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Årsredovisning

för

Åkers AB

556153-4792

Räkenskapsåret

2021

Undertecknad styrelseledamot intygar härmed, dels att denna kopia av årsredovisningen gällande räkenskapsåret 20210101-20211231 överensstämmer med originalet, dels att resultat- och balansräkningen fastställts på årsstämma den 15 juni 2022. Årsstämman beslöt godkänna styrelsens förslag till vinstdisposition.

Åkers Styckebruk 2022-07-12

Jörgen Hedström

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Styrelsen och verkställande direktören för Åkers Aktiebolag avger följande årsredovisning för räkenskapsåret 2021.

Årsredovisningen är upprättad i svenska kronor, SEK. Om inte annat särskilt anges, redovisas alla belopp i tusentals kronor (Tkr). Uppgifter inom parentes avser föregående år.

Förvaltningsberättelse

Information om verksamheten

Åkers AB med dotterbolag tillhör segmentet Union Electric Åkers inom Ampco-Pittsburgh Corporation där man huvudsakligen utvecklar, tillverkar och marknadsför högkvalitativa valsar för varm- och kallvalsning för den globala stål- och metallindustrin. Gjutna valsar används främst för varmvalsning och smidda valsar för kallvalsning.

Åkers AB är moderbolag till två tillverkande enheter, Shanxi Åkers Tisco Roll Co. Ltd, Taiyuan i Shanxiprovinsen, Kina och till Åkers Sweden AB. Båda enheterna tillverkar gjutna valsar samt fem säljbolag i fem länder. För tre säljbolag har avveckling påbörjats, under 2019 samt 2020 och beräknas vara klart under första halvåret 2022. Åkers AB har ingen egen tillverkning utan marknadsför och säljer valsar inköpta från övriga koncernbolag i Ampco-Pittsburgh Gruppen. Produktionsenheter finns i USA, England, Sverige, Slovenien, Kina och Kanada.

Ansvaret för styrning, ledning och kontroll av bolagets verksamhet fördelas mellan aktieägarna på bolagsstämman, styrelsen och verkställande direktören i Åkers AB.

Företaget har sitt säte i Strängnäs kommun i Södermanlands län.

Väsentliga händelser under räkenskapsåret

Covidpandemin har fortsatt påverkat företaget under året om än i mindre utsträckning än tidigare. Störst påverkan har externa faktorer haft. Påverkan har till största del varit ökade kostnader i form av ökade leverantörspriser. Utan inbördes rang innefattar det energipriser, råmaterialpriser/legeringar samt transporter (land & sjö).
Dessutom har transportområdet påverkat leveranstider till kund och därmed ökat vårt arbetsinnehåll för att lösa våra leveranser i rätt tid till våra kunder.

Förväntad framtida utveckling samt väsentliga risker och osäkerhetsfaktorer

År 2022 blir en fortsatt utmaning för företaget gällande omvärldspåverkan som till största del påverkar vår kostnadsprognos. Främst energi, råmaterial och transporter. Dessa områden är svåra att direkt påverka för oss.

Vidare finns områden som blir en utmaning att hantera även om vi har större möjlighet att påverka och uppnå det resultat vi förväntar oss. I dessa områden ingår strategisk kompetensförsörjning, maskinparksuppgradering/investeringar, klimatsmart arbete, process och produktstabilitet/utveckling, förståelse för kunds ökade prestanda & kvalitetskrav.

Försäljningsvolym för år 2022 väntas stiga väsentligt jämfört med 2021. Prognosen för en flerårsöversikt visar även den på ökad omsättning. Det innebär rekrytering för oss och i den processen behöver kompetens och flexibilitet vara tydligt, genomförandet blir utmanande då efterfrågan på kompetent personal är stor och konkurrensen hög från närliggande stora industrikoncerner.

Fortsatt arbete med kultur och struktur i företaget kommer ske, utmaningen är att få alla medarbetare att tänka värde/nytta och agera utifrån det. Det arbetet startar på bred front i företaget under kvartal 3 då vi tar nästa steg i vår målstyrningsprocess.

Forskning och utveckling

Som ett led i en övergripande strategi för att utveckla nya marknader och upprätthålla en ledarposition i var och en av de branscher som servas, får koncernen subventioner för forskning och utveckling. De aktiviteter som genomförs är utformade för att utveckla nya produkter, förbättra befintliga produkter och processer, förbättra produktkvaliteten, anpassa produkter för att möta kundspecifikationer och minska tillverkningskostnader.

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Marknadsutveckling

Coronapandemin var i högsta grad närvarande för järn- och stålindustrin i Sverige även under 2021.
Efter det dramatiska fallet under pandemiåret 2020 såg vi 2021 en kraftig rekyl i efterfrågan på handelsfärdigt stål. Om vi bortser från utvecklingen i Kina ökade efterfrågan i övriga världen med 11 procent. I USA ökade efterfrågan med 15 procent och I EU blev ökningen runt 10 procent I de norra delarna och 20 procent i södra Europa. Den samlade efterfrågan på stål i EU:s 27 medlemsländer plus Storbritannien landade på 158 Mton under 2021, vilket är en ökning med 13 procent jämfört med 2020. Ökningen innebär att efterfrågan i EU är tillbaka på nivåerna för coronapandemin. En liknande rekyl kunde noteras både i Japan och Sydkorea där efterfrågan på stål i respektive land ökade med 10 procent, vilket gjorde att även Sydkorea kom tillbaka till en nivå motsvarande före pandemin. För länderna i Central- och Sydamerika blev rekylen också kraftig på drygt 20 procent. Denna rekyl innebär att nivåerna före pandemin i dessa länder passerades med god marginal under 2021. I ASEAN-länderna (bland annat Indonesien, Thailand och Vietnam) såg vi en mer begränsad ökning på runt 5 procent, men i dessa länder var fallet 2020 inte lika djupt. Utvecklingen på den svenska stålmarknaden gick i linje med den allmänna bilden i Europa och övriga världen, bortsett från Kina. Aktiviteten inom nästan alla stålkonsumerande sektorer och särskilt fordonsindustrin ökade både kraftigt och snabbt vilket framkallade rejält uppsving i efterfrågan på stål i Sverige. Data till och med det tredje kvartalet 2021 visar en ökad efterfrågan på 16 procent jämfört med samma period 2020. Den samlade produktionen av råstål I Sverige landade på 4,7 Mton, vilket är drygt 6 procent högre än 2020. Ökningen innebär också att produktionen av råstål är tillbaka på nivån före pandemin. Stålmarknadens utveckling avspeglar också valsmarknaden för 2021 där en positiv utveckling av efterfrågan noterades. Efterfrågan på valsade produkter är kopplat till förbrukning av valsar vilket följaktligen medfört vissa förändringar i leveransmönster och volymer under året.

Risker och riskhantering

All affärsverksamhet är förenad med risker. Risker som hanteras rätt kan skapa möjligheter och innebära ett värdeskapande medan felaktigt hanterade risker kan leda till skador och förluster. Koncernens resultat och finansiella ställning påverkas av ett stort antal faktorer där flera ligger utanför den egna kontrollen. De allmänna politiska och ekonomiska förutsättningarna som påverkar marknaderna för stål och stålproduktion är exempel på sådana faktorer. Koncernens riskhantering syftar till att minimera verksamhetens risker men också till att säkerställa att möjligheter kan tillvaratas på bästa sätt.

Marknadsrelaterade risker

Koncernens resultat och finansiella utveckling påverkas av ett stort antal marknadsrelaterade faktorer. De senaste årens volatilitet på de globala finansiella marknaderna har åskådliggjort flera av de risker och osäkerhetsfaktorer som omger verksamheten. Dessa risker är huvudsakligen relaterade till konjunkturens påverkan på efterfrågan, marknadspriser och finansiering.

Råvaruprisrisker

För järnskrot och legeringar, utgörande ca en tredjedel av de totala kostnaderna inom Union Electric Åkers, tillämpas skrot- och legeringstillägg vilket är ett etablerat sätt att justera stålpriser till följd av nationella och internationella variationer i kostnader för skrot och legeringsämnen. Dessa tillägg innebär att risken för prisfluktuationer till stor del överförs till kunderna.

Miljö och miljöpåverkan

Union Electric Åkers bedriver tillståndspliktig verksamhet på flera platser i världen. Samtliga produktionsenheter uppfyller sina respektive lokala miljökrav och har tillstånd för sin verksamhet i enlighet med respektive lands miljölagstiftning. Tillstånden reglerar bl. a produktionsnivåer, utsläpp till luft och vatten, deponering av avfall, hantering av kemikalier samt bullernivåer. Tillstånden revideras endast vid större förändringar i verksamheten. Union Electric Åkers verksamhet är miljöpåverkande genom utsläpp till luft och vatten, generering av miljöfarligt avfall såsom spillolja och filterstoft, förbrukning av ändliga resurser samt buller. Åkers är en stor energiförbrukare och våra produkter transporteras huvudsakligen via lastbil och båt. För att minska företagets påverkan på miljön bedriver Åkers sedan flera år ett kontinuerligt arbete för att förbättra kvaliteten på produkter och processer. Dessa förbättringar innebär bland annat minskad energiförbrukning, minskad förbrukning av ändliga resurser och användning av kemikalier vilket därmed minskar företagets totala miljöpåverkan.

Åkers miljötillstånd innehåller begränsningar enligt följande:

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Producera och efterbearbeta 30 000 ton gott gjutgods och granulat per år.
Antalet förbrukade Lansar får uppgå till högst 500 per år.
Utsläpp av stoft från befintliga och nyinstallerade filter får uppgå till högst 10 mg/m3. Övriga emissionspunkter stoft 20 mg/m3. Stoftmätningar genomförs årligen på olika filter.
Begränsningar avseende buller från verksamheten.
Begränsningar i avloppsvatten till spillvattennätet. Vattenprover utförs årligen.

Dessa följs upp genom miljörapport till tillsynsmyndighet och miljötillsyn samt Åkers årsklocka där aktiviteter är planerade och egenkontrollprogrammet.

Verksamhetsrelaterade risker
Valstillverkning sker genom en rad processer. Störningar i en del av processen kan få allvarliga följdeffekter i övriga processled. Avbrott i verksamheten som orsakas av exempelvis brand, transportproblem eller maskinhaveri kan bli mycket kostsamma. Dessa risker begränsas genom att optimera nivåer av råvaror och produkter i arbete. Gruppen har dessutom försäkringar som minimerar kostnaderna vid skador och avbrott. För att minimera risker och försäkringspremier bedrivs ett fortlöpande skadeförebyggande arbete. Vidare kontrolleras att det finns en skriftlig miljöplan för anläggningarna, att det finns förteckning över godkända kemikalier och att denna följs, rutiner för hantering och lagring av brandfarliga kemikalier och farligt avfall, att säkerhetsdatablad finns till hands och att det finns en plan för att minimera utsläpp och avfall.

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Hållbarhetsrapport

Hållbarhetsrapporten har upprättats i enlighet med bestämmelserna i Årsredovisningen 6 kap. 1014 §§ och omfattar Åkers AB:s hela verksamhet. Vid upprättande av rapporten har utgångspunkten varit följande aspekter: miljö, sociala förhållanden, medarbetare, mänskliga rättigheter samt anti-korruption. Åkers AB redogör för dessa aspekter genom att beskriva hur dessa hanteras vad gäller:

-Policyer, rutiner, instruktioner och strukturer
-Hållbarhetsrisker och hur Åkers AB agerar på dessa
-Indikationer som Åkers AB använder sig av

Affärsmodell
Åkers AB har ingen egen tillverkning utan marknadsför och säljer valsar inköpta från övriga koncernbolag i Ampco-Pittsburgh Gruppen. Den externa relationen med kunderna hanteras via Åkers AB.
Åkers AB tillhandahåller koncerngemensamma tjänster som Marknad & Försäljning (Säljorganisation med säljbolag/kontor i flera delar av världen), Forskning & Utveckling och Administration. Anställda i Åkers AB har koncerngemensamma tjänster och tillhör olika funktioner i gruppen.

Åkers AB hyr lokaler och köper tjänster, (redovisning, inköp, löneadministration och HR) från Åkers Sweden AB.
Åkers AB följer gängse standarder för svenskt näringsliv samt de policyer och revisioner som Ampco-Pittsburgh Corporation ålägger oss att följa samt de policys och revisioner framtagna av Åkers Sweden AB.

Policy, granskningsförfaranden och resultat

Miljö: Åkers AB köper valsar från övriga producerande bolag inom Ampco Pittsburgh Gruppen. Produktionen sker under de miljöledningssystem som upprättas i de producerande bolag. De miljöledningssystem som upprättas av de producerande bolagen revideras på årlig basis. Den innehåller bland annat förhållningssätt gentemot leverantörer och kunders syn på miljöfrågan, säkerställande av ett internt miljömål, resurstillsättning för ett internt miljöarbete.

Sociala förhållanden: Åkers AB köper tjänster från Åkers Sweden AB och följer de riktlinjer som upprättats. Åkers Sweden AB är en av de största privata arbetsgivarna i kommunen och en del av samhället som bolaget verkar i. Genom sponsring av lokalt föreningsliv, dialog med närboende, samarbeten med olika skolor, kommun, arbetsförmedling och andra intressenter samt genom deltagande på mässor och arbetsmarknadsdagar bidrar bolaget till samhällets utveckling.

Medarbetare: Åkers AB följer gängse standarder för svenskt näringsliv samt företagets policys och de producerande enheternas riktlinjer.

Mänskliga rättigheter och Anti-korruption: Åkers AB följer gängse standarder för svenskt näringsliv samt de policyer och revisioner som Ampco-Pittsburgh Corporation ålägger oss att följa: "Code of Business Conduct", "Anti Corruption policy", "Export Controls and Sanctions Compliance Policy" och "Global Antitrust and Competion Compliance Policy". I dessa finns uttalat att " Vi kompromissar inte under några omständigheter med våra etiska riktlinjer eller integritetsbestämmelser, och vårt agerande kännetecknas av integritet, objektivitet och total avsaknad av korruption.

Väsentliga hållbarhetsrisker

Miljö: De största riskerna inom området är den energianvändning varje producerande enhet har, transporter samt förbrukning av ändliga resurser såsom vissa grundämnen (metall) och legeringar. Då närboende finns belägna i direkt närhet till flertalet verksamheter finns även risk för störningar avseende buller och vibrationer.
De producerande enheterna arbetar för att optimera återanvändning av råmaterial i så stor utsträckning som möjligt, och reducera antalet kasserade produkter. Drivkraften för att återvinna råmaterial är inte bara till nytta av hållbarhetsskäl men även av kostnadsskäl.

Sociala förhållanden: Åkers AB är verksamma i en tung industri, vars attraktionskraft inte är lika stor i dagens

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moderna samhälle som tidigare. Samtidigt är produkten som tillverkas högteknologisk och ställer krav på hög kompentens hos våra medarbetare inom tex metallurgi, gjutning, bearbetning och produktionsteknik. Det tillsammans med ökade kompetenskrav generellt, komplexitet och flexibilitet i arbetet gör det svårt att rekrytera personal med rätt kompetens. Delvis vägs detta upp genom att företaget är en del i en stor internationell verksamhet och har därför möjlighet att nå en större urvalsgrupp samt erbjuda en internationell karriär.

Medarbetare: Verksamheten är uppbyggd som en del av en koncernstruktur och de anställda tillhör olika funktioner inom koncernen. Genom utveckling av stödjande ledarskap, större fokus på tidiga insatser, förbättrade och delvis nya rutiner för tex rehabilitering och hantering av kränkningar fångas risker i den organisatoriska och sociala arbetsmiljön upp.

Mänskliga rättigheter: Vi kräver att våra leverantörer, kunder och samarbetspartners följer alla tillämpliga lagar och bestämmelser. De måste också respektera våra krav och affärsprinciper. Vårt stöd för mänskliga rättigheter uttrycks i vår uppförandekod och uppförandekod för leverantörer. Uppförandekoden hjälper oss att upptäcka, förebygga och begränsa risker som gäller mänskliga rättigheter.

Anti-korruption: Vi tolererar inte mutor, "smörjpengar" eller utpressning i någon form, varken som betalare/initiativtagare eller mottagare. Detta regleras i den Efterlevnadspolicy som är framtagen av koncernen. Syftet med denna Efterlevnadspolicy om antikorruption är att hjälpa till att säkerställa efterlevnad för Ampco-Pittsburgh Corporation och dess helägda direkta och indirekta dotterbolag av alla gällande antikorruptionslagar och -förordningar, inklusive utan begränsning, USA:s FCPA (Foreign Corrupt Practices Act) från 1977, enligt hur den ändrats, Storbritanniens UKBA (United Kingdom's Bribery Act 2010) och liknande antagna lagar i andra länder, inklusive dem inom EU och medlemsstaterna i OECD (Organization for Economic Cooperation and Development), som alla uttryckligen förbjuder bestickning och annat korrupt beteende.

Riskhantering centrala resultatindikatorer

Miljö: Då Åkers AB inte har någon egen produktion finns inga miljönyckeltal utan varje producerande enhet har som mål att åstadkomma förbättringar på området, t.ex. energieffektivisering, minska koldioxidutsläpp ställt mot produktionsmängd. Samtliga verksamheter följer lokala lagar och förordningar.

Sociala förhållanden: Vi saknar etablerade nyckeltal för sociala förhållande vilket till stor del beror på vår omognad inom området. Vi ger alla samma anställningsmöjligheter och rättigheter och diskriminerar inte i fråga om anställning, arbetsuppgifter eller lön på grund av kön, ras, religion, ålder, funktionshinder, sexuell läggning, nationalitet, politisk åskådning, socialt eller etniskt ursprung eller andra personliga egenskaper eller övertygelser.

Medarbetare: Vi saknar etablerade nyckeltal men sjukfrånvaro följs upp, dock är den obefintlig i dagsläget. Personalomsättningen har varit väldigt låg i företaget de senaste 10 åren. Vi har HR-processer som tar hand om medarbetare.

Mänskliga rättigheter: Våra största leverantörer är koncerninterna och följer koncernens uppförandekod.

Anti-korruption: Åkers AB har tydligt framhävt att mutor, utpressning eller andra ohederliga eller oetiska affärsmetoder inte tolereras. Det finns en etisk kommitté dit misstänkta brott mot de etiska reglerna ska rapporteras. På Åkers AB finns inga nedbrutna rutiner eller uttalade rapporteringsvägar, då det inte förekommit fall som föranlett detta.

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Flerårsöversikt (Tkr)	**2021**	**2020**	**2019**	**2018**	**2017**
Nettoomsättning	603 727	587 099	735 040	691 260	641 344
Resultat efter avskrivningar	-444	5 859	5 400	15 011	5 182
Resultat efter finansiella poster	-5 923	4 391	5 787	12 006	-876
Antal anställda	7	6	10	11	11
Balansomslutning	675 805	644 879	433 158	398 034	373 617
Avkastning på eget kap. (%)	neg	1	7	18	neg
Avkastning på totalt kap. (%)	0	1	2	4	neg
Soliditet (%)	55	58	19	19	23

För definitioner av nyckeltal, se Redovisnings- och värderingsprinciper.

Förslag till vinstdisposition

Styrelsen föreslår att till förfogande stående vinstmedel (kronor):

balanserad vinst	**295 442 493**
årets förlust	**-5 923 315**
	289 519 178
disponeras så att	
i ny räkning överföres	**289 519 178**
	289 519 178

Företagets resultat och ställning i övrigt framgår av efterföljande resultat- och balansräkning samt kassaflödesanalys med noter.

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Resultaträkning
Tkr

	Not	2021-01-01 -2021-12-31	2020-01-01 -2020-12-31
Rörelsens intäkter			
Nettoomsättning	2	603 727	587 099
Övriga rörelseintäkter	3	95 398	133 340
		699 124	**720 439**
Rörelsens kostnader			
Handelsvaror		-604 999	-586 530
Övriga externa kostnader	4, 5	-87 210	-118 500
Personalkostnader	6	-7 037	-9 124
Avskrivningar och nedskrivningar av materiella och immateriella anläggningstillgångar		-322	-425
		-699 568	**-714 580**
Rörelseresultat	7	**-444**	**5 859**
Resultat från finansiella poster			
Finansiella anläggningstillgångar och kortfristiga placeringar	8	-2 094	880
Resultat från övriga värdepapper och fordringar som är anläggningstillgångar	9	100	-880
Räntekostnader och liknande resultatposter	10	-3 486	-1 468
		-5 480	**-1 468**
Resultat efter finansiella poster		**-5 923**	**4 391**
Resultat före skatt		**-5 923**	**4 391**
Skatt på årets resultat	11	0	0
Årets resultat		**-5 923**	**4 391**

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Balansräkning

Tkr

	Not	2021-12-31	2020-12-31
TILLGÅNGAR			
Anläggningstillgångar			
Materiella anläggningstillgångar			
Maskiner och inventarier	12	304	627
		304	**627**
Finansiella anläggningstillgångar			
Andelar i koncernföretag	13, 14	379 977	379 977
Andra långfristiga fordringar	15	239	216
		380 216	**380 193**
Summa anläggningstillgångar		**380 520**	**380 820**
Omsättningstillgångar			
Varulager m m			
Färdiga varor och handelsvaror		3 920	4 638
		3 920	**4 638**
Kortfristiga fordringar			
Kundfordringar		95 867	74 249
Fordringar hos koncernföretag		162 647	153 844
Övriga fordringar		5 719	3 656
Förutbetalda kostnader och upplupna intäkter	16	481	2 088
		264 714	**233 837**
Kassa och bank		26 651	25 584
Summa omsättningstillgångar		**295 285**	**264 059**
SUMMA TILLGÅNGAR		**675 805**	**644 879**

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Balansräkning

Tkr

	Not	2021-12-31	2020-12-31
EGET KAPITAL OCH SKULDER			
Eget kapital	17, 18		
Bundet eget kapital			
Aktiekapital		10 000	10 000
Uppskrivningsfond		41 557	41 557
Reservfond		28 000	28 000
		79 557	**79 557**
Fritt eget kapital			
Balanserad vinst eller förlust		295 442	291 051
Årets resultat		-5 923	4 391
		289 519	**295 442**
Summa eget kapital		**369 076**	**374 999**
Avsättningar			
Övriga avsättningar för pensioner och liknande förpliktelser	19, 20	11 685	11 691
Övriga avsättningar	21	0	0
Summa avsättningar		**11 685**	**11 691**
Kortfristiga skulder			
Förskott från kunder		5 841	6 323
Leverantörsskulder		4 459	6 948
Skulder till koncernföretag		274 199	235 606
Övriga skulder		98	96
Upplupna kostnader och förutbetalda intäkter	22	10 447	9 216
Summa kortfristiga skulder		**295 044**	**258 189**
SUMMA EGET KAPITAL OCH SKULDER		**675 805**	**644 879**

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Rapport över förändringar i eget kapital

Tkr

	Aktie-kapital	Uppskrivn-ingsfond	Reserv-fond	Balanserat resultat	Summa eget kapital
Ingående eget kapital 2020-01-01	**10 000**	**41 557**	**28 000**	**773**	**80 330**
Aktieägartillskott				290 278	290 278
Årets resultat				4 391	4 391
Utgående eget kapital 2020-12-31	**10 000**	**41 557**	**28 000**	**295 442**	**374 999**
Årets resultat				-5 923	-5 923
Utgående eget kapital 2021-12-31	**10 000**	**41 557**	**28 000**	**289 519**	**369 076**

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Kassaflödesanalys

Tkr

	Not	2021-01-01 -2021-12-31	2020-01-01 -2020-12-31
Den löpande verksamheten			
Resultat efter finansiella poster		-5 923	4 391
Justeringar för poster som inte ingår i kassaflödet	23	316	-751
Kassaflöde från den löpande verksamheten före förändring av rörelsekapital		**-5 607**	**3 640**
Kassaflöde från förändring av rörelsekapitalet			
Förändring av varulager och pågående arbete		718	341
Förändring av kundfordringar		-21 618	0
Förändring av kortfristiga fordringar		-9 259	80 790
Förändring av leverantörsskulder		-2 489	0
Förändring av kortfristiga skulder		39 345	-81 771
Kassaflöde från den löpande verksamheten		**1 090**	**3 000**
Investeringsverksamheten			
Investeringar i materiella anläggningstillgångar		0	-130
Förändring av långfristiga fordringar		-23	69
Kassaflöde från investeringsverksamheten		**-23**	**-61**
Årets kassaflöde		**1 067**	**2 939**
Likvida medel vid årets början			
Likvida medel vid årets början		25 584	22 645
Likvida medel vid årets slut		**26 651**	**25 584**

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Noter

Tkr

Not 1 Redovisnings- och värderingsprinciper

Allmänna upplysningar

Årsredovisningen är upprättad i enlighet med årsredovisningslagen och BFNAR 2012:1 Årsredovisning och koncernredovisning (K3).

Fordringar och skulder i utländsk valuta har värderats till balansdagens kurs. Kursvinster och kursförluster på rörelsefordringar och rörelseskulder redovisas i rörelseresultatet medan kursvinster och kursförluster på finansiella fordringar och skulder redovisas som finansiella poster.

Redovisningsprinciperna är oförändrade jämfört med föregående år.

Intäktsredovisning

Intäkter har tagits upp till verkligt värde av vad som erhållits eller kommer att erhållas och redovisas i den omfattning det är sannolikt att de ekonomiska fördelarna kommer att tillgodogöras bolaget och intäkterna kan beräknas på ett tillförlitligt sätt.

Vid försäljning av varor redovisas normalt inkomsten som intäkt när de väsentliga förmåner och risker som är förknippade med ägandet av varan har överförts från företaget till köparen.

Anläggningstillgångar

Materiella anläggningstillgångar redovisas till anskaffningsvärde minskat med ackumulerade avskrivningar enligt plan och eventuella nedskrivningar.

Avskrivning sker linjärt över den förväntade nyttjandeperioden med hänsyn till väsentligt restvärde. Följande avskrivningsprocent tillämpas:

Materiella anläggningstillgångar

Maskiner och inventarier	3-20 år

Komponentindelning

Materiella anläggningstillgångar har delats upp på komponenter när komponenterna är betydande och när komponenterna har väsentligt olika nyttjandeperioder. När en komponent i en anläggningstillgång byts ut, utrangeras eventuell kvarvarande del av den gamla komponenten och den nya komponentens anskaffningsvärde aktiveras. Utgifter för löpande reparationer och underhåll redovisas som kostnader.

Finansiella instrument

Finansiella instrument värderas utifrån anskaffningsvärdet. Instrumentet redovisas i balansräkningen när bolaget blir part i instrumentets avtalsmässiga villkor. Finansiella tillgångar tas bort från balansräkningen när rätten att erhålla kassaflöden från instrumentet har löpt ut eller överförts och bolaget har överfört i stort sett alla risker och förmåner som är förknippade med äganderätten. Finansiella skulder tas bort från balansräkningen när förpliktelserna har reglerats eller på annat sätt upphört.

Andelar i dotterföretag

Andelar i dotterföretag redovisas till anskaffningsvärde efter avdrag för eventuella nedskrivningar. I anskaffningsvärdet ingår köpeskillingen som erlagts för aktierna samt förvärvskostnader. Eventuella kapitaltillskott läggs till anskaffningsvärdet när de uppkommer.

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Kundfordringar/kortfristiga fordringar
Kundfordringar och kortfristiga fordringar redovisas som omsättningstillgångar till det belopp som förväntas bli inbetalt efter avdrag för individuellt bedömda osäkra fordringar.

Låneskulder och leverantörsskulder
Låneskulder och leverantörsskulder redovisas initialt till anskaffningsvärde efter avdrag för transaktionskostnader. Skiljer sig det redovisade beloppet från det belopp som ska återbetalas vid förfallotidpunkten periodiseras mellanskillnaden som räntekostnad över lånets löptid med hjälp av instrumentets effektivränta. Härigenom överensstämmer vid förfallotidpunkten det redovisade beloppet och det belopp som ska återbetalas.

Nedskrivningsprövning av finansiella anläggningstillgångar
Vid varje balansdag bedöms om det finns indikationer på nedskrivningsbehov av någon av de finansiella anläggningstillgångarna. Nedskrivning sker om värdenedgången bedöms vara bestående och prövas individuellt.

Leasingavtal
Företaget redovisar samtliga leasingavtal, såväl finansiella som operationella, som operationella leasingavtal. Operationella leasingavtal redovisas som en kostnad linjärt över leasingperioden.

Varulager
Varulagret har värderats till det lägsta av dess anskaffningsvärde och dess nettoförsäljningsvärde på balansdagen. Med nettoförsäljningsvärde avses varornas beräknade försäljningspris minskat med försäljningskostnader. Den valda värderingsmetoden innebär att inkurans i varulagret har beaktats.

Inkomstskatter
Total skatt utgörs av aktuell skatt och uppskjuten skatt. Skatter redovisas i resultaträkningen, utom då underliggande transaktion redovisas direkt mot eget kapital varvid tillhörande skatteeffekter redovisas i eget kapital.

Avsättningar
Som avsättning har redovisats förpliktelser gentemot tredje man som är hänförliga till räkenskapsåret eller tidigare räkenskapsår och som på balansdagen antingen är säkra eller sannolika till sin förekomst men oviss till belopp eller till den tidpunkt då de ska infrias.

En avsättning för framtida kostnader görs när det finns en legal eller informell förpliktelse och en tillförlitlig uppskattning av ett belopp kan göras.
Avsättning för omstrukturering görs när det föreligger en fastställd och utförlig omstruktureringsplan och berörda personer har informerats.
Vid försäljning lämnar Åkers livstids produktionsgaranti. Avsättningar för dessa åtaganden baseras på historisk information och uppkomna kostnader för att reglera krav enligt garantivillkoren. Garantiavsättningar görs i de tillverkande enheterna.

Ersättningar till anställda
Ersättningar till anställda avser alla former av ersättningar som företaget lämnar till de anställda. Kortfristiga ersättningar utgörs av bland annat löner, betald semester, betald frånvaro, bonus och ersättning efter avslutad anställning (pension). Kortfristiga ersättningar redovisas som kostnad och en skuld då det finns en legal eller informell förpliktelse att betala ut en ersättning till följd av en tidigare händelse och en tillförlitlig uppskattning av beloppet kan göras.

Ersättningar till anställda efter avslutad anställning
I företaget finns förmånsbestämda pensionsplaner. Redovisning sker enligt förenklingsreglerna.

Företaget har förmånsbestämda pensionsplaner där en pensionspremie betalas och redovisar dessa planer som avgiftsbestämda planer i enlighet med förenklingsregeln i BFNAR 2012:1 (K3).

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Företaget har förmånsbestämda pensionsplaner som finansieras via Alecta, vilka redovisas som avgiftsbestämda planer då det inte finns tillräcklig information för att redovisa planen som förmånsbestämd.

Företaget har en förmånsbestämd pensionsförpliktelse som är knuten till en pensionsstiftelse. Företaget redovisar en avsättning för den del stiftelsens förmögenhet, värderad till marknadsvärde, understiger förpliktelsen.

Koncernförhållanden

Företaget är moderföretag men med hänvisning till undantagsreglerna i årsredovisningslagen 7 kap 2§ upprättas ingen egen koncernredovisning. Moderföretaget i den största koncernen som Åkers AB är dotterbolag till är Ampco-Pittsburh Corporation, org.nr. EIN 25-1117717, med säte i Pennsylvania, USA. Det utländska moderföretagets koncernredovisning kan erhållas från Ampco-Pittsburgh Corporation, PO Box 465, 726 Bell Avenue, Suite 301, Carnegie, PA 15106-0465 USA.

Kassaflödesanalys

Kassaflödesanalysen upprättas enligt indirekt metod. Det redovisade kassaflödet omfattar endast transaktioner som medfört in- eller utbetalningar.

Som likvida medel klassificerar företaget, förutom kassamedel, disponibla tillgodohavanden hos banker och andra kreditinstitut samt kortfristiga likvida placeringar som är noterade på en marknadsplats och har en kortare löptid än tre månader från anskaffningstidpunkten. Förändringar i spärrade medel redovisas i investeringsverksamheten.

Nyckeltalsdefinitioner

Nettoomsättning
Rörelsens huvudintäkter, fakturerade kostnader, sidointäkter samt intäktskorrigeringar.

Resultat efter avskrivningar
Resultat efter avskrivningar men före finansiella intäkter och kostnader.

Resultat efter finansiella poster
Resultat efter finansiella intäkter och kostnader men före bokslutsdispositioner och skatter.

Antal anställda
Medelantal anställda under räkenskapsåret.

Balansomslutning
Företagets samlade tillgångar.

Avkastning på eget kap. (%)
Resultat efter finansiella poster i procent av justerat eget kapital (eget kapital och obeskattade reserver med avdrag för uppskjuten skatt).

Avkastning på totalt kap. (%)
Rörelseresultat plus finansiella intäkter i procent av balansomslutningen.

Soliditet (%)
Justerat eget kapital (eget kapital och obeskattade reserver med avdrag för uppskjuten skatt) i procent av balansomslutning.

Uppskattningar och bedömningar

Upprättandet av bokslut och tillämpning av redovisningsprinciper, baseras ofta på ledningens bedömningar, uppskattningar och antaganden som anses vara rimliga vid den tidpunkt då bedömningen görs. Uppskattningar och bedömningar är baserade på historiska erfarenheter och ett antal andra faktorer, som under rådande omständigheter anses vara rimliga. Resultatet av dessa används för att bedöma de redovisade värdena på tillgångar och skulder, som inte annars framgår tydligt från andra källor. Det verkliga utfallet kan avvika från dessa uppskattningar och bedömningar. Uppskattningar och antaganden ses över regelbundet.

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Enligt företagsledningen är väsentliga bedömningar avseende tillämpade redovisningsprinciper samt källor till osäkerhet i uppskattningar, främst relaterade till följande poster.

Våra kunder garanteras en viss livslängd på våra valsar uttryckt i millimeter slityta, varför vi har svårt att bedöma under vilken tid våra kunder förbrukar våra valsar.

Värdering av aktier i dotterbolag bygger på bedömningar och uppskattningar. Nedskrivningsprövning görs och baseras på framtida kassaflöden, prognoser och budget vilket grundar sig på företagsledningens bästa uppskattning.

Not 2 Nettoomsättningens fördelning

	2021	2020
Nettoomsättningen per rörelsegren		
Valsar	603 727	587 099
	603 727	**587 099**
Nettoomsättningen per geografisk marknad		
Europa	375 630	366 656
Nordamerika	33 950	51 627
Sydamerika	28 879	15 982
Asien inkl. Australien	111 282	105 964
Afrika inkl. Mellanöstern	53 986	46 870
	603 727	**587 099**

Not 3 Övriga rörelseintäkter

	2021	2020
Vidarefakturerade kostnader	81 497	105 603
Licensintäkter	7 195	6 837
Övriga rörelseintäkter	6 706	20 900
	95 398	**133 340**

Not 4 Leasingavtal

Årets leasingkostnader avseende leasingavtal, uppgår till 189 (80) tkr.

Framtida leasingavgifter, för icke uppsägningsbara leasingavtal, förfaller till betalning enligt följande:

	2021	2020
Inom ett år	267	238
Senare än ett år men inom fem år	229	61
	496	**299**

I beloppet för övriga externa kostnader ingår avgifter för operationell leasing och hyra enligt ovan. Avgifterna avser till största delen leasingavgifter för personbilar, hyra av kontorsmaskiner och IT-utrustning.

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Not 5 Arvode till revisorer

Med revisionsuppdrag avses granskning av årsredovisningen och bokföringen samt styrelsens och verkställande direktörens förvaltning, övriga arbetsuppgifter som det ankommer på bolagets revisor att utföra samt rådgivning eller annat biträde som föranleds av iakttagelser vid sådan granskning eller genomförandet av sådana övriga arbetsuppgifter.

	2021	2020
BDO		
Revisionsuppdrag	161	121
	161	**121**

Not 6 Anställda och personalkostnader

	2021	2020
Medelantalet anställda		
Kvinnor	3	3
Män	4	3
	7	**6**
Löner och andra ersättningar		
Verkställande direktör och motsvarande befattningshavare	0	2 239
Övriga anställda	4 070	2 864
	4 070	**5 103**
Sociala kostnader		
Pensionskostnader för styrelse och verkställande direktör	0	169
Pensionskostnader för övriga anställda	1 285	1 677
Övriga sociala avgifter enligt lag och avtal	1 655	2 152
	2 940	**3 998**
Totala löner, ersättningar, sociala kostnader och pensionskostnader	**7 010**	**9 101**
Könsfördelning bland ledande befattningshavare		
Andel män i styrelsen	100 %	100 %
Andel män bland övriga ledande befattningshavare	100 %	100 %

Av löner och ersättningar avser 0 KSEK (0 KSEK) övriga ledande befattningshavare. Tantiem till verkställande direktör och övriga ledande befattningshavare uppgår till 0 KSEK (0 KSEK).

I beloppet för pensionsavsättningar ingår avsättning för styrelse, VD och motsvarande befattningshavare med 0 tkr (68 tkr). Inga avtal om avgångsvederlag finns med styrelse, VD och motsvarande befattningshavare.

I medelantalet anställda i Sverige ingår en kvinnlig anställd som är verksam i Turkiet.

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Not 7 Transaktioner med närstående

Transaktioner mellan företaget och dess närstående har skett på marknadsmässiga grunder.

	2021	2020
Andel av årets totala inköp som skett från andra företag i koncernen	97,00 %	97,00 %
Andel av årets totala försäljningar som skett till andra företag i koncernen	15,00 %	19,00 %

Not 8 Finansiella anläggningstillgångar och kortfristiga placeringar

	2021	2020
Återföring av nedskrivningar	-2 094	880
	-2 094	**880**

Not 9 Resultat från övriga värdepapper och fordringar som är anläggningstillgångar

	2021	2020
Ränteintäkt från långfristiga fordran på koncernföretag	0	589
Valutakursdifferenser från långfristig fordran på koncernföretag	100	-1 469
	100	**-880**

Not 10 Räntekostnader och liknande resultatposter

	2021	2020
Räntekostnader till koncernföretag	-2 388	-2 388
Övriga räntekostnader	-694	-679
Kursdifferenser	-404	1 599
Inkomstskatt Åkers Tisco Rolls		0
	-3 486	**-1 468**

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Not 11 Aktuell och uppskjuten skatt

	2021	2020
Skatt på årets resultat		
Aktuell skatt	0	0
Totalt redovisad skatt	**0**	**0**

Avstämning av effektiv skatt

		2021		2020
	Procent	**Belopp**	**Procent**	**Belopp**
Redovisat resultat före skatt		-5 923		4 391
Skatt enligt gällande skattesats	20,60	1 220	21,40	-940
Ej avdragsgilla kostnader		-438		-253
Ej skattepliktiga intäkter		244		188
I år uppkomna underskott som ej redovisas som tillgång		-1 026		0
Under året utnyttjande av tidigare års underskottsavdrag vars skattevärde ej redovisats som tillgång		0		1 004
Redovisad effektiv skatt	**0,00**	**0**	**0,00**	**0**

Not 12 Maskiner och inventarier

	2021-12-31	2020-12-31
Ingående anskaffningsvärden	3 000	2 870
Inköp	0	130
Utgående ackumulerade anskaffningsvärden	**3 000**	**3 000**
Ingående avskrivningar	-2 373	-1 948
Årets avskrivningar	-322	-425
Utgående ackumulerade avskrivningar	**-2 695**	**-2 373**
Utgående redovisat värde	**304**	**627**

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Not 13 Andelar i koncernföretag

	2021-12-31	2020-12-31
Ingående anskaffningsvärden	493 696	203 418
Inköp	0	290 278
Försäljningar	0	0
Utgående ackumulerade anskaffningsvärden	**493 696**	**493 696**
Ingående nedskrivningar	-113 719	-113 719
Utgående ackumulerade nedskrivningar	**-113 719**	**-113 719**
Utgående redovisat värde	**379 977**	**379 977**

Not 14 Specifikation andelar i koncernföretag

Namn	Kapital-andel	Rösträtts-andel	Bokfört värde
Åkers Germany GmbH	100%	100%	400
Shanxi ATR	60%	60%	85 987
Åkers Trading Company Shanghai Ltd	100%	100%	2 871
Åkers Cairo LLC	100%	100%	205
Åkers Istanbul Ltd	100%	100%	236
Åkers Sweden AB	100%	100%	290 278
			379 977

	Säte	Org.nr
Åkers Germany GmbH	Duisburg	HR88849
Shanxi ATR	Taiyuan	911400006623-635000
Åkers Trading Company Shanghai Ltd	Shanghai	310000400571845
Åkers Cairo LLC	Kairo	42158
Åkers Istanbul Ltd	Istanbul	0230305978
Åkers Sweden AB	Å.Styckebruk	556031-8080

Not 15 Andra långfristiga fordringar

	2021-12-31	2020-12-31
Vid årets början	216	285
Årets förändring depositoner	16	-60
Årets förändring övriga långfristiga fordringar	7	-9
Utgående ackumulerade anskaffningsvärden	**239**	**216**
Utgående redovisat värde	**239**	**216**

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Not 16 Förutbetalda kostnader och upplupna intäkter

	2021-12-31	2020-12-31
Förutbetalda försäkringspremier	15	0
Förutbetalda finansieringskostnader	0	1
Övriga förutbetalda kostnader	365	292
Övriga upplupna intäkter	101	1 795
	481	**2 088**

Not 17 Antal aktier och kvotvärde

Namn	Antal aktier	Kvot-värde
Stamaktier	1 400 000	7,14
	1 400 000	

Not 18 Disposition av vinst eller förlust

	2021-12-31
Förslag till vinstdisposition	
Styrelsen föreslår att till förfogande stående vinstmedel:	
balanserad vinst	295 442
årets förlust	-5 923
	289 519
disponeras så att	
i ny räkning överföres	289 519
	289 519

Not 19 Ställda säkerheter och eventualförpliktelser

	2021-12-31	2020-12-31
Eventualförpliktelser		
Personalförpliktelser	234	234
	234	**234**

Not 20 Avsättning för pensioner och liknande förpliktelser

	2021-12-31	2020-12-31
Pensioner och liknande förpliktelser		
Belopp vid årets ingång	11 691	11 574
Årets avsättning enligt Tryggandelagen, PRI pensionsgaranti	-6	117
	11 685	**11 691**

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Not 21 Övriga avsättningar

	2021-12-31	2020-12-31
Vid årets början	0	1 293
Garantiavsättningar Frankrike	0	-1 293
	0	**0**

Not 22 Upplupna kostnader och förutbetalda intäkter

	2021-12-31	2020-12-31
Personalrelaterade kostnader	1 563	2 421
Förutbetalda intäkter	8 810	6 267
Övrigt	74	528
	10 447	**9 216**

Not 23 Justering för poster som inte ingår i kassaflödet

	2021-12-31	2020-12-31
Avskrivningar	322	425
Avsättningar för pensioner	-6	117
Övriga avsättningar	0	-1 293
	316	**-751**

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Undertecknade försäkrar härmed att årsredovisningen har upprättats i enlighet med årsredovisningslagen och god redovisningssed, att aktuella redovisningsnormer har tillämpats och att lämnade uppgifter stämmer med faktiska förhållanden.

Åkers Styckebruk, datum enligt digital signering

Jörgen Hedström
Verkställande direktör

Vår revisionsberättelse har lämnats

BDO Sweden AB

Carl-Johan Kjellman
Auktoriserad revisor

Johan Pharmanson
Auktoriserad revisor

Syje|VPt9-HJeslsEvtc

SEALED BY Verified SYJEJVPT9-HJESLSEVTC

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Activity log

RECIPIENT	ACTION*	TIMESTAMP (CET)	METHOD	DETAILS
1. JÖRGEN HEDSTRÖM	**Signed**	**15.06.2022 13:38**	**eID**	**Swedish BankID (DOB: 04/04/1966)**
jorgen.hedstrom@akersrolls.com	Authenticated	15.06.2022 13:37	Low	IP: 62.119.17.2
2. CARL-JOHAN KJELLMAN	**Signed**	**15.06.2022 20:14**	**eID**	**Swedish BankID (DOB: 09/08/1974)**
carl-johan.kjellman@bdo.se	Authenticated	15.06.2022 20:12	Low	IP: 151.177.173.125
3. Sten Johan Pharmanson	**Signed**	**15.06.2022 23:31**	**eID**	**Swedish BankID (DOB: 13/11/1964)**
johan.pharmanson@bdo.se	Authenticated	15.06.2022 23:30	Low	IP: 81.229.61.219

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REVISIONSBERÄTTELSE

Till bolagsstämman i Åkers AB
Org.nr. 556153-4792

Rapport om årsredovisningen

Uttalanden

Vi har utfört en revision av årsredovisningen för Åkers AB för räkenskapsåret 2021-01-01 -- 2021-12-31.

Enligt vår uppfattning har årsredovisningen upprättats i enlighet med årsredovisningslagen och ger en i alla väsentliga avseenden rättvisande bild av Åkers ABs finansiella ställning per den 2021-12-31 och av dess finansiella resultat och kassaflöde för året enligt årsredovisningslagen. Förvaltningsberättelsen är förenlig med årsredovisningens övriga delar.

Vi tillstyrker därför att bolagsstämman fastställer resultaträkningen och balansräkningen.

Grund för uttalanden

Vi har utfört revisionen enligt International Standards on Auditing (ISA) och god revisionssed i Sverige. Vårt ansvar enligt dessa standarder beskrivs närmare i avsnittet "Revisorns ansvar". Vi är oberoende i förhållande till Åkers AB enligt god revisorssed i Sverige och har i övrigt fullgjort vårt yrkesetiska ansvar enligt dessa krav.

Vi anser att de revisionsbevis vi har inhämtat är tillräckliga och ändamålsenliga som grund för våra uttalanden.

Styrelsens och verkställande direktörens ansvar

Det är styrelsen och verkställande direktören som har ansvaret för att årsredovisningen upprättas och att den ger en rättvisande bild enligt årsredovisningslagen. Styrelsen och verkställande direktören ansvarar även för den interna kontroll som de bedömer är nödvändig för att upprätta en årsredovisning som inte innehåller några väsentliga felaktigheter, vare sig dessa beror på oegentligheter eller misstag.

Vid upprättandet av årsredovisningen ansvarar styrelsen och verkställande direktören för bedömningen av bolagets förmåga att fortsätta verksamheten. De upplyser, när så är tillämpligt, om förhållanden som kan påverka förmågan att fortsätta verksamheten och att använda antagandet om fortsatt drift. Antagandet om fortsatt drift tillämpas dock inte om styrelsen och verkställande direktören avser att likvidera bolaget, upphöra med verksamheten eller inte har något realistiskt alternativ till att göra något av detta.

Revisorns ansvar

Våra mål är att uppnå en rimlig grad av säkerhet om huruvida årsredovisningen som helhet inte innehåller några väsentliga felaktigheter, vare sig dessa beror på oegentligheter eller misstag, och att lämna en revisionsberättelse som innehåller våra uttalanden. Rimlig säkerhet är en hög grad av säkerhet, men är ingen garanti för att en revision som utförs enligt ISA och god revisionssed i Sverige alltid kommer att upptäcka en väsentlig felaktighet om en sådan finns. Felaktigheter kan uppstå på grund av oegentligheter eller misstag och anses vara väsentliga om de enskilt eller tillsammans rimligen kan förväntas påverka de ekonomiska beslut som användare fattar med grund i årsredovisningen.

Som del av en revision enligt ISA använder vi professionellt omdöme och har en professionellt skeptisk inställning under hela revisionen. Dessutom:

- identifierar och bedömer vi riskerna för väsentliga felaktigheter i årsredovisningen, vare sig dessa beror på oegentligheter eller misstag, utformar och utför granskningsåtgärder bland annat utifrån dessa risker och inhämtar revisionsbevis som är tillräckliga och ändamålsenliga för att utgöra en grund för våra uttalanden. Risken för att inte upptäcka en väsentlig felaktighet till följd av oegentligheter är högre än för en väsentlig felaktighet som beror på misstag, eftersom oegentligheter kan innefatta agerande i maskopi, förfalskning, avsiktliga utelämnanden, felaktig information eller åsidosättande av intern kontroll.
- skaffar vi oss en förståelse av den del av bolagets interna kontroll som har betydelse för vår revision för att utforma granskningsåtgärder som är lämpliga med hänsyn till omständigheterna, men inte för att uttala oss om effektiviteten i den interna kontrollen.
- utvärderar vi lämpligheten i de redovisningsprinciper som används och rimligheten i styrelsens och verkställande direktörens uppskattningar i redovisningen och tillhörande upplysningar.
- drar vi en slutsats om lämpligheten i att styrelsen och verkställande direktören använder antagandet om fortsatt drift vid upprättandet av årsredovisningen. Vi drar också en slutsats, med grund i de inhämtade revisionsbevisen, om huruvida det finns någon väsentlig osäkerhetsfaktor som avser sådana händelser eller förhållanden som kan leda till betydande tvivel om bolagets förmåga att fortsätta verksamheten. Om vi drar slutsatsen att det finns en väsentlig osäkerhetsfaktor, måste vi i revisionsberättelsen fästa uppmärksamheten på upplysningarna i årsredovisningen om den väsentliga osäkerhetsfaktorn eller, om sådana upplysningar är otillräckliga, modifiera uttalandet om årsredovisningen. Våra slutsatser baseras på de revisionsbevis som inhämtas fram till datumet för revisionsberättelsen. Dock kan framtida händelser eller förhållanden göra att ett bolag inte längre kan fortsätta verksamheten.
- utvärderar vi den övergripande presentationen, strukturen och innehållet i årsredovisningen, däribland upplysningarna, och om årsredovisningen återger de underliggande transaktionerna och händelserna på ett sätt som ger en rättvisande bild.

Vi måste informera styrelsen om bland annat revisionens planerade omfattning och inriktning samt tidpunkten för den. Vi måste också informera om betydelsefulla iakttagelser under revisionen, däribland de eventuella betydande brister i den interna kontrollen som vi identifierat.

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Rapport om andra krav enligt lagar och andra författningar

Uttalanden

Utöver vår revision av årsredovisningen har vi även utfört en revision av styrelsens och verkställande direktörens förvaltning för Åkers AB för räkenskapsåret 2021-01-01 -- 2021-12-31 samt av förslaget till dispositioner beträffande bolagets vinst eller förlust.

Vi tillstyrker att bolagsstämman behandlar förlusten enligt förslaget i förvaltningsberättelsen och beviljar styrelsens ledamöter och verkställande direktören ansvarsfrihet för räkenskapsåret.

Grund för uttalanden

Vi har utfört revisionen enligt god revisionssed i Sverige. Vårt ansvar enligt denna beskrivs närmare i avsnittet "Revisorns ansvar". Vi är oberoende i förhållande till Åkers AB enligt god revisorssed i Sverige och har i övrigt fullgjort vårt yrkesetiska ansvar enligt dessa krav.

Vi anser att de revisionsbevis vi har inhämtat är tillräckliga och ändamålsenliga som grund för våra uttalanden.

Styrelsens och verkställande direktörens ansvar

Det är styrelsen som har ansvaret för förslaget till dispositioner beträffande bolagets vinst eller förlust. Vid förslag till utdelning innefattar detta bland annat en bedömning av om utdelningen är försvarlig med hänsyn till de krav som bolagets verksamhetsart, omfattning och risker ställer på storleken av bolagets egna kapital, konsolideringsbehov, likviditet och ställning i övrigt.

Styrelsen ansvarar för bolagets organisation och förvaltningen av bolagets angelägenheter. Detta innefattar bland annat att fortlöpande bedöma bolagets ekonomiska situation och att tillse att bolagets organisation är utformad så att bokföringen, medelsförvaltningen och bolagets ekonomiska angelägenheter i övrigt kontrolleras på ett betryggande sätt. Verkställande direktören ska sköta den löpande förvaltningen enligt styrelsens riktlinjer och anvisningar och bland annat vidta de åtgärder som är nödvändiga för att bolagets bokföring ska fullgöras i överensstämmelse med lag och för att medelsförvaltningen ska skötas på ett betryggande sätt.

Revisorns ansvar

Vårt mål beträffande revisionen av förvaltningen, och därmed vårt uttalande om ansvarsfrihet, är att inhämta revisionsbevis för att med en rimlig grad av säkerhet kunna bedöma om någon styrelseledamot eller verkställande direktören i något väsentligt avseende:

- företagit någon åtgärd eller gjort sig skyldig till någon försummelse som kan föranleda ersättningsskyldighet mot bolaget, eller
- på något annat sätt handlat i strid med aktiebolagslagen, årsredovisningslagen eller bolagsordningen.

Vårt mål beträffande revisionen av förslaget till dispositioner av bolagets vinst eller förlust, och därmed vårt uttalande om detta, är att med rimlig grad av säkerhet bedöma om förslaget är förenligt med aktiebolagslagen.

Rimlig säkerhet är en hög grad av säkerhet, men ingen garanti för att en revision som utförs enligt god revisionssed i Sverige alltid kommer att upptäcka åtgärder eller försummelser som kan föranleda ersättningsskyldighet mot bolaget, eller att ett förslag till dispositioner av bolagets vinst eller förlust inte är förenligt med aktiebolagslagen.

Som en del av en revision enligt god revisionssed i Sverige använder vi professionellt omdöme och har en professionellt skeptisk inställning under hela revisionen. Granskningen av förvaltningen och förslaget till dispositioner av bolagets vinst eller förlust grundar sig främst på revisionen av räkenskaperna. Vilka tillkommande granskningsåtgärder som utförs baseras på vår professionella bedömning med utgångspunkt i risk och väsentlighet. Det innebär att vi fokuserar granskningen på sådana åtgärder, områden och förhållanden som är väsentliga för verksamheten och där avsteg och överträdelser skulle ha särskild betydelse för bolagets situation. Vi går igenom och prövar fattade beslut, beslutsunderlag, vidtagna åtgärder och andra förhållanden som är relevanta för vårt uttalande om ansvarsfrihet. Som underlag för vårt uttalande om styrelsens förslag till dispositioner beträffande bolagets vinst eller förlust har vi granskat om förslaget är förenligt med aktiebolagslagen.

Stockholm 15 juni 2022

BDO Sweden AB

Carl-Johan Kjellman
Auktoriserad revisor

Johan Pharmarson
Auktoriserad revisor

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number 1-898

AMPCO-PITTSBURGH CORPORATION

Pennsylvania	**25-1117717**
(State of Incorporation)	**(I.R.S. Employer Identification No.)**

726 Bell Avenue, Suite 301
Carnegie, Pennsylvania 15106
(Address of principal executive offices)

(412) 456-4400
(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $1 par value	AP	New York Stock Exchange
Series A Warrants to purchase shares of Common Stock	AP WS	NYSE American Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting stock of Ampco-Pittsburgh Corporation held by non-affiliates on June 30, 2021 (based upon the closing price of the Registrant's Common Stock on the New York Stock Exchange on that date) was approximately $68 million.

As of March 9, 2022, 19,190,536 common shares were outstanding.

Documents Incorporated by Reference: Part III of this report incorporates by reference certain information from the Proxy Statement for the 2022 Annual Meeting of Shareholders.

TABLE OF CONTENTS

PART I

Item 1. Business 1

Item 1a. Risk Factors 5

Item 1b. Unresolved Staff Comments 11

Item 2. Properties 11

Item 3. Legal Proceedings 13

Item 4. Mine Safety Disclosures 13

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities 14

Item 6. Reserved 14

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations 14

Item 7a. Quantitative and Qualitative Disclosures about Market Risk 23

Item 8. Financial Statements and Supplementary Data 24

Item 9. Changes In and Disagreements With Accountants On Accounting and Financial Disclosure 65

Item 9a. Controls and Procedures 65

Item 9b. Other Information 65

Item 9c. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections 65

PART III

Item 10. Directors, Executive Officers and Corporate Governance 66

Item 11. Executive Compensation 66

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters 66

Item 13. Certain Relationships and Related Transactions, and Director Independence 66

Item 14. Principal Accountant Fees and Services 66

Part IV

Item 15. Exhibits and Financial Statement Schedules 67

Item 16. Form 10-K Summary 70

Signatures 71

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FORWARD-LOOKING STATEMENTS

The Private Securities Litigation Reform Act of 1995 (the "Act") provides a safe harbor for forward-looking statements made by us or on our behalf. *Management's Discussion and Analysis of Financial Condition and Results of Operations* and other sections of this Annual Report on Form 10-K, as well as the consolidated financial statements and notes hereto, may include, but are not limited to, statements about operating performance, trends and events that we expect or anticipate will occur in the future, statements about sales and production levels, restructurings, the impact from global pandemics (including COVID-19), profitability and anticipated expenses, inflation, the global supply chain, future proceeds from the exercise of outstanding warrants, and cash outflows. All statements in this document other than statements of historical fact are statements that are, or could be, deemed "forward-looking statements" within the meaning of the Act and words such as "may," "will," "intend," "believe," "expect," "anticipate," "estimate," "project," "forecast" and other terms of similar meaning that indicate future events and trends are also generally intended to identify forward-looking statements. Forward-looking statements speak only as of the date on which such statements are made, are not guarantees of future performance or expectations, and involve risks and uncertainties. For us, these risks and uncertainties include, but are not limited to:

- cyclical demand for products and economic downturns;
- excess global capacity in the steel industry;
- fluctuations in the value of the U.S. dollar relative to other currencies;
- increases in commodity prices, reductions in electricity and natural gas supply or shortages of key production materials;
- limitations in availability of capital to fund our strategic plan;
- inability to maintain adequate liquidity in order to meet our operating cash flow requirements, repay maturing debt and meet other financial obligations;
- inability to obtain necessary capital or financing on satisfactory terms in order to acquire capital expenditures that may be necessary to support our growth strategy;
- inoperability of certain equipment on which we rely;
- liability of our subsidiaries for claims alleging personal injury from exposure to asbestos-containing components historically used in certain products of our subsidiaries;
- changes in the existing regulatory environment;
- inability to successfully restructure our operations;
- consequences of global pandemics (including COVID-19);
- work stoppage or another industrial action on the part of any of our unions;
- inability to satisfy the continued listing requirements of the New York Stock Exchange or the NYSE American Exchange;
- potential attacks on information technology infrastructure and other cyber-based business disruptions;
- failure to maintain an effective system of internal control; and
- those discussed more fully elsewhere in this report, particularly in Item 1A, *Risk Factors*, in Part I of this Annual Report on Form 10-K.

We cannot guarantee any future results, levels of activity, performance or achievements. In addition, there may be events in the future that we are not able to predict accurately or control which may cause actual results to differ materially from expectations expressed or implied by forward-looking statements. Except as required by applicable law, we assume no obligation, and disclaim any obligation, to update forward-looking statements whether as a result of new information, events or otherwise.

–PART I–

ITEM 1. BUSINESS

GENERAL DEVELOPMENT OF BUSINESS

Ampco-Pittsburgh Corporation (the "Corporation") was incorporated in Pennsylvania in 1929. The Corporation, individually or together with its consolidated subsidiaries, is also referred to herein as the "Registrant." The Corporation manufactures and sells highly engineered, high-performance specialty metal products and customized equipment utilized by industry throughout the world. It

operates in two business segments – the *Forged and Cast Engineered Products* ("FCEP") segment and the *Air and Liquid Processing* ("ALP") segment. This segment presentation is consistent with how the Corporation's chief operating decision maker evaluates financial performance and makes resource allocation and strategic decisions about the business.

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency caused by a new strain of the coronavirus ("COVID-19") and advised of the risks to the international community as the virus spread globally. In March 2020, the WHO classified the COVID-19 outbreak as a pandemic based on the rapid increase in exposure globally. In response, many state and local governments required the closure of various businesses. The U.S. Department of Homeland Security, however, issued guidance outlining criteria to identify domestic businesses as operating in critical infrastructure industries, essential to the economic prosperity, security and continuity of the United States, which provides exceptions to certain closures mandated by state and local governments and permits businesses to continue operations during such an order. The Corporation's domestic businesses were, and continue to be, deemed to participate in critical infrastructure industries; however, despite the designation and particularly in 2020, the Corporation has had to periodically and temporarily idle certain operations of its FCEP segment and, consequently, furlough certain of its employees in response to market conditions. While most of these direct impacts were experienced in 2020, as variants have developed, the Corporation has experienced episodic disruptions to its operations or the operations of its customers and suppliers. The pandemic also has spurred disruptions to the global supply chain, which is believed to be a key factor in the global inflationary pressures of 2021. Accordingly, the Corporation has experienced, and may continue to experience, customer-requested delays of deliveries or cancellation of orders, lower order intake resulting from customers postponing projects, inability to obtain raw materials and supplies critical to the manufacturing process, delays in receiving and shipping product due to the lack of transportation, and higher cost of production and transportation.

NARRATIVE DESCRIPTION OF BUSINESS

Forged and Cast Engineered Products Segment

The FCEP segment produces forged hardened steel rolls, cast rolls and forged engineered products ("FEP"). Forged hardened steel rolls are used primarily in cold rolling mills by producers of steel, aluminum and other metals. Cast rolls, which are produced in a variety of iron and steel qualities, are used mainly in hot and cold strip mills, medium/heavy section mills and plate mills. FEP principally are sold to customers in the steel distribution market, oil and gas industry and the aluminum and plastic extrusion industries. The segment has operations in the United States, England, Sweden, and Slovenia and an equity interest in three joint venture companies in China. Collectively, the segment primarily competes with European, Asian and North and South American companies in both domestic and foreign markets and distributes a significant portion of its products through sales offices located throughout the world.

Union Electric Steel Corporation produces forged hardened steel rolls and FEP. It is headquartered in Carnegie, Pennsylvania, with three manufacturing facilities in Pennsylvania and one in Indiana. The following entities are direct or indirect operating subsidiaries of Union Electric Steel Corporation:

Union Electric Steel UK Limited produces cast rolls in a variety of iron and steel qualities for hot and cold strip mills, medium/heavy section mills and plate mills. It is located in Gateshead, England.

Åkers Sweden AB produces cast rolls in a variety of iron and steel qualities for hot strip finishing mills, roughing mills, plate mills, and medium/heavy section mills. It is located in Åkers Styckebruk, Sweden.

Åkers Valji Ravne d.o.o. produces forged rolls for cluster mills and Z-Hi mills, work rolls for narrow and wide strip and aluminum mills, back-up rolls for narrow strip mills, and leveling rolls and shafts. It is located in Ravne, Slovenia.

Alloys Unlimited Processing, LLC is a distributor of tool steels and alloys and carbon round bar. It is located in Austintown, Ohio.

The segment's three joint venture companies in China include:

Shanxi Åkers TISCO Roll Co., Ltd. is a joint venture between Taiyuan Iron and Steel Co. Ltd. and Åkers AB, a non-operating subsidiary of Union Electric Steel Corporation, that produces cast rolls for hot strip mills, steckel mills and medium plate mills. It is located in Taiyuan, Shanxi Province, China. Åkers AB holds a 59.88% interest in the joint venture.

Magong Gongchang United Rollers Co., Ltd., previously known as Masteel Gongchang Roll Co., Ltd., is a joint venture among Union Electric Steel Corporation, Magang (Group) Holding Co., Ltd. and Jiangsu Gong-Chang Roll Co., Ltd. that produces large forged backup rolls for hot and cold strip mills. It is located in Maanshan, Anhui Province, China. Union Electric Steel (Hong Kong) Limited, a non-operating subsidiary of Union Electric Steel Corporation, holds a 33% interest in the joint venture.

Jiangsu Gong-Chang Roll Co., Ltd., previously known as Jiangsu Gongchang Roll Joint-Stock Co., Ltd., is a joint venture that produces cast rolls for hot and cold strip mills, medium/heavy section mills and plate mills. It is located in Xinjian Town Yixing City, Jiangsu Province, China. Union Electric Steel UK Limited holds a 24.03% interest in the joint venture.

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Air and Liquid Processing Segment

The ALP segment includes Aerofin, Buffalo Air Handling and Buffalo Pumps, all divisions of Air & Liquid Systems Corporation ("Air & Liquid"), a wholly owned subsidiary of the Corporation. The segment has operations in Virginia and New York with headquarters in Carnegie, Pennsylvania. The segment distributes a significant portion of its products through a common independent group of sales offices located throughout the United States and has several major competitors.

Aerofin Division of Air & Liquid Systems Corporation produces custom-engineered finned tube heat exchange coils and related heat transfer products for a variety of industries including OEM/commercial, nuclear power generation and industrial manufacturing. It is located in Lynchburg, Virginia.

Buffalo Air Handling Division of Air & Liquid Systems Corporation produces large custom-designed air handling systems for institutional (e.g., hospital, university), pharmaceutical and general industrial building markets. It is located in Amherst, Virginia.

Buffalo Pumps Division of Air & Liquid Systems Corporation manufactures centrifugal pumps for the fossil fueled power generation, marine defense and industrial refrigeration industries. It is located in North Tonawanda, New York.

Products

In both segments, the products are dependent on engineering, principally custom designed, and are sold to sophisticated commercial and industrial users located throughout the world. Products are delivered directly to the customer via third-party carriers or customer-arranged transportation. For the FCEP segment, no customers exceeded 10% of its net sales in 2021, and one customer accounted for approximately 11% of its net sales in 2020. The loss of this customer could have a material adverse effect on the segment. For the ALP segment, no customers exceeded 10% of its net sales in 2021 or 2020. For additional information on the products produced and financial information about each segment, see Note 16, *Revenue*, and Note 23, *Business Segments*, to the Consolidated Financial Statements.

Raw Materials

Raw materials used in both segments are generally available from many sources, and neither segment is dependent upon any single supplier for any raw material. Substantial volumes of raw materials used by each segment are subject to significant variations in price. The Corporation's subsidiaries generally do not purchase or commit for the purchase of a major portion of raw materials significantly in advance of the time they require such materials but do make forward commitments for natural gas, electricity and certain commodities (copper and aluminum). See Note 14, *Derivative Instruments*, to the Consolidated Financial Statements.

Patents and Trademarks

While the Corporation and its subsidiaries hold certain patents, trademarks and licenses, in the opinion of the Corporation, they are not material to either segment.

Backlog

The backlog of orders at December 31, 2021, was approximately $292.5 million compared to a backlog of $246.1 million at year-end 2020. Both segments contributed to the improvement in backlog. Backlog for the FCEP segment increased by approximately $31.4 million year over year due to a combination of (i) higher orders for FEP as a result of increased demand from the steel distribution and oil and gas markets, (ii) improved pricing for FEP and mill rolls and (iii) higher variable-index surcharges included in backlog. Backlog for the ALP segment increased by approximately $15.0 million and benefited from improved order intake for each of its product lines. Approximately 6% of the backlog is expected to be released after 2022.

Competition

The Corporation faces considerable competition from a large number of companies in both segments. The Corporation believes, however, that its subsidiaries are significant participants in each of the niche markets that they serve. Competition in both segments is based on quality, service, price, and delivery.

Environmental Protection Compliance Costs

Expenditures for environmental control matters were not material to either segment in 2021 and are not expected to be material in 2022.

Employees and Human Capital Management

Employees

On December 31, 2021, the Corporation and its subsidiaries had 1,485 active employees worldwide, of which approximately 50% were employed in the United States. Approximately one-third of the Corporation's employees are covered by collective bargaining agreements or agreements with works councils.

Oversight

The Compensation Committee of the Board of Directors maintains oversight of the Corporation's human capital management strategies that it may deem important to the long-term sustainability of the Corporation.

Key Areas of Focus for the Corporation

Health and Safety – The Corporation's health and safety program is designed around the regulations associated with the specific hazards and unique working environments of the Corporation's manufacturing and headquarter operations. The Corporation requires all of its locations to perform regular safety audits to ensure compliance with the safety program. Leading indicators, such as reporting and training of all near-miss events, are used to identify risks for potential future incidents. Lagging indicators, such as OSHA recordable rates and lost-time incidence rates, are used to measure achievement of safety metrics.

Diversity and Inclusion – The Corporation tracks various metrics such as turnover, absenteeism and diversity. The Corporation has developed strategies to ensure that employees of diverse backgrounds and perspectives enjoy a culture of mutual respect, inclusiveness and teamwork in an environment which values diversity.

AVAILABLE INFORMATION

The Corporation files annual, quarterly and current reports; amendments to those reports; proxy statements; and other information with the Securities and Exchange Commission ("SEC"). You may access and read the Corporation's filings without charge through the SEC's website at www.sec.gov.

The Corporation's internet address is www.ampcopittsburgh.com. The Corporation makes available, free of charge on its website, access to these reports as soon as reasonably practicable after such material is filed with, or furnished to, the SEC. The information on the Corporation's website is not part of this Annual Report on Form 10-K.

EXECUTIVE OFFICERS

The name, age, position with the Corporation, and business experience for at least the past five years of the Executive Officers(1) of the Corporation are as follows:

J. Brett McBrayer (age 56). Mr. McBrayer has served as the Corporation's Chief Executive Officer since July 2018. He previously served as President and Chief Executive Officer at Airtex Products and ASC Industries, a global manufacturer and distributor of automotive after-market and OEM fuel and water pumps, from 2012 to 2017. Airtex Products and ASC Industries, together with its parent company, UCI International LLC, and affiliated companies, filed for bankruptcy protection in June 2016, and successfully emerged in December 2016. Mr. McBrayer also served as Vice President and General Manager of the Alcan Cable business at Rio Tinto Alcan, as Vice President and General Manager of the Specialty Metals Division at Precision Cast Parts Corporation, and held positions of various responsibility and leadership during his 20 years with Alcoa, Inc. Mr. McBrayer received a Bachelor of Science in Industrial Engineering from the University of Tennessee and a Master of Arts in Applied Behavioral Science from Bastyr University.

Michael G. McAuley (age 58). Mr. McAuley has served as Senior Vice President, Chief Financial Officer and Treasurer of the Corporation since March 2018 and as Vice President, Chief Financial Officer and Treasurer since April 2016. Previously, he served as Senior Vice President and Chief Financial Officer of RTI International Metals, Inc., a producer of titanium mill products and fabricated metal components, from July 2014 to October 2015.

Samuel C. Lyon (age 53). Mr. Lyon has served as President of Union Electric Steel Corporation since February 2019. He previously served as Vice President and Group President of Performance Engineered Products at Carpenter Technology Corporation, a developer, manufacturer and distributor of stainless steels and corrosion-resistant alloys, from July 2017 to January 2019. Prior to that, he served as Vice President and General Manager of Dynamet Incorporated, the titanium business unit of Carpenter Technology Corporation, from October 2016 to June 2017, and as Chief Operating Officer of UCI-Pumps business of UCI-Fram, an OEM and after-market automotive parts supplier, from March 2013 to September 2016.

David G. Anderson (age 54). Mr. Anderson has been employed by the Corporation since 2010 and has served as President of Air & Liquid Systems Corporation since January 2022. He previously served as Vice President of Finance for Union Electric Steel Corporation from October 2018 to December 2021, and as Vice President of Air & Liquid Systems Corporation from May 2016 to October 2018.

(1) Officers serve at the discretion of the Board of Directors of the Corporation and none of the listed individuals serve as a director of another public company.

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ITEM 1A. RISK FACTORS

Our business, financial condition, results of operations, liquidity, and the value of any investment in our securities are subject to a number of risks. The risks and uncertainties described below are those that we have identified as material, but are not the only risks and uncertainties we face. Our business is also subject to general risks and uncertainties that affect many other companies, including overall economic and industry conditions. The COVID-19 pandemic has led to general uncertainty and adverse changes in global economic conditions and has heightened, and in some cases manifested, certain of the risks we normally face in operating our business, including those disclosed herein. Additional risks and uncertainties not currently known to us or that we currently believe are not material also may impair our business, financial condition, results of operations, liquidity, and the value of any investment in our securities.

RISKS RELATED TO OUR BUSINESS AND INDUSTRY

Cyclical demand for products and economic downturns could reduce the demand for, and sales of, our products, which could adversely affect our margins and profitability.

A significant portion of the FCEP segment's sales consists of mill rolls to customers in the global steel and aluminum industry that can be periodically impacted by economic or cyclical downturns. Such downturns, the timing and length of which are difficult to predict, may reduce the demand for, and sales of, our forged and cast rolls both in the United States and the rest of the world. Lower demand for rolls may also adversely impact profitability as other competing roll producers lower selling prices in the marketplace in order to fill their manufacturing capacity. Cancellation of orders or deferral of delivery of rolls may occur and produce an adverse impact on our financial results. In addition, sales of FEP, specifically open-die forged products for the oil and gas industry and steel distribution markets, are impacted by fluctuations in global energy prices.

Excess global capacity in the steel industry could lower prices for our products, which could adversely affect our sales, margins and profitability, as well as the collectability of our receivables and the salability of our in-process inventory.

The global steel manufacturing capacity continues to exceed global consumption of steel products. Such excess capacity often results in manufacturers in certain countries exporting steel at prices significantly below their home market prices (often due to local government assistance or subsidies), which leads to global market destabilization and reduced sales and profitability of some of our customers which, in turn, affects our sales and profit margins, as well as the collectability of our receivables and the salability of our in-process inventory. Excess capacity in the global roll industry and cyclicality in end-market demand also pose risks of potential impairment of our long-lived assets, which could be material to our results of operations and the carrying value of our assets.

A reduction in the level of our export sales, as well as other economic factors in foreign countries, could have an adverse impact on our financial results.

Exports are a significant portion of our sales. Historically, changes in foreign exchange rates, particularly in respect of the U.S. dollar, British pound, Swedish krona, and euro, have impacted the export of our products and may do so again in the future. Other factors that may adversely impact our export sales and our operating results include political and economic instability, export controls, changes in tax laws and tariffs, and new indigenous producers in overseas markets. A reduction in the level of our export sales may have an adverse impact on our financial results. In addition, changes in foreign currency exchange rates may provide foreign roll suppliers with advantages based on those lower foreign currency exchange rates and, therefore, permit them to compete in our home markets.

Fluctuation in the value of the U.S. dollar relative to other currencies could adversely affect our business, results of operations and financial condition.

Certain of our subsidiaries operate in foreign jurisdictions and, accordingly, earn revenues, pay expenses, own assets, and incur liabilities in countries using currencies other than the U.S. dollar. Since our consolidated financial statements are presented in U.S. dollars, we must translate revenues and expenses into U.S. dollars at the average exchange rate during each reporting period and assets and liabilities into U.S. dollars at the exchange rate in effect at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against other major currencies will affect the translated value for revenue, expenses and balance sheet items denominated in foreign currencies and could materially affect our financial results expressed in U.S. dollars.

Increases in commodity prices, reductions in electricity and natural gas supply or shortage of key production materials could adversely impact our production, which could result in lower profitability or higher losses.

Our subsidiaries use certain commodities in the manufacture of their products. These include steel scrap, ferroalloys and energy. Any unexpected, sudden or prolonged price increase may cause a reduction in our profit margins or losses where beneficial fixed-priced contracts do not exist, unfavorable fixed-price contracts cannot be modified or increases cannot be obtained in our selling prices. In addition, there could be a time lag between when we incur such price increases and when we are able to recover such increases in our selling prices. Global increases in transportation costs and more limited availability of freight carriers may impact timely delivery of

20221031111031

supplies to our subsidiaries and product to our customers, which may be accentuated during pandemics, and may negatively impact our sales, production and profitability. There also may be curtailment in electricity or natural gas supply or availability of key production materials, all of which could adversely impact our production. Shortage of critical materials, while driving up costs, may be of such severity as to disrupt our production, all of which may impact our sales and profitability. Geopolitical factors or wars could exacerbate these risks. In particular, the Russia-Ukraine conflict may intensify the inflationary effect for the cost of natural gas, raw materials and other production components which could be difficult to predict given the fluidity of the military conflict, the novelty of Western sanctions against Russia and possibility of yet harsher ones.

We could face limitations in availability of capital to fund our strategic plans. Additionally, deterioration in our credit profile or increases in interest rates could increase our costs of borrowing and further limit our access to capital markets and commercial credit.

We are parties to a senior secured asset-based revolving credit facility with a consortium of banks. The credit facility is collateralized by a first priority perfected security interest in substantially all of our assets. The credit facility provides for borrowings not to exceed $100 million and an allowance of $20 million for new capital equipment financing but otherwise restricts us from incurring additional indebtedness outside of the agreement, unless approved by the banks. The credit facility is subject to various affirmative and negative covenants and contains various sub-limits, including those based on the type of collateral and borrowings by geographic region. If the financial covenants become difficult to meet or if our borrowing needs increase beyond the prescribed limits, our financial position, results of operations and liquidity may be materially adversely affected. In addition, changes in our credit profile could cause less favorable commercial terms for the procurement of materials required to manufacture our products, which also could have a negative impact on our financial position, results of operations and liquidity. Further, our access to public and private debt markets is limited based on our size, credit profile and not being a well-known seasoned issuer, which may result in limitations in availability of capital to fund our strategic plans.

We need to maintain adequate liquidity in order to meet our operating cash flow requirements, repay maturing debt and meet other financial obligations. If we fail to comply with the covenants contained in our revolving credit facility, it may adversely affect our liquidity, results of operations and financial condition.

Our liquidity is a function of our cash on-hand, our ability to successfully generate cash flows from a combination of efficient operations and continuing operating improvements, availability from our revolving credit facility, access to capital markets, and funding from other third parties. We believe our liquidity (including operating and other cash flows that we expect to generate and revolving credit availability) should be sufficient to meet our operating requirements as they occur; however, our ability to maintain sufficient liquidity going forward is subject to the general liquidity of and ongoing changes in the credit markets as well as general economic, financial, competitive, legislative, regulatory, and other market factors that are beyond our control.

Our revolving credit facility is subject to various affirmative and negative covenants. Failure to comply with material provisions or covenants in the revolving credit facility could have a material adverse effect on our liquidity, results of operations and financial condition. We may seek to renegotiate or replace such facility, or may determine not to replace such facility at all and may instead pursue other forms of liquidity. Any new credit agreement or these other forms of liquidity may result in higher borrowing costs and contain non-investment grade covenants that are less advantageous to us than our existing revolving credit facility.

Our growth strategy may require substantial capital expenditures. We may be unable to obtain necessary capital or financing on satisfactory terms.

To support our growth strategy, we expect to continue to make substantial capital expenditures. We expect to fund capital expenditures with cash generated by operations and borrowings under our credit facility; however, our financing needs may require us to alter or increase our capitalization substantially through the issuance of debt or equity securities. The issuance of additional indebtedness would require that a portion of our cash flows from operations be used for the payment of interest and principal, thereby reducing our ability to use our cash flows from operations to fund working capital, capital expenditures and acquisitions. Furthermore, raising equity capital generally would dilute existing shareholders. If additional capital is needed, we may not be able to obtain debt or equity financing on terms acceptable to us, if at all.

Dependence on certain equipment may cause an interruption in our production if such equipment is out of operation for an extended period of time, which could result in lower sales and profitability.

Our principal business relies on certain unique equipment such as an electric arc furnace and a spin cast work roll machine. Although a comprehensive critical spare inventory of key components for this equipment is maintained, if any such unique equipment is out of operation for an extended period, it may result in a significant reduction in our sales and earnings.

The ultimate liability of our subsidiaries for claims alleging personal injury from exposure to asbestos-containing components historically used in certain products of our subsidiaries could have a material adverse effect on our financial condition, results of operations or liquidity in the future.

Certain of our subsidiaries, and in some cases, we, are defendants in numerous claims alleging personal injury from exposure to asbestos-containing components historically used in certain products of these subsidiaries. Through the current year end, our insurance has covered a majority of our settlement and defense costs. We believe that the estimated costs, net of anticipated insurance recoveries, of our pending and future asbestos legal proceedings should not have a material adverse effect on our financial condition or liquidity. However, there can be no assurance that our subsidiaries or we will not be subject to significant additional claims in the future or that our subsidiaries' ultimate liability with respect to asbestos claims will not present significantly greater and longer lasting financial exposure than provided in our consolidated financial statements. The ultimate net liability with respect to such pending and any unasserted claims is subject to various uncertainties, including the following:

- the number and nature of claims in the future;
- the costs of defending and settling these claims;
- insolvencies among our insurance carriers and the risk of future insolvencies;
- the possibility that adverse jury verdicts could require damage payments in amounts greater than the amounts for which we have historically settled claims;
- possible changes in the litigation environment or federal and state law governing the compensation of asbestos claimants; and
- the risk that the bankruptcies of other asbestos defendants may increase our costs.

Because of the uncertainties related to such claims, it is possible that our ultimate liability could have a material adverse effect on our financial condition, results of operations or liquidity in the future.

A change in the existing regulatory environment could negatively affect our operations and financial performance.

We are subject to a wide variety of complex domestic and foreign laws, rules and regulations, including trade policies and tax regimes. We are affected by new laws and regulations and changes to existing laws and regulations, including interpretations by the courts and regulators, whether prompted by changes in government administrations or otherwise. These laws, regulations and policies, and changes thereto, may result in restrictions or limitations to our current operational practices and processes and product/service offerings which could negatively impact our current cost structure, revenue streams, future tax obligations, the value of our deferred income tax assets, cash flows, and overall financial position.

In 2018, the United States imposed tariffs of 25% on primary steel imports and 10% on primary aluminum imports into the United States. As consumers of steel and aluminum in some of our products, our cost base is exposed to the impact of this action, or similar actions, which could reduce our margins, and we could potentially lose market share to foreign competitors not subject to similar tariff increases. Our financial condition, results of operations and liquidity may continue to be affected by these tariffs, or similar actions. Moreover, these new tariffs, or other changes in U.S. trade policy, have resulted in, and may continue to trigger, retaliatory actions by affected countries which could adversely impact demand for our products, as well as impact our costs, customers, suppliers, and/or the U.S. economy or certain sectors thereof and, thus, may adversely impact our business, operations and financial performance.

We may not be able to achieve the expected benefits of restructuring our operations or consummating future divestitures of operations which become non-core to our portfolio.

We may, from time to time, divest businesses that become less of a strategic fit within our core portfolio or restructure operations to improve our operating results. Our profitability may be impacted by gains or losses on the sale or restructuring of such businesses and our level of expected cost savings from restructuring actions may not materialize. Additionally, we may be required to record asset impairment or restructuring charges related to these businesses and may in the future become responsible for liabilities which materialize post-divestiture. These issues may adversely impact our financial position, results of operations and liquidity.

We have significant international operations and sales and face risks related to global health epidemics such as the coronavirus.

Outbreaks of contagious diseases and other adverse public health developments in countries where we operate could have a material and adverse effect on our business, financial condition and results of operations. For example, the outbreak of a novel strain of the coronavirus resulted in significant local governmental measures being implemented to control the spread of the virus, including restrictions on manufacturing and the movement of employees in many regions and countries. The coronavirus has had a significant impact on our business and financial results and recovery depends on future developments, which remain highly uncertain. Future

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pandemics may result in a widespread health crisis that could adversely affect the economies and financial markets of many countries, resulting in an economic downturn, and negatively impact our sales and results of operations.

The COVID-19 pandemic has caused and may continue to cause disruptions in manufacturing industries.

The COVID-19 pandemic has significantly increased economic and demand uncertainty and could cause a sustained global recession. It has impacted, and may continue to impact, our financial condition, results of operations and liquidity.

While the U.S. Department of Homeland Security guidance has identified our domestic businesses as operating in critical infrastructure industries, essential to the economic prosperity, security and continuity of the United States, we have had to periodically and temporarily idle certain operations of our FCEP segment and, consequently, furlough certain of our employees in response to market conditions. While most of these direct impacts were experienced in 2020, as variants have developed, we have experienced episodic disruptions to our operations or to the operations of our customers and suppliers. The pandemic also has spurred disruptions to the global supply chain, which is believed to be a key factor in the global inflationary pressures of 2021. Accordingly, the FCEP segment has experienced, and may continue to experience, customer-requested delays of deliveries or cancellation of orders, lower order intake resulting from customers postponing projects, inability to obtain raw materials and supplies critical to the manufacturing process, delays in receiving and shipping product due to the lack of transportation, and higher cost of production and transportation. We also may experience long-term disruptions to our operations resulting from changes in government policy or guidance; quarantines of employees, customers and suppliers in areas affected by the pandemic; and closures of businesses or manufacturing facilities that are critical to our business or our supply chains. We may also incur higher write-offs of accounts receivables and impairment charges on our asset values, including property, plant and equipment and intangible assets.

The COVID-19 pandemic also could adversely affect our liquidity and our ability to access the capital markets. Additionally, government stimulus programs available to us, our customers or our suppliers may prove to be insufficient or ineffective. Furthermore, in the event that the impact from the COVID-19 pandemic causes us to be unable to maintain a certain level of excess availability under our revolving credit facility, our availability of funds may become limited, or we may be required to renegotiate the facility on less favorable terms. If we are unable to access additional credit at the levels we require, or the cost of credit is greater than expected, it could materially adversely affect our financial condition, results of operations and liquidity.

Although our internal control over financial reporting has not been impacted to date, the COVID-19 pandemic could negatively affect it in the future if infections within our workforce are significant or our workforce is required to work from home on a longer term or permanent basis, thereby requiring new processes, procedures and controls to respond to changes in our business environment. We may be susceptible to increased litigation related to, among other things, the financial impacts of the pandemic on our business, our ability to meet contractual obligations due to the pandemic, employment practices or policies adopted during the health crisis, or litigation related to individuals contracting COVID-19 as a result of alleged exposures on our premises.

While we have been impacted by the effect of the COVID-19 pandemic – see Part II, Item 7 *Management's Discussion and Analysis of Financial Condition and Results of Operations* – the full extent to which the COVID-19 pandemic will affect our operations, and the industries in which we operate, remains uncertain and will ultimately depend on future developments which cannot be predicted at this time, including, but not limited to, the duration, severity, speed, and scope of the pandemic, and the length of time required for demand to return and normal economic and operating conditions to resume. The impact of the COVID-19 pandemic also may have the effect of exacerbating many of the other risks described herein.

Uncertainty related to environmental regulation and industry standards, as well as the physical risks of climate change, could impact our results of operations and financial position.

Increased public awareness and concern regarding environmental risks, including global climate change, may result in more international, regional and/or federal requirements or industry standards to reduce or mitigate global warming and other environmental risks. New climate change laws and regulations could require us to change our manufacturing processes or obtain substitute materials that may cost more or be less available for our manufacturing operations. Various jurisdictions in which we do business have implemented, or in the future could implement or amend, restrictions on emissions of carbon dioxide or other greenhouse gases, limitations or restrictions on water use, changes from traditional fossil fuel sources to renewables, regulations on energy management and waste management, and other climate change-based rules and regulations, which may increase our costs and adversely affect our operating results. In addition, the physical risks of climate change may impact the availability and cost of materials, sources and supply of energy, product demand and manufacturing and could increase our insurance and other operating costs. The expected future increased worldwide regulatory activity relating to climate change could expand the nature, scope and complexity of matters that we are required to control, assess and report. If environmental laws or regulations or industry standards are either changed or adopted and impose significant operational restrictions and compliance requirements upon us, our suppliers, our customers, or our products, or if our operations are disrupted due to the physical impacts of climate change on us, our suppliers, our customers or our business, our results of operations and financial condition could be adversely impacted.

A work stoppage or another industrial action on the part of any of our unions could be disruptive to our operations.

Our subsidiaries have several key operations which are subject to multi-year collective bargaining agreements or agreements with works councils with their hourly work forces. While we believe we have good relations with our unions, there is the risk of industrial action or work stoppage at the expiration of an agreement if contract negotiations fail, which may disrupt our manufacturing processes and impact our results of operations.

RISKS RELATED TO OWNERHSIP OF OUR SECURITIES

Actions of activist shareholders with respect to us or our securities could be disruptive and potentially costly and the possibility that activist shareholders may contest, or seek changes that conflict with, our strategic direction could cause uncertainty about the strategic direction of our business.

Activist shareholders may from time to time attempt to effect changes in our strategic direction and, in furtherance thereof, may seek changes in how we are governed. While our Board of Directors and management team strive to maintain constructive, ongoing communications with all of our shareholders, including activist shareholders, and welcome their views and opinions with the goal of working together constructively to enhance value for all shareholders, activist campaigns that contest, or conflict with, our strategic direction could have an adverse effect on us because: (i) responding to actions by activist shareholders can disrupt our operations, be costly and time-consuming and divert the attention of our Board of Directors and senior management from the pursuit of business strategies, which could adversely affect our results of operations and financial condition; (ii) perceived uncertainties as to our future direction may lead to the perception of a change in the direction of the business, instability or lack of continuity which may be exploited by our competitors, cause concern to our current or potential customers, result in the loss of potential business opportunities and make it more difficult to attract and retain qualified personnel and business partners; and (iii) these types of actions could cause significant fluctuations in our stock price due to factors that do not necessarily reflect the underlying fundamentals and prospects of our business.

We may not be able to satisfy the continued listing requirements of the New York Stock Exchange and the NYSE American Exchange for our common stock and Series A warrants, respectively.

Our common stock is currently listed on the New York Stock Exchange, and our Series A warrants are listed on the NYSE American Exchange, with each imposing objective and subjective requirements for continued listing.

Continued listing criteria of the New York Stock Exchange include maintaining prescribed levels of financial condition, market capitalization and shareholders' equity. Specifically, the New York Stock Exchange requires a company with common equity listed on its exchange to maintain average global market capitalization over a consecutive 30 trading-day period of at least $50 million or maintain shareholders' equity of at least $50 million. Our common stock's average-global market capitalization over the 30 trading-day period ended December 31, 2021, was $98.4 million, and our total Ampco-Pittsburgh shareholders' equity was $82.6 million as of December 31, 2021. Should we receive a notice of non-compliance, the New York Stock Exchange may allow up to an 18-month cure period if we present a plan to become compliant with adequate strategic actions and progress reporting satisfactory to the New York Stock Exchange. If the New York Stock Exchange determines that our common stock fails to satisfy the requirements for continued listing, or we continue to fail to meet listing criteria, our common stock could be de-listed from the New York Stock Exchange, which could impact potential liquidity for our shareholders.

Continued listing criteria of the NYSE American Exchange include maintaining prescribed levels of financial condition, market capitalization and shareholders' equity. Among other requirements, there must be an aggregate of at least 50,000 Series A warrants. Satisfaction of the NYSE American Exchange's listing requirements therefore depends upon the extent to which warrant holders elect to exercise their Series A warrants. We cannot provide assurance that we will continue to meet these, or other, listing standards of the NYSE American Exchange with respect to the Series A warrants.

Holders of Series A warrants will have no rights as holders of our common stock until they exercise their Series A warrants and acquire our common stock.

Until holders of our Series A warrants acquire shares of our common stock upon exercise of such Series A warrants, they will have no rights with respect to the shares of our common stock underlying such Series A warrants. Upon exercise of the Series A warrants, the holders thereof will be entitled to exercise the rights of holders of our common stock only as to matters for which the record date occurs after the warrant exercise date.

The market price of our common stock may not exceed the exercise price of the Series A warrants at such time as the holder desires to exercise such Series A warrants.

The Series A warrants are exercisable through August 1, 2025. The market price of our common stock may not exceed the exercise price of the Series A warrants at such times prior to their date of expiration that the holder desires to exercise such warrants. Any Series A warrants not exercised by their date of expiration will expire without residual value to the holders. Additionally, the price of

20221031111033

the Series A warrants may fluctuate, and liquidity may be limited. Holders of Series A warrants may be unable to resell their Series A warrants at a favorable price, or at all.

Because the Series A warrants are executory contracts, they may have no value in a bankruptcy or reorganization proceeding.

In the event a bankruptcy or reorganization proceeding is commenced by or against us, a bankruptcy court may hold that any unexercised Series A warrants are executory contracts subject to rejection by us with the approval of a bankruptcy court. As a result, even if we have sufficient funds, holders may not be entitled to receive any consideration for their Series A warrants or may receive an amount less than they would be entitled to if they had exercised their Series A warrants prior to the commencement of any such bankruptcy or reorganization proceeding.

We have not declared dividends since mid-2017 and do not expect to declare dividends in the foreseeable future. Any return on the investment in our common stock may be limited to the value of our common stock.

We have not declared a cash dividend on our common stock since mid-2017 and do not anticipate doing so in the foreseeable future. The declaration and payment of dividends on our common stock will depend on earnings, financial condition and other business and economic factors affecting us at such time as our Board of Directors may consider relevant. In addition, payment of dividends is prohibited under our current revolving credit facility unless approved in advance by our banks. If we do not pay dividends, our common stock may be less valuable because a return on investment in our securities will only occur if the value of our stock price appreciates.

GENERAL RISK FACTORS

Potential attacks on information technology infrastructure and other cyber-based business disruptions could have a material adverse effect on our financial condition, results of operations and liquidity.

We depend on integrated information technology ("IT") systems to conduct our business. IT systems failures, including risks associated with upgrading our systems or in successfully integrating IT and other systems to common platforms, network disruptions and breaches of data security could disrupt our operations by impeding our processing of transactions, our ability to protect customer or company information and our financial reporting. Our computer systems, including our back-up systems, could be damaged or interrupted by power outages; computer and telecommunications failures; computer viruses; internal or external security breaches; events such as fires, earthquakes, floods, tornadoes, and hurricanes; and errors by our employees. Cyber-based risks, in particular, are evolving and include potential attacks to our IT infrastructure and to the IT infrastructure of third parties in attempts to gain unauthorized access to our confidential or other proprietary information or information relating to our employees, customers and other third parties or to seek ransom. Although we have taken steps to address these concerns, there can be no assurance that a system failure or data security breach will not have a material adverse effect on our financial condition, results of operations and liquidity.

If we fail to maintain an effective system of internal control, we may not be able to accurately determine our financial results or prevent fraud. As a result, our shareholders could lose confidence in our financial results, which could harm the business and the value of our securities.

Effective internal control is necessary to provide reliable financial reports and effectively prevent fraud. Section 404 of the Sarbanes-Oxley Act of 2002 requires us to evaluate and report on our internal control over financial reporting. Our internal control over financial reporting is not subject to attestation by our independent registered public accounting firm pursuant to the exemption provided to issuers that are not "large accelerated filers" or "accelerated filers" under the Dodd-Frank Act of 2010. We cannot be certain that we will be successful in maintaining adequate internal control over our financial reporting and financial processes in the future. Because our internal control relies on the judgments and determinations of key personnel, the COVID-19 pandemic elevates this risk. We may in the future discover areas of our internal control that need improvement. Furthermore, to the extent our business grows, our internal control may become more complex, and we would require significantly more resources to ensure our internal control remains effective. If we or our independent registered public accounting firm discover a material weakness, the disclosure of that fact, even if quickly remediated, could reduce the market value of our securities. Additionally, the existence of any material weakness could require us to devote significant time and incur significant expense to identify and remediate any such material weaknesses, and we may not be able to remediate any such material weaknesses in a timely manner.

Our By-laws designate the state and federal courts sitting in the judicial district of the Commonwealth of Pennsylvania as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our shareholders, which could discourage lawsuits against us and our directors and officers but may be found to be inapplicable or unenforceable.

Our By-laws provide, unless we otherwise consent in writing, the state and federal courts sitting in the judicial district of the Commonwealth of Pennsylvania embracing the county in which our principal executive office is located will be the sole and exclusive forum for (a) any derivative action or proceeding brought on behalf of us, (b) any action asserting a claim of breach of a fiduciary duty owed to us or our shareholders by any director, officer or other employee of ours, (c) any action asserting a claim against us or against

any of our directors, officers or other employees arising pursuant to any provision of the Pennsylvania Business Corporation Law of 1988 or our Articles of Incorporation or By-laws, (d) any action seeking to interpret, apply, enforce, or determine the validity of our Article of Incorporation or By-laws, or (e) any action asserting a claim against us or any director or officer or other employee of ours governed by the internal affairs doctrine. This exclusive forum provision does not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended (the "Exchange Act") or the Securities Act of 1933, as amended. This exclusive forum provision may limit the ability of our shareholders to bring a claim in a judicial forum that such shareholders find favorable for disputes with us or our directors or officers, which may discourage such lawsuits against us and our directors and officers. Alternatively, if a court outside of Pennsylvania were to find this exclusive forum provision inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings described above, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition and results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

The Corporation has no unresolved staff comments.

ITEM 2. PROPERTIES

The location and general character of the principal locations in each segment, all of which are owned unless otherwise noted, are listed below. In addition, the Corporation has sales offices located in several foreign countries. See Note 3, *Property, Plant and Equipment*, and Note 8, *Debt*, to the Consolidated Financial Statements for disclosure of properties held as collateral.

Company and Location	Principal Use	Approximate Square Footage	Type of Construction
FORGED AND CAST ENGINEERED PRODUCTS SEGMENT			
Union Electric Steel Corporation			
Route 18 Burgettstown, PA 15021*	Manufacturing facilities	296,800 on 55 acres	Metal and steel
726 Bell Avenue Carnegie, PA 15106*	Manufacturing facilities and offices	165,900 on 8.7 acres	Metal and steel
U.S. Highway 30 Valparaiso, IN 46383*	Manufacturing facilities	88,000 on 20 acres	Metal and steel
1712 Greengarden Road Erie, PA 16501*	Manufacturing facilities	40,000 on 1 acre	Metal and steel
Union Electric Steel UK Limited Coulthards Lane Gateshead, England	Manufacturing facilities and offices	274,000 on 10 acres	Steel framed, metal and brick
Åkers Sweden AB Bruksallén 12SE-647 51 Åkers Styckebruk, Sweden	Manufacturing facilities and offices	394,000 on 162 acres	Steel framed, metal and brick

20221031111034

Company and Location	Principal Use	Approximate Square Footage	Type of Construction
Åkers Valji Ravne d.o.o. Koroška c. 14 SI-2390 Ravne na Koroškem, Slovenia	Manufacturing facilities and offices	106,000 on 2.1 acres	Brick
Shanxi Åkers TISCO Roll Co. Ltd. No. 2 Jian Cao Ping Taiyuan, Shanxi, China	Manufacturing facilities and offices	338,000 on 14.6 acres	Metal, steel and brick
Alloys Unlimited and Processing, LLC 3760 Oakwood Avenue Austintown, OH 44515*	Manufacturing facilities and offices	69,800 on 1.5 acres	Steel framed and cement block
AIR AND LIQUID PROCESSING SEGMENT			
Air & Liquid Systems Corporation *Aerofin Division* 4621 Murray Place Lynchburg, VA 24506	Manufacturing facilities and offices	146,000 on 15.3 acres	Brick, concrete and steel
Buffalo Air Handling Division Zane Snead Drive Amherst, VA 24531	Manufacturing facilities and offices	89,000 on 19.5 acres	Metal and steel
Buffalo Pumps Division 874 Oliver Street N. Tonawanda, NY 14120	Manufacturing facilities and offices	94,000 on 9 acres	Metal, brick and cement block

** Facility is leased.*

In 2018, Union Electric Steel Corporation completed a sale and leaseback financing transaction covering certain of its real estate assets, including its manufacturing facilities in Valparaiso, Indiana and Burgettstown, Pennsylvania, and its manufacturing facility and corporate headquarters located in Carnegie, Pennsylvania. Simultaneously with the sale, Union Electric Steel Corporation entered into a lease agreement pursuant to which Union Electric Steel Corporation would lease the properties from Store Capital Acquisitions, LLC, the purchaser of the properties.

Union Electric Steel Corporation subleases office space to the Corporation. The Corporation further subleases a portion of its office space to Air & Liquid for use as its headquarters.

All of the owned facilities are adequate and suitable for their respective purposes.

The facilities of the FCEP segment operated within 85% to 90% of their normal capacity during 2021. The facilities of the ALP segment operated within 60% to 70% of their normal capacity. Normal capacity is defined as capacity under approximately normal conditions with allowances made for unavoidable interruptions, such as lost time for repairs, maintenance, breakdowns, set-up, failure, supply delays, labor shortages and absences, Sundays, holidays, vacation, inventory taking, and the periodic and temporary idling of certain operations of the FCEP segment resulting from the COVID-19 pandemic. The number of work shifts is also taken into consideration.

ITEM 3. LEGAL PROCEEDINGS

LITIGATION

The Corporation and its subsidiaries may become involved in various claims and lawsuits incidental to their businesses. In addition, claims been asserted alleging personal injury from exposure to asbestos-containing components historically used in some products manufactured by predecessors of Air & Liquid. Air & Liquid, and in some cases the Corporation, are defendants (among a number of defendants, often in excess of 50) in cases filed in various state and federal courts. See Note 19, *Litigation*, to the Consolidated Financial Statements.

ENVIRONMENTAL

The Corporation is currently performing certain remedial actions in connection with the sale of real estate previously owned and periodically incurs costs to maintain compliance with environmental laws and regulations. Environmental exposures are difficult to assess and estimate for numerous reasons, including lack of reliable data, the multiplicity of possible solutions, the years of remedial

and monitoring activity required, and identification of new sites. The Corporation believes appropriate reserves have been established. See Note 21, *Environmental Matters*, to the Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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– PART II –

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The shares of common stock of Ampco-Pittsburgh Corporation are traded on the New York Stock Exchange (symbol AP). The Corporation paid cash dividends on common shares in every year since 1965 through mid-2017. In June 2017, the Corporation announced that it would suspend quarterly cash dividends, beginning with the second quarter of 2017.

The Series A warrants are traded on the NYSE American Exchange (symbol AP WS). Each warrant entitles the holder with the right to purchase 0.4464 shares of common stock of Ampco-Pittsburgh Corporation.

The number of registered shareholders at December 31, 2021, and 2020, equaled 364 and 376, respectively.

ITEM 6. RESERVED

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

(in thousands, except per share amounts)

EXECUTIVE OVERVIEW

Ampco-Pittsburgh Corporation and its subsidiaries (collectively, the "Corporation") manufacture and sell highly engineered, high-performance specialty metal products and customized equipment utilized by industry throughout the world. It operates in two business segments – the *Forged and Cast Engineered Products* ("FCEP") segment and the *Air and Liquid Processing* ("ALP") segment. This segment presentation is consistent with how the Corporation's chief operating decision maker evaluates financial performance and makes resource allocation and strategic decisions about the business.

COVID-19

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency caused by a new strain of the coronavirus ("COVID-19") and advised of the risks to the international community as the virus spread globally. In March 2020, the WHO classified the COVID-19 outbreak as a pandemic based on the rapid increase in exposure globally. In response, many state and local governments required the closure of various businesses. The U.S. Department of Homeland Security, however, issued guidance outlining criteria to identify domestic businesses as operating in critical infrastructure industries, essential to the economic prosperity, security and continuity of the United States, which provides exceptions to certain closures mandated by state and local governments and permits businesses to continue operations during such an order. The Corporation's domestic businesses were, and continue to be, deemed to participate in critical infrastructure industries; however, despite the designation and particularly in 2020, the Corporation has had to periodically and temporarily idle certain operations of its FCEP segment and, consequently, furlough certain of its employees in response to market conditions. While most of these direct impacts were experienced in 2020, as variants have developed, the Corporation has experienced episodic disruptions to its operations or the operations of its customers and suppliers. The pandemic also has spurred disruptions to the global supply chain, which is believed to be a key factor in the global inflationary pressures of 2021. Accordingly, the Corporation has experienced, and may continue to experience, customer-requested delays of deliveries or cancellation of orders, lower order intake resulting from customers postponing projects, inability to obtain raw materials and supplies critical to the manufacturing process, delays in receiving and shipping product due to the lack of transportation, and higher cost of production and transportation.

It is difficult to isolate the impact of the pandemic on the Corporation's operating results, particularly in relation to the unabsorbed costs resulting from the periodic and temporary idling of certain of the Corporation's forged and cast roll operations and furloughing of employees. In addition, the Corporation is uncertain of the full effect the pandemic will have on it for the longer term since the scope and duration of the pandemic is unknown, and evolving factors such as the level and timing of the distribution of efficacious vaccines across the world, hesitancy to use the vaccine and the extent of any resurgences of the virus or emergence of new variants of the virus will impact the stability of economic recovery and growth. The extent to which the operations of the Corporation, and the operations of its customers and vendors, may be adversely impacted by the COVID-19 pandemic will depend largely on these future developments. The Corporation may experience long-term disruptions to its operations resulting from changes in government policy or guidance; quarantines of employees, customers and suppliers in areas affected by the pandemic; and closures of businesses or manufacturing facilities critical to its business or supply chains. It also may incur higher write-offs of accounts receivables and impairment charges on its asset values, including property, plant and equipment and intangible assets. The Corporation is actively monitoring, and will continue to actively monitor, the pandemic and the potential impact on its operations, financial condition, liquidity, suppliers, industry, and workforce.

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In response to the pandemic, the United States federal government enacted the Coronavirus Aid, Relief, and Economic Security ("CARES") Act into law on March 27, 2020. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferral of employer-side social security payments and contributions to employee benefit plans, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations, and technical corrections to tax depreciation methods for qualified improvement property. Subsequently, on March 11, 2021, the American Rescue Plan ("ARP") Act of 2021 was enacted into law, providing the next phase of economic relief as a result of the COVID-19 pandemic. The ARP Act, among other things, extends the provision relating to refundable payroll tax credits and deferral of contributions to employee benefit plans. Similar programs have been offered in certain of the foreign jurisdictions in which the Corporation operates, including subsidies and reimbursement of certain employee-related costs. While the Corporation has taken, and intends to continue to take, advantage of various provisions of the CARES Act, the ARP Act and other similar programs offered domestically and in the foreign jurisdictions in which the Corporation operates, where possible, it is unable to determine what impact those provisions may have on its consolidated financial statements in the future.

The Segments

The *FCEP segment* produces forged hardened steel rolls, cast rolls and forged engineered products ("FEP"). Forged hardened steel rolls are used primarily in cold rolling mills by producers of steel, aluminum and other metals. Cast rolls, which are produced in a variety of iron and steel qualities, are used mainly in hot and cold strip mills, medium/heavy section mills and plate mills. FEP principally are sold to customers in the steel distribution market, oil and gas industry and the aluminum and plastic extrusion industries. The segment has operations in the United States, England, Sweden, Slovenia, and an equity interest in three joint venture companies in China. Collectively, the segment primarily competes with European, Asian and North and South American companies in both domestic and foreign markets and distributes a significant portion of its products through sales offices located throughout the world.

For the FCEP segment, roll market conditions have recovered to near pre-pandemic levels, and expectations are for sales orders to continue to improve in 2022. The FEP market also continues to strengthen with increasing demand from the steel distribution and oil and gas markets. During 2021, however, the segment experienced escalating costs, particularly for raw materials, energy and transportation, and supply chain issues. In the fourth quarter of 2021, the Corporation announced price increases for its forged and cast rolls and FEP and changes to its surcharge policy, each aimed at recovering a portion of these escalating costs. For forged and cast rolls, the price increase was effective immediately following the announcement. For FEP, the increase was effective immediately on all new orders received as of the date of the announcement, or as relevant contract terms permit. The primary focus for this segment is to maintain a strong position in the roll market and to continue diversification and development of FEP for use in other industries, operational and efficiency improvements at its facilities, and capital equipment investment activities to upgrade existing equipment with a goal of reducing costs, improving reliability and increasing FEP capacity and capabilities.

The *ALP segment* includes Aerofin, Buffalo Air Handling and Buffalo Pumps, all divisions of Air & Liquid Systems Corporation ("Air & Liquid"), a wholly owned subsidiary of the Corporation. Aerofin produces custom-engineered finned tube heat exchange coils and related heat transfer products for a variety of industries including OEM/commercial, nuclear power generation and industrial manufacturing. Buffalo Air Handling produces large custom-designed air handling systems for institutional (e.g., hospital, university), pharmaceutical and general industrial building markets. Buffalo Pumps manufactures centrifugal pumps for the fossil-fueled power generation, marine defense and industrial refrigeration industries. The segment has operations in Virginia and New York with headquarters in Carnegie, Pennsylvania. The segment distributes a significant portion of its products through a common independent group of sales offices located throughout the United States and Canada.

The ALP businesses are benefitting from steady demand but, similarly, are facing increasing production and transportation costs and supply chain issues. The segment has been implementing price increases for certain of its products to help mitigate these inflationary effects. The focus for this segment is to grow revenues, increase margins, strengthen engineering and manufacturing capabilities, increase manufacturing productivity, and continue to improve its sales distribution network.

CONSOLIDATED RESULTS OF OPERATIONS OVERVIEW

The Corporation

	2021		2020	
Net Sales:				
Forged and Cast Engineered Products	$ 260,204	75%	$ 237,889	72%
Air and Liquid Processing	84,716	25%	90,655	28%
Consolidated	$ 344,920	100%	$ 328,544	100%
(Loss) Income from Operations:				
Forged and Cast Engineered Products	$ (3,065)		$ 8,621	
Air and Liquid Processing (1)	1,905		10,133	
Corporate costs	(12,456)		(12,308)	
Consolidated	$ (13,616)		$ 6,446	
Backlog:				
Forged and Cast Engineered Products	$ 223,321	76%	$ 191,919	78%
Air and Liquid Processing	69,233	24%	54,212	22%
Consolidated	$ 292,554	100%	$ 246,131	100%

(1) (Loss) income from operations for the Air and Liquid Processing segment includes charges for asbestos-related costs of $6.661 and $283 in 2021 and 2020, respectively, as more fully explained in Note 19, Litigation, to the Consolidated Financial Statements.

Net sales equaled $344,920 and $328,544 for 2021 and 2020, respectively. The increase of $16,376 is principally attributable to a higher volume of shipments of FEP for the FCEP segment, primarily due to increasing demand from the steel distribution and oil and gas markets, which increased net sales by approximately $17,100. A discussion of sales by segment is included below.

Backlog equaled $292,554 at December 31, 2021, versus $246,131 as of December 31, 2020. Backlog represents the accumulation of firm orders on hand which: (i) are supported by evidence of a contractual arrangement, (ii) include a fixed and determinable sales price, (iii) have collectability that is reasonably assured, and (iv) generally are expected to ship within two years from the backlog reporting date. Backlog at a certain date may not be a direct measure of future revenue for a particular order because price increases, negotiated subsequently to the original order, are not included in backlog until the updated contract is received from the customer and certain surcharges are not determinable until the order is completed and ready for shipment to the customer. Approximately 6% of the backlog is expected to be released after 2022. A discussion of backlog by segment is included below.

Gross margin, excluding depreciation and amortization, as a percentage of net sales was 16.6% and 21.6% for 2021 and 2020, respectively. The decrease from the prior year is primarily attributable to the FCEP segment which experienced higher net raw material and energy costs, higher repairs and maintenance spend associated with extended machine outages, and changes in product mix. Additionally, the prior year benefited from receipt of business interruption insurance proceeds of $769 for equipment outages that occurred in 2018 (the "Proceeds from Business Interruption Insurance Claim"). For the ALP segment, gross margin, excluding depreciation and amortization, as a percentage of net sales decreased slightly as a result of higher costs and changes in product mix, the majority of which was offset by higher sales prices.

Selling and administrative expenses were comparable, totaling $45,998 (13.3% of net sales) and $45,542 (13.9% of net sales) for 2021 and 2020, respectively. In summary:

- Severance costs associated with early-retirement incentives for two executive officers, employee terminations at one of the Corporation's cast roll facilities and costs associated with the closing of a foreign sales office increased expense in 2021 by $1,600 (the "Reorganization-Related Costs");
- Commission expense resulting primarily from higher FEP sales increased expense in 2021 by $1,300; and
- Higher exchange rates used to translate the selling and administrative costs of the Corporation's foreign subsidiaries into the U.S. dollar increased expense in 2021 by $900; offset by
- Lower incentive compensation, which reduced expense in 2021 by $2,300;
- Lower spend on research and development activities, which reduced expense in 2021 by $800; and
- Lower bad debt expense in 2021, as a result of bad debt reserves established in 2020 for FCEP customers adversely affected by the COVID-19 pandemic, which reduced expense by $500.

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Depreciation and amortization expense was comparable, equaling $17,877 and $18,575 for 2021 and 2020, respectively.

Charge for asbestos-related costs equaled $6,661 and $283 in 2021 and 2020, respectively, (the "Asbestos-Related Charge"). The charge in 2021 represents changes in the estimated costs of pending and future asbestos claims, net of additional insurance recoveries, through 2052, the estimated final date by which the Corporation expects to have settled all asbestos-related claims. The amount in 2020 represents a charge for the potential insolvency of an asbestos-related insurance carrier. See Note 19, *Litigation,* to the Consolidated Financial Statements for further explanation.

Investment-related income equaled $1,084 and $1,396 for 2021 and 2020, respectively, and represents primarily dividends received from one of the Corporation's Chinese joint ventures.

Interest expense equaled $3,599 and $4,114 for 2021 and 2020, respectively. The decrease principally is due to lower average borrowings outstanding under the revolving credit facility in 2021 compared to 2020.

Other income – net is comprised of the following:

	2021	2020	Change
Net pension and other postretirement income	$ 6,694	$ 4,879	$ 1,815
Unrealized gain on Rabbi trust investments	661	377	284
Loss on foreign exchange transactions	(1,134)	(97)	(1,037)
Other	81	(187)	268
	$ 6,302	$ 4,972	$ 1,330

Other income – net fluctuated due to:

- Higher pension and other postretirement income due to lower interest costs on employee benefit obligations as a result of lower discount rates coupled with a higher expected return on plan assets as a result of an increase in the fair value of plan assets year over year;
- Changes in the market value of the investments in the Rabbi trust; and
- Higher foreign exchange losses.

Income tax (provision) benefit equaled $(2,305) and 470 for 2021 and 2020, respectively, and includes income taxes associated with the Corporation's profitable operations. An income tax benefit is not able to be recognized on losses of certain of the Corporation's entities since it is "more likely than not" the asset will not be realized. Accordingly, changes in the income tax (provision) benefit for each period includes the effects of changes in the pre-tax income of the Corporation's profitable operations. In addition, the income tax benefit for 2020 includes a $3,502 benefit made possible by the CARES Act, which enabled the Corporation to carry back net operating losses to an earlier period, at a higher tax rate, and to release a portion of the valuation allowance it had previously established against its deferred income tax assets.

Net loss attributable to Ampco-Pittsburgh and net loss per common share for 2021 include the Asbestos-Related Charge and the Reorganization-Related Costs which increased the net loss of Ampco-Pittsburgh by $8,157 or $0.43 per common share. Net income attributable to Ampco-Pittsburgh and net income per common share for 2020 include an income tax benefit of $3,502, due to the enactment of the CARES Act, the Proceeds from Business Interruption Insurance Claim and the Asbestos-Related Charge, which had a combined net positive impact on the net income of Ampco-Pittsburgh of $3,988 or $0.28 per common share.

Non-GAAP Financial Measures

The Corporation presents non-GAAP adjusted (loss) income from operations, which is calculated as (loss) income from operations excluding the Asbestos-Related Charge, the Reorganization-Related Costs and the Proceeds from Business Interruption Insurance Claim for each of the years, as applicable. This non-GAAP financial measure is not based on any standardized methodology prescribed by accounting principles generally accepted in the United States of America ("GAAP") and may not be comparable to similarly-titled measures presented by other companies.

The Corporation has presented non-GAAP adjusted (loss) income from operations because it is a key measure used by the Corporation's management and Board of Directors to understand and evaluate the Corporation's operating performance and to develop operational goals for managing its business. This non-GAAP financial measure excludes significant charges or credits, that are one-time charges or credits, unrelated to the Corporation's ongoing results of operations or beyond its control. Additionally, a portion of the incentive and compensation arrangements for certain employees is based on the Corporation's business performance. The Corporation believes this non-GAAP financial measure helps identify underlying trends in its business that otherwise could be

masked by the effect of the items that it excludes from adjusted (loss) income from operations. In particular, the Corporation believes that the exclusion of the Asbestos-Related Charge, the Reorganization-Related Costs and the Proceeds from Business Interruption Insurance Claim can provide a useful measure for period-to-period comparisons of the Corporation's core business performance. The Corporation also believes this non-GAAP financial measure provides useful information to management, shareholders and investors, and others in understanding and evaluating its operating results, enhancing the overall understanding of its past performance and future prospects and allowing for greater transparency with respect to key financial metrics used by the Corporation's management in its financial and operational decision-making.

Adjusted (loss) income from operations is not prepared in accordance with GAAP and should not be considered in isolation of, or as an alternative to, measures prepared in accordance with GAAP. There are limitations related to the use of adjusted (loss) income from operations rather than (loss) income from operations, which is the nearest GAAP equivalent. Among other things, there can be no assurance that additional expenses similar to the Asbestos-Related Charge and the Reorganization-Related Costs or additional benefits similar to the Proceeds from Business Interruption Insurance Claim will not occur in future periods.

The adjustments reflected in adjusted (loss) income from operations are pre-tax. The tax impact associated with these adjustments was $132 for 2021 and not significant for 2020.

The following is a reconciliation of (loss) income from operations to non-GAAP adjusted (loss) income from operations for 2021 and 2020, respectively:

	2021	2020
(Loss) income from operations, as reported (GAAP)	**$ (13,616)**	$ 6,446
Asbestos-Related Charge (1)	**6,661**	283
Reorganization-Related Costs (2)	**1,600**	0
Proceeds from Business Interruption Insurance Claim (3)	**0**	(769)
(Loss) income from operations, as adjusted (Non-GAAP)	**$ (5,355)**	$ 5,960

(1) For 2021, represents a charge for changes in the estimated costs of pending and future asbestos claims, net of additional insurance recoveries, through 2052, the estimated final date by which the Corporation expects to have settled all asbestos-related claims. For 2020, represents a charge for the potential insolvency of an asbestos-related insurance carrier. See Note 19, Litigation, to the Consolidated Financial Statements for further explanation.

(2) Represents severance costs associated with early-retirement incentives for two executive officers, employee terminations at one of the Corporation's cast roll facilities and costs associated with the closing of a foreign sales office.

(3) Represents business interruption insurance proceeds received for equipment outages that occurred in 2018.

Forged and Cast Engineered Products

	2021	2020	Change
Net sales:			
Forged and cast mill rolls	**$ 234,926**	$ 228,219	$ 6,707
FEP	**25,278**	9,670	15,608
	$ 260,204	$ 237,889	$ 22,315
Operating (loss) income	**$ (3,065)**	$ 8,621	$ (11,686)
Backlog:			
Forged and cast mill rolls	**$ 197,476**	$ 185,755	$ 11,721
FEP	**25,845**	6,164	19,681
	$ 223,321	$ 191,919	$ 31,402

Net sales increased by $22,315 in 2021 from 2020 principally due to the net of:

- Higher volume of FEP shipments as a result of increased demand from the steel distribution and oil and gas markets, which increased net sales in 2021 when compared to 2020 by approximately $17,100;
- Net higher variable-index surcharges and pricing passed through to customers as a result of higher raw material costs, which increased net sales in 2021 when compared to 2020 by approximately $5,800;
- Higher volume of mill roll shipments resulting from improved demand as certain customers returned to pre-pandemic levels of production and, as a result, began to replenish roll inventory, which increased net sales in 2021 when compared to 2020 by approximately $400;
- Changes in exchange rates used to translate net sales of the segment's foreign subsidiaries into the U.S. dollar, which increased net sales in 2021 when compared to 2020 by approximately $9,400; offset by

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- Changes in product mix, which decreased net sales in 2021 when compared to 2020 by approximately $10,400.

Operating results decreased by $11,686 in 2021 when compared to 2020 primarily as a result of:

- Higher costs of raw materials, energy and other production costs, net of variable-index surcharges passed through to customers, which reduced operating results in 2021 when compared to 2020 by approximately $15,100;
- Changes in sales product mix net of higher sales volumes, which reduced operating results in 2021 when compared to 2020 by approximately $3,100;
- Higher maintenance spending associated with extended machine outages, which reduced operating results in 2021 when compared to 2020 by approximately $3,000;
- Higher commissions principally associated with the higher volume of FEP sales, which reduced operating results in 2021 when compared to 2020 by approximately $1,300; offset by
- Higher production levels when compared to the pandemic-plagued levels of the prior year resulting in a better absorption of costs, which improved operating results in 2021 when compared to 2020 by approximately $8,900; and
- Changes in exchange rates used to translate operating results of the segment's foreign subsidiaries into the U.S. dollar, which increased operating results in 2021 when compared to 2020 by approximately $800.

In addition, operating results for 2020 included:

- Proceeds received from the Business Interruption Insurance Claim of $769; offset by
- Charges for anticipated bad debts and slow-moving inventory reserves of approximately $1,000 for customers expected to be more severely impacted by the pandemic.

Backlog equaled $223,321 at December 31, 2021, compared to $191,919 at December 31, 2020, with the improvement in current year-end backlog of $31,402 principally due to:

- Increased demand from the steel distribution and oil and gas markets coupled with favorable product mix, surcharge and pricing, which increased FEP backlog by $19,700; and
- Favorable product mix, surcharge and pricing for mill rolls, which improved roll backlog by $12,900; offset by
- Lower foreign exchange rates used to translate the backlog of the Corporation's foreign subsidiaries into the U.S. dollar, which reduced backlog by approximately $1,200 at December 31, 2021, compared to December 31, 2020.

At December 31, 2021, approximately 5% of the backlog is expected to ship after 2022.

Air and Liquid Processing

	2021	2020	Change
Net sales			
Centrifugal pumps	$ 33,867	$ 36,911	$ (3,044)
Air handling systems	26,477	28,495	(2,018)
Heat exchange coils	24,372	25,249	(877)
	$ 84,716	$ 90,655	$ (5,939)
Operating income (1)	$ 1,905	$ 10,133	$ (8,228)
Backlog	$ 69,233	$ 54,212	$ 15,021

(1) Operating income for 2021 includes a charge of $6,661 for changes in the estimated costs of pending and future asbestos claims, net of additional insurance recoveries, through 2052, the estimated final date by which the Corporation expects to have settled all asbestos-related claims. Operating income for 2020, includes a charge of $283 for the potential insolvency of an asbestos-related insurance carrier. See Note 19, Litigation, to the Consolidated Financial Statements for further explanation.

Net sales for 2021 decreased from the prior year by $5,939. Sales of centrifugal pumps declined from a year ago as a result of a lower volume of commercial pump shipments partially offset by a higher volume of shipments to U.S. Navy shipbuilders. Sales of air handling units for the current year decreased from the prior year primarily as a result of customer-requested deferrals and delays in receiving required components. Sales of heat exchange coils were slightly less in 2021 when compared to 2020 with lower sales to the nuclear industry being offset by higher sales to the commercial market.

Operating income for 2021 includes the Asbestos-Related Charge of $6,661 for changes in the estimated costs of pending and future asbestos claims, net of additional insurance recoveries, through 2052, the estimated final date by which the Corporation expects to have settled all asbestos-related claims. Operating income for 2020 includes the Asbestos-Related Charge of $283 for the potential insolvency of an asbestos-related insurance carrier. See Note 19, *Litigation,* to the Consolidated Financial Statements for further explanation. In addition, operating income for the current year was negatively impacted by the lower volume of shipments but benefited from changes in product mix and savings generated from process improvements.

Backlog at December 31, 2021, improved $15,021 from December 31, 2020, principally due to additional order intake for centrifugal pumps and higher on-hand orders for air handlers due, in part, to the aforementioned deferrals by customers and delays in receiving required components. At December 31, 2021, approximately 9% of the backlog is expected to ship after 2022.

LIQUIDITY AND CAPITAL RESOURCES

	2021	2020	Change
Net cash flows (used in) provided by operating activities	**$ (15,866)**	$ 33,635	$ (49,501)
Net cash flows used in investing activities	**(14,734)**	(7,929)	(6,805)
Net cash flows provided by (used in) financing activities	**24,402**	(17,220)	41,622
Effect of exchange rate changes on cash and cash equivalents	**(307)**	1,396	(1,703)
Net (decrease) increase in cash and cash equivalents	**(6,505)**	9,882	(16,387)
Cash and cash equivalents at beginning of period	**16,842**	6,960	9,882
Cash and cash equivalents at end of period	**$ 10,337**	$ 16,842	$ (6,505)

Net cash flows (used in) provided by operating activities equaled $(15,866) and $33,635 for 2021 and 2020, respectively. The significant change between the years primarily is due to (i) a net loss incurred in 2021 versus net income in 2020 and (ii) a higher investment in trade working capital year over year as the Corporation began to return to a higher level of business activity following the pandemic-plagued levels of the prior year and, for inventories, higher costs associated with inflation and supply chain disruptions. Although the Corporation recorded the Asbestos-Related Charge in 2021 and 2020, these were non-cash charges and, accordingly, did not impact net cash flows (used in) provided by operating activities. Instead, net asbestos-related payments equaled $9,903 and $8,725 in 2021 and 2020, respectively, and are expected to approximate $7,000 in 2022.

Deferred employer-side social security payments equaled $2,163 through December 31, 2020, of which one half was paid in 2021, and, under the current provisions of the CARES Act, the balance will be paid in December 2022. Contributions to the defined benefit pension and other postretirement benefits plans equaled $1,658 and $7,857 in 2021 and 2020, respectively, and are expected to approximate $3,100 in 2022. Contributions for 2021 and expected contributions for 2022 are lower than contributions for 2020 due to relief provided by the ARP Act.

Net cash flows used in investing activities primarily represented expenditures for the FCEP segment. The Corporation has undertaken a significant capital program approximating $27,000 to upgrade existing equipment at certain of its FCEP locations, which is anticipated to occur over the next two years. At December 31, 2021, commitments for future capital expenditures, including those associated with the FCEP capital program, approximated $20,800.

Net cash flows provided by (used in) financing activities fluctuated year over year primarily due to:

- Net borrowings from the Corporation's revolving credit facility of $23,744 in 2021 versus repayment of (i) net amounts outstanding under the Corporation's revolving credit facility of $28,273 and (ii) an outstanding Industrial Revenue Bond at maturity of $4,120 in 2020; and
- Proceeds from shareholders exercising warrants for the Corporation's common stock of $3,308 in 2021 versus net common equity proceeds of $18,139 received in 2020 when the Corporation completed an equity rights offering. See Note 12, *Equity Rights Offering,* to the Consolidated Financial Statements for further explanation.

The effect of exchange rate changes on cash and cash equivalents is primarily attributable to the fluctuation of the British pound and Swedish krona against the U.S. dollar.

As a result of the above, cash and cash equivalents decreased by $6,505 during 2021 and ended the period at $10,337 in comparison to $16,842 at December 31, 2020. The majority of the Corporation's cash and cash equivalents is held by its foreign operations. Domestic customer remittances are used to pay down borrowings under the Corporation's revolving credit facility daily, resulting in minimal cash maintained by the Corporation's domestic operations. Cash held by the Corporation's foreign operations is considered to be permanently re-invested; accordingly, a provision for estimated local and withholding tax has not been made. If the Corporation were to remit any foreign earnings to it or any of its U.S. entities, the estimated tax impact would be insignificant.

Funds on hand, funds generated from future operations and availability under the Corporation's revolving credit facility are expected to be sufficient to finance the Corporation's operational requirements. The maturity date for the revolving credit facility is June 29,

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2026, and, subject to the other terms and conditions of the revolving credit agreement, will become due on that date. While availability under the revolving credit facility also should be sufficient to fund the capital equipment investment activities for the FCEP segment, the Corporation currently is exploring supplemental financing. As of December 31, 2021, remaining availability under the revolving credit facility approximated $34,000, net of standard availability reserves.

With respect to litigation, see Note 19, *Litigation*, to the Consolidated Financial Statements. With respect to environmental matters, see Note 21, *Environmental Matters*, to the Consolidated Financial Statements.

OFF-BALANCE SHEET ARRANGEMENTS

The Corporation's off-balance sheet arrangements include the previously mentioned expected future capital expenditures and letters of credit unrelated to the Industrial Revenue Bonds. See Note 11, *Commitments and Contingent Liabilities*, to the Consolidated Financial Statements. These arrangements are not considered significant to the liquidity, capital resources, market risk, or credit risk of the Corporation.

EFFECTS OF INFLATION

Inflationary and market pressures on costs are likely to continue to be experienced. Product pricing is reflective of current costs. For the FCEP segment, approximately 50% to 70% of customer orders include a commodity surcharge; the ability to pass on future increases in the price of commodities for the balance of the customer orders will be negotiated on a contract-by-contract basis. To minimize the effect of future increases, the Corporation has entered into pricing for a portion of the electricity and natural gas for certain of its FCEP operating entities and has long-term labor agreements at each of the key locations. Certain of these agreements will expire in 2022. As is consistent with past practice, the Corporation will negotiate with the intent to secure mutually beneficial arrangements covering multiple years. See Note 11, *Commitments and Contingent Liabilities*, and Note 14, *Derivative Instruments*, to the Consolidated Financial Statements for further information.

APPLICATION OF CRITICAL ACCOUNTING POLICIES

The Corporation has identified critical accounting policies that are important to the presentation of its financial condition, changes in financial condition and results of operations and involve the most complex or subjective assessments. Critical accounting policies relate to assessing recoverability of property, plant and equipment and accounting for pension and other postretirement benefits, litigation and loss contingencies, and income taxes.

Property, plant and equipment is reviewed for recoverability whenever events or circumstances indicate the carrying amount of the long-lived assets may not be recoverable. If the undiscounted cash flows generated from the use and eventual disposition of the assets are less than their carrying value, then the asset value may not be fully recoverable, potentially resulting in a write-down of the asset value. Estimates of future cash flows are based on expected market conditions over the remaining useful life of the primary asset(s). Accordingly, assumptions are made about pricing, volume and asset-resale values. The Corporation believes the amounts recorded in the accompanying consolidated financial statements for property, plant and equipment are recoverable and are not impaired as of December 31, 2021.

Accounting for pension and other postretirement benefits involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, input from the Corporation's actuaries is evaluated and extensive use is made of assumptions about inflation, long-term rate of return on plan assets, longevity, employee turnover and discount rates. The curtailment of the majority of the Corporation's defined benefit pension plans and the amendment of various other postretirement benefit plans has helped to mitigate the volatility in net periodic pension and other postretirement benefit costs resulting from changes in these assumptions.

The expected long-term rate of return on plan assets is an estimate of the average rates of earnings expected to be earned on funds invested or to be invested to provide for the benefits included in the projected benefit obligation. Since these benefits will be paid over many years, the expected long-term rate of return is reflective of current investment returns and investment returns over a longer period. Also, consideration is given to target and actual asset allocations, inflation and real risk-free return. The Corporation believes the expected long-term rate of return ranging between 6.50% and 7.00% for its domestic plans and 2.90% for its foreign plans to be reasonable. Actual returns on plan assets for 2021 approximated 8.70% for the domestic plans and 10.76% for the foreign plans. A percentage point decrease in the expected long-term rate of return would increase annual pension expense by approximately $2,500. Conversely, a percentage point increase in the expected long-term rate of return would decrease annual pension expense by approximately $2,500.

The discount rates used in determining future pension obligations and other postretirement benefits for each of the plans are based on rates of return for high-quality fixed-income investments currently available and expected to be available during the period to maturity of the pension and other postretirement benefits. High-quality fixed-income investments are defined as those investments which have received one of the two highest ratings given by a recognized rating agency with maturities of 10+ years. Assumed discount rates

range between 2.79% and 2.91% for its domestic plans, 2.91% for its other postretirement benefits plans, and 1.95% for its foreign plans at December 31, 2021. A 1/4 percentage point increase in the discount rate would decrease projected and accumulated benefit obligations by approximately $10,300. Conversely, a 1/4 percentage point decrease in the discount rate would increase projected and accumulated benefit obligations by approximately $10,300.

The Corporation believes that the amounts recorded in the accompanying consolidated financial statements related to pension and other postretirement benefits are based on assumptions that are appropriate at December 31, 2021, although actual outcomes could differ.

Litigation and loss contingency accruals are made when it is determined that it is probable that a liability has been incurred and the amount can be reasonably estimated. Specifically, the Corporation and certain of its subsidiaries are involved in various claims and lawsuits incidental to its businesses. In addition, claims have been asserted alleging personal injury from exposure to asbestos-containing components historically used in some products manufactured by predecessors of Air & Liquid (the "Asbestos Liability"). To assist the Corporation in determining whether an estimate could be made of the potential liability for pending and unasserted future claims for the Asbestos Liability along with applicable insurance coverage, and the amounts of any estimates, the Corporation hires a nationally recognized asbestos-liability expert and an insurance consultant. Based on their analyses, reserves for probable and reasonably estimable costs for the Asbestos Liability, including defense costs, and receivables for the insurance recoveries that are deemed probable are established. These amounts rely on assumptions which are based on currently known facts and strategy.

In 2018, the Corporation undertook a review of the Asbestos Liability claims, defense costs and the likelihood for insurance recoveries. The Corporation extended its estimate of the Asbestos Liability, including the estimated costs of settlement and defense costs relating to pending claims and future claims projected to be filed against it through 2052, the estimated final date by which the Corporation expects to have settled all asbestos-related claims. The Corporation's policy is to evaluate the Asbestos Liability and related insurance receivables as well as the underlying assumptions on a regular basis. In 2021, the Corporation reviewed the assumptions and determined certain adjustments to the Asbestos Liability and related insurance coverage were necessary based on current experience and future expectations. As a result, the Corporation recorded an additional charge of $6,661 representing the change in the estimated costs of pending and future asbestos claims, net of additional insurance recoveries, through 2052. Key variables in these assumptions, including the ability to reasonably estimate the Asbestos Liability through the expected final date by which the Corporation expects to have settled all asbestos-related claims, are summarized in Note 19, *Litigation*, to the Consolidated Financial Statements. Key assumptions include the number and nature of new claims to be filed each year, the average cost of disposing of each new claim, average annual defense costs, and the solvency risk with respect to the relevant insurance carriers. Other factors that may affect the Asbestos Liability and the Corporation's ability to recover under its insurance policies include uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, reforms that may be made by state and federal courts, the passage of state or federal tort reform legislation, and continued solvency of the insurance carriers. Actual expenses or insurance recoveries could be significantly higher or lower than those recorded if assumptions used in the calculations vary significantly from actual results.

The Corporation intends to continue to evaluate the Asbestos Liability and related insurance receivables as well as the underlying assumptions on a regular basis to determine whether further adjustments to the estimates are required. Due to the uncertainties surrounding asbestos litigation and insurance, these regular reviews may result in the incurrence of future charges or credits; however, the Corporation is currently unable to estimate such future changes. Adjustments, if any, to the Corporation's estimate of the Asbestos Liability and/or insurance receivables could be material to its operating results for the periods in which the adjustments to the liability or receivable are recorded, and to its liquidity and financial position when such liabilities are paid.

Accounting for income taxes includes the Corporation evaluation of the underlying accounts, permanent and temporary differences, its tax filing positions and interpretations of existing tax law. A valuation allowance is recorded against deferred income tax assets to reduce them to the amount that is "more likely than not" to be realized. In doing so, assumptions are made about the future profitability of the Corporation and the nature of that profitability. Actual results may differ from these assumptions. If the Corporation determined it would not be able to realize all or part of the deferred income tax assets in the future, an adjustment to the valuation allowance would be established resulting in a charge to net income (loss). Likewise, if the Corporation determined it would be able to realize deferred income tax assets in excess of the net amount recorded, a portion of the existing valuation allowance would be released resulting in a credit to net income (loss). As of December 31, 2021, the valuation allowance approximates $42,441, reducing deferred income tax assets, net of deferred income tax liabilities, to $2,176, an amount the Corporation believes is "more likely than not" to be realized.

The Corporation does not recognize a tax benefit in the consolidated financial statements related to a tax position taken or expected to be taken in a tax return unless it is "more likely than not" that the tax authorities will sustain the tax position solely on the basis of the position's technical merits. Consideration primarily is given to legislation and statutes, legislative intent, regulations, rulings and case law as well as their applicability to the facts and circumstances of the tax position when assessing the sustainability of the tax position. In the event a tax position no longer meets the "more likely than not" criteria, the Corporation would reverse the tax benefit by recognizing a liability and recording a charge to earnings. Conversely, if the Corporation subsequently determined that a tax position

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met the "more likely than not" criteria, it would recognize the tax benefit by reducing the liability and recording a credit to earnings. As of December 31, 2021, based on information known to date, the Corporation believes the amount of unrecognized tax benefits for tax positions taken or expected to be taken in a tax return, which may be challenged by the tax authorities, not to be significant.

See Note 20, *Income Taxes*, to the Consolidated Financial Statements.

RECENTLY IMPLEMENTED AND ISSUED ACCOUNTING PRONOUNCEMENTS

See Note 1, *Summary of Significant Accounting Policies*, to the Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

CONSOLIDATED BALANCE SHEETS

(in thousands, except par value)	December 31, 2021	2020
Assets		
Current assets:		
Cash and cash equivalents	$ 10,337	$ 16,842
Receivables, less allowance for doubtful accounts of $1,240 in 2021 and $1,131 in 2020	68,829	60,366
Inventories	88,198	73,243
Insurance receivable – asbestos	16,000	16,000
Other current assets	4,933	5,381
Total current assets	188,297	171,832
Property, plant and equipment, net	158,563	162,098
Operating lease right-of-use assets, net	4,056	4,344
Insurance receivable – asbestos	105,297	101,937
Deferred income tax assets	2,176	2,493
Intangible assets, net	6,204	7,217
Investments in joint ventures	2,175	2,175
Prepaid pensions	11,963	5,327
Other noncurrent assets	6,901	5,785
Total assets	$ 485,632	$ 463,208
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$ 44,230	$ 26,678
Accrued payrolls and employee benefits	15,954	19,304
Debt – current portion	20,007	12,436
Operating lease liabilities – current portion	641	674
Asbestos liability – current portion	23,000	22,000
Other current liabilities	21,210	24,240
Total current liabilities	125,042	105,332
Employee benefit obligations	62,114	81,832
Asbestos liability	157,314	158,196
Long-term debt	40,912	24,807
Noncurrent operating lease liabilities	3,415	3,670
Deferred income tax liabilities	3,858	1,403
Other noncurrent liabilities	1,171	2,969
Total liabilities	393,826	378,209
Commitments and contingent liabilities (Note 11)		
Shareholders' equity:		
Common stock – par value $1; authorized 40,000 shares; issued and outstanding 19,184 shares at December 31, 2021 and 18,312 shares at December 31, 2020	19,184	18,312
Additional paid-in capital	174,561	170,318
Retained deficit	(56,066)	(43,371)
Accumulated other comprehensive loss	(55,106)	(68,695)
Total Ampco-Pittsburgh shareholders' equity	82,573	76,564
Noncontrolling interest	9,233	8,435
Total shareholders' equity	91,806	84,999
Total liabilities and shareholders' equity	$ 485,632	$ 463,208

See Notes to Consolidated Financial Statements.

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CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share amounts)	For The Years Ended December 31, 2021	2020
Net sales	$ 344,920	$ 328,544
Operating costs and expenses:		
Costs of products sold (excluding depreciation and amortization)	287,639	257,513
Selling and administrative	45,998	45,542
Depreciation and amortization	17,877	18,575
Charge for asbestos-related costs	6,661	283
Loss on disposal of assets	361	185
	358,536	322,098
(Loss) income from operations	(13,616)	6,446
Other income (expense):		
Investment-related income	1,084	1,396
Interest expense	(3,599)	(4,114)
Other – net	6,302	4,972
	3,787	2,254
(Loss) income before income taxes	(9,829)	8,700
Income tax (provision) benefit	(2,305)	470
Net (loss) income	(12,134)	9,170
Less: Net income attributable to noncontrolling interest	561	1,200
Net (loss) income attributable to Ampco-Pittsburgh	$ (12,695)	$ 7,970
Net (loss) income per share attributable to Ampco-Pittsburgh common shareholders:		
Basic	$ (0.67)	$ 0.56
Diluted	$ (0.67)	$ 0.54
Weighted-average number of common shares outstanding:		
Basic	18,953	14,272
Diluted	18,953	14,636

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands)	For The Years Ended December 31, 2021	2020
Net (loss) income	$ (12,134)	$ 9,170
Other comprehensive income (loss), net of income tax where applicable:		
Adjustments for changes in:		
Foreign currency translation	(2,951)	6,981
Unrecognized employee benefit costs (including effects of foreign currency translation)	15,263	(8,188)
Fair value of cash flow hedges	774	390
Reclassification adjustments for items included in net (loss) income:		
Amortization of unrecognized employee benefit costs	1,826	1,395
Settlement of cash flow hedges	(1,086)	(92)
Other comprehensive income	13,826	486
Comprehensive income	1,692	9,656
Less: Comprehensive income attributable to noncontrolling interest	798	1,719
Comprehensive income attributable to Ampco-Pittsburgh	$ 894	$ 7,937

See Notes to Consolidated Financial Statements.

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CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(in thousands)	Common Stock	Additional Paid-in Capital	Retained Deficit	Accumulated Other Comprehensive Loss	Noncontrolling Interest	Total
Balance January 1, 2020	$ 12,652	$ 156,251	$ (51,341)	$ (68,662)	$ 6,716	$ 55,616
Stock-based compensation		1,329				1,329
Comprehensive income:						
Net income			7,970		1,200	9,170
Other comprehensive (loss) income				(33)	519	486
Comprehensive income					1,719	9,656
Equity rights offering (Note 12)	5,508	12,631				18,139
Issuance of common stock including excess tax benefits of $0	152	107				259
Balance December 31, 2020	18,312	170,318	(43,371)	(68,695)	8,435	84,999
Stock-based compensation		**2,438**				**2,438**
Comprehensive income:						
Net (loss) income			**(12,695)**		**561**	**(12,134)**
Other comprehensive income				**13,589**	**237**	**13,826**
Comprehensive income					**798**	**1,692**
Shareholder exercise of warrants (Note 12)	**575**	**2,733**				**3,308**
Issuance of common stock including excess tax benefits of $0	**297**	**(928)**				**(631)**
Balance December 31, 2021	**$ 19,184**	**$ 174,561**	**$ (56,066)**	**$ (55,106)**	**$ 9,233**	**$ 91,806**

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	For The Years Ended December 31, 2021	2020
Cash flows from operating activities:		
Net (loss) income	$ (12,134)	$ 9,170
Adjustments to reconcile net (loss) income from operations to net cash flows from operating activities:		
Depreciation and amortization	17,877	18,575
Charge for asbestos-related costs	6,661	283
Deferred income tax expense	1,304	958
Difference between net periodic pension and other postretirement costs and contributions	(7,489)	(11,844)
Stock-based compensation	2,438	1,329
Non-cash provisions – net	1,809	2,006
Other – net	658	413
Changes in assets/liabilities:		
Receivables	(8,268)	20,866
Inventories	(18,400)	10,219
Other assets	(5,918)	1,928
Insurance receivable – asbestos	13,312	18,712
Asbestos liability	(23,215)	(27,437)
Accounts payable	17,601	(7,778)
Accrued payrolls and employee benefits	2,048	(2,753)
Other liabilities	(4,150)	(1,012)
Net cash flows (used in) provided by operating activities	(15,866)	33,635
Cash flows from investing activities:		
Purchases of property, plant and equipment	(15,236)	(8,466)
Proceeds from sale of property, plant and equipment	229	271
Other – net	273	266
Net cash flows used in investing activities	(14,734)	(7,929)
Cash flows from financing activities:		
Proceeds from revolving credit facility	32,244	6,000
Payments on revolving credit facility	(8,500)	(34,273)
Repayment of debt	(2,165)	(6,757)
Proceeds from shareholder exercise of warrants	3,308	0
Proceeds from equity rights offering, net of issuance costs	0	18,139
Debt issuance costs	(485)	(329)
Net cash flows provided by (used in) financing activities	24,402	(17,220)
Effect of exchange rate changes on cash and cash equivalents	(307)	1,396
Net (decrease) increase in cash and cash equivalents	(6,505)	9,882
Cash and cash equivalents at beginning of year	16,842	6,960
Cash and cash equivalents at end of year	$ 10,337	$ 16,842
Supplemental disclosures of cash flow information:		
Income tax payments	$ 1,633	$ 2,174
Interest payments	2,895	2,978
Non-cash investing and financing activities:		
Purchases of property, plant and equipment in accounts payable	$ 1,676	$ 981
Finance lease right-of-use assets exchanged for lease liabilities	1,258	430
Operating lease right-of-use assets exchanged for lease liabilities	199	701

See Notes to Consolidated Financial Statements.

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Description of Business

Ampco-Pittsburgh Corporation and its subsidiaries (collectively, the "Corporation") manufacture and sell highly engineered, high-performance specialty metal products and customized equipment utilized by industry throughout the world. It operates in two business segments, the *Forged and Cast Engineered Products* ("FCEP") segment and the *Air and Liquid Processing* ("ALP") segment. This segment presentation is consistent with how the Corporation's chief operating decision maker evaluates financial performance and makes resource allocation and strategic decisions about the business.

The Segments

The FCEP segment produces forged hardened steel rolls, cast rolls and forged engineered products ("FEP"). Forged hardened steel rolls are used primarily in cold rolling mills by producers of steel, aluminum and other metals. Cast rolls, which are produced in a variety of iron and steel qualities, are used mainly in hot and cold strip mills, medium/heavy section mills and plate mills. FEP principally are sold to customers in the steel distribution market, oil and gas industry and the aluminum and plastic extrusion industries. The segment has operations in the United States, England, Sweden, and Slovenia and equity interests in three joint venture companies in China. Collectively, the segment primarily competes with European, Asian and North American and South American companies in both domestic and foreign markets and distributes a significant portion of its products through sales offices located throughout the world.

The ALP segment includes Aerofin, Buffalo Air Handling and Buffalo Pumps, all divisions of Air & Liquid Systems Corporation ("Air & Liquid"), a wholly owned subsidiary of the Corporation. Aerofin produces custom-engineered finned tube heat exchange coils and related heat transfer products for a variety of industries including OEM/commercial, nuclear power generation and industrial manufacturing. Buffalo Air Handling produces large custom-designed air handling systems for institutional (e.g., hospital, university), pharmaceutical and general industrial building markets. Buffalo Pumps manufactures centrifugal pumps for the fossil fueled power generation, marine defense and industrial refrigeration industries. The segment has operations in Virginia and New York with headquarters in Carnegie, Pennsylvania. The segment distributes a significant portion of its products through a common independent group of sales offices located throughout the United States and Canada.

COVID-19

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency caused by a new strain of the coronavirus ("COVID-19") and advised of the risks to the international community as the virus spread globally. In March 2020, the WHO classified the COVID-19 outbreak as a pandemic based on the rapid increase in exposure globally. In response, many state and local governments required the closure of various businesses. The U.S. Department of Homeland Security, however, issued guidance outlining criteria to identify domestic businesses as operating in critical infrastructure industries, essential to the economic prosperity, security and continuity of the United States, which provides exceptions to certain closures mandated by state and local governments and permits businesses to continue operations during such an order. The Corporation's domestic businesses were, and continue to be, deemed to participate in critical infrastructure industries; however, despite the designation and particularly in 2020, the Corporation has had to periodically and temporarily idle certain operations of its FCEP segment and, consequently, furlough certain of its employees in response to market conditions. While most of these direct impacts were experienced in 2020, as variants have developed, the Corporation has experienced episodic disruptions to its operations or the operations of its customers and suppliers. The pandemic also has spurred disruptions to the global supply chain, which is believed to be a key factor in the global inflationary pressures of 2021. Accordingly, the Corporation has experienced, and may continue to experience, customer-requested delays of deliveries or cancellation of orders, lower order intake resulting from customers postponing projects, inability to obtain raw materials and supplies critical to the manufacturing process, delays in receiving and shipping product due to the lack of transportation, and higher cost of production and transportation.

It is difficult to isolate the impact of the pandemic on the Corporation's operating results, particularly in relation to the unabsorbed costs resulting from the periodic and temporary idling of certain of the Corporation's forged and cast roll operations and furloughing of employees. In addition, the Corporation is uncertain of the full effect the pandemic will have on it for the longer term since the scope and duration of the pandemic is unknown, and evolving factors such as the level and timing of the distribution of efficacious vaccines across the world, hesitancy to use the vaccine and the extent of any resurgences of the virus or emergence of new variants of the virus will impact the stability of economic recovery and growth. The extent to which the operations of the Corporation, and the operations of its customers and vendors, may be adversely impacted by the COVID-19 pandemic will depend largely on these future developments. The Corporation may experience long-term disruptions to its operations resulting from changes in government policy or guidance; quarantines of employees, customers and suppliers in areas affected by the pandemic; and closures of businesses or manufacturing facilities critical to its business or supply chains. It may also incur higher write-offs of accounts receivables and impairment charges on its asset values, including property, plant and equipment and intangible assets. The Corporation is actively

monitoring, and will continue to actively monitor, the pandemic and the potential impact on its operations, financial condition, liquidity, suppliers, industry, and workforce.

In response to the pandemic, the United States federal government enacted the Coronavirus Aid, Relief, and Economic Security ("CARES") Act into law on March 27, 2020. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferral of employer-side social security payments and contributions to employee benefit plans, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations, and technical corrections to tax depreciation methods for qualified improvement property. Subsequently, on March 11, 2021, the American Rescue Plan ("ARP") Act of 2021 was enacted into law, providing the next phase of economic relief as a result of the COVID-19 pandemic. The ARP Act, among other things, extends the provision relating to refundable payroll tax credits and deferral of contributions to employee benefit plans. Similar programs have been offered in certain of the foreign jurisdictions in which the Corporation operates, including subsidies and reimbursement of certain employee-related costs. While the Corporation has taken, and intends to continue to take, advantage of various provisions of the CARES Act, the ARP Act and other similar programs offered domestically and in the foreign jurisdictions in which the Corporation operates, where possible, it is unable to determine what impact those provisions may have on its consolidated financial statements in the future.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

The Corporation's accounting policies conform to accounting principles generally accepted in the United States of America. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to estimates and assumptions include assessing the carrying value of long-lived assets, valuing the assets and obligations related to employee benefit plans, accounting for loss contingencies associated with claims and lawsuits, and accounting for income taxes. Actual results could differ from those estimates. A summary of the significant accounting policies followed by the Corporation is presented below.

Basis of Presentation

The financial information included herein reflects the consolidated financial position of the Corporation as of December 31, 2021, and 2020, and the consolidated results of its operations and cash flows for the years then ended.

Consolidation

The accompanying consolidated financial statements include the assets, liabilities, revenues, and expenses of all majority-owned subsidiaries and joint ventures over which the Corporation exercises control and, when applicable, entities for which the Corporation has a controlling financial interest or is the primary beneficiary. Investments in joint ventures where the Corporation owns 20% to 50% of the voting stock and has the ability to exercise significant influence over the operating and financial policies of the joint venture are accounted for using the equity method of accounting. Investments in joint ventures where the Corporation does not have the ability to exercise significant influence over the operating and financial policies of the joint venture are accounted for using the cost method of accounting. Investments in joint ventures are reviewed for impairment whenever events or circumstances indicate the carrying amount of the investment may not be recoverable. If the estimated fair value of the investment is less than the carrying amount and such decline is determined to be "other than temporary," then the investment may not be fully recoverable, potentially resulting in a write-down of the investment value. Intercompany accounts and transactions are eliminated.

Cash and Cash Equivalents

Securities with purchased original maturities of three months or less are considered to be cash equivalents. The Corporation maintains cash and cash equivalents at various financial institutions which may exceed federally-insured amounts.

Inventories

Inventories are valued at the lower of cost and net realizable value, which is defined as the estimated selling price in the ordinary course of business less reasonably predictable costs of completion, disposal and transportation. Cost includes the cost of raw materials, direct labor and overhead for those items manufactured but not yet sold or for which control has not yet transferred to the customer. Fixed production overhead is allocated to inventories based on normal capacity of the production facilities. In periods of abnormally high production, the amount of fixed overhead allocated to each unit of production is decreased so that inventories are not measured above cost. The amount of fixed overhead allocated to inventories is not increased as a consequence of abnormally low production or plant idling. Costs for abnormal amounts of spoilage, handling costs and freight costs are charged to expense when incurred. Cost of domestic raw materials, work-in-process and finished goods inventories is primarily determined by the last-in, first-out (LIFO) method. Cost of domestic supplies and foreign inventories is determined primarily by the first-in, first-out (FIFO) method.

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Property, Plant and Equipment

Property, plant and equipment purchased new is recorded at cost with depreciation computed using the straight-line method over the following estimated useful lives: land improvements – 15 to 20 years, buildings – 25 to 50 years, machinery and equipment – 3 to 25 years and other (e.g., furniture and fixtures and vehicles) – 5 to 10 years. Assets under finance leases are depreciated on a straight-line basis over the shorter of the estimated useful life of the asset or the lease term. Property, plant and equipment acquired as part of a business combination is recorded at its estimated fair value with depreciation computed using the straight-line method over the estimated remaining useful lives based, in part, on third-party valuations. Expenditures that extend economic useful lives are capitalized. Routine maintenance is charged to expense. Gains or losses are recognized on retirements or disposals. Property, plant and equipment is reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. If the undiscounted cash flows generated from the use and eventual disposition of the assets are less than their carrying value, then the asset value may not be fully recoverable, potentially resulting in a write-down of the asset value. Estimates of future cash flows are based on expected market conditions over the remaining useful life of the primary asset(s). In addition, the remaining depreciation period for the impaired asset would be re-assessed and, if necessary, revised. Proceeds from government grants are recorded as a reduction in the purchase price of the underlying assets and amortized against depreciation over the lives of the related assets.

Right-of-Use Assets

A right-of-use ("ROU") asset represents the right to use an underlying asset for the term of the lease, and the corresponding liability represents an obligation to make periodic payments arising from the lease. A determination of whether an arrangement includes a lease is made at the inception of the arrangement. ROU assets and liabilities are recognized on the consolidated balance sheet, at the commencement date of the lease, in an amount equal to the present value of the lease payments over the term of the lease calculated using the interest rate implicit in the lease arrangement or, if not known, the Corporation's incremental borrowing rate. The present value of a ROU asset also includes any lease payments made prior to commencement of the lease and excludes any lease incentives received or to be received under the arrangement. The lease term includes options to extend or terminate the lease when it is reasonably certain that such options will be exercised. Operating leases that have original terms of less than 12 months, inclusive of options to extend that are reasonably certain to be exercised, are classified as short-term leases and are not recognized on the consolidated balance sheet.

ROU assets are recorded as a noncurrent asset on the consolidated balance sheet. The corresponding liabilities are recorded as an operating lease liability, either current or noncurrent, as applicable, on the consolidated balance sheet. Operating lease costs are recognized on a straight-line basis over the lease term within costs of products sold (excluding depreciation and amortization) or selling and administrative expenses based on the use of the related ROU asset.

Intangible Assets

Intangible assets primarily consist of developed technology, customer relationships and trade name. Intangible assets with finite lives are amortized using the straight-line method over their estimated useful life, which is determined by identifying the period over which most of the cash flows are expected to be generated. Intangible assets with indefinite lives are not amortized but reviewed for impairment at least annually, as of October 1. Additionally, intangible assets, both finite and indefinite lived, are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable. For finite-lived intangible assets, if the undiscounted cash flows attributable to the assets are less than their carrying value, then the asset value may not be fully recoverable, potentially resulting in a write-down of the asset value. For indefinite-lived intangible assets, if the discounted cash flows attributable to the assets are less than their carrying value, then the asset value may not be fully recoverable, potentially resulting in a write-down of the asset value. Also, if the estimate of an intangible asset's remaining useful life changes, the remaining carrying value of the intangible asset will be amortized prospectively over the revised remaining useful life.

Debt Issuance Costs

Debt issuance costs are amortized as interest expense over the scheduled maturity period of the debt. The costs related to a line-of-credit arrangement are amortized over the term of the arrangement, regardless of whether there are any outstanding borrowings. Unamortized debt issuance costs are either recognized as a direct deduction from the carrying amount of the related debt or, if related to a line-of-credit facility, as an other noncurrent asset on the consolidated balance sheet.

Product Warranty

A warranty that ensures basic functionality is an assurance-type warranty. A warranty that goes beyond ensuring basic functionality is considered a service-type warranty. The Corporation provides assurance-type warranties; it does not provide service-type warranties. Provisions for assurance-type warranties are recognized at the time the underlying sale is recorded. The provision is based on historical experience as a percentage of sales adjusted for potential claims when a liability is probable and for known claims.

Employee Benefit Plans

Funded Status

If the fair value of the plan assets exceeds the projected benefit obligation, the over-funded projected benefit obligation is recognized as an asset (prepaid pensions) on the consolidated balance sheet. Conversely, if the projected benefit obligation exceeds the fair value of the plan assets, the under-funded projected benefit obligation is recognized as a liability (employee benefit obligations) on the consolidated balance sheet. Gains and losses arising from the difference between actuarial assumptions and actual experience and unamortized prior service costs are recorded as a separate component of accumulated other comprehensive loss.

Net Periodic Pension and Other Postretirement Benefit Costs

Net periodic pension and other postretirement benefit costs include service cost, interest cost, expected rate of return on the market-related value of plan assets, amortization of prior service costs, and recognized actuarial gains or losses. When actuarial gains or losses exceed 10% of the greater of the projected benefit obligation or the market-related value of plan assets, they are amortized to net periodic pension and other postretirement benefit costs over the average remaining service period of the employees expected to receive benefits under the plan or over the remaining life expectancy of the employees expected to receive benefits if "all or almost all" of the plan's participants are inactive. When actuarial gains or losses are less than 10% of the greater of the projected benefit obligation or the market-related value of plan assets, they are included in net periodic pension and other postretirement benefit costs indirectly as a result of lower/higher interest costs arising from a decrease/increase in the projected benefit obligation. The market-related value of plan assets is determined using a five-year moving average which recognizes gains or losses in the fair market value of assets at the rate of 20% per year.

Warrants

Accounting for warrants includes an initial assessment of whether the warrants qualify as debt or equity. The Corporation's warrants meet the definition of equity instruments and, accordingly, are recorded within shareholders' equity on the consolidated balance sheet. The fair value of the warrants is determined as of the measurement date. Incremental costs directly attributable to the offering of the securities are deferred and charged against the proceeds of the offering.

Other Comprehensive Income (Loss)

Other comprehensive income (loss) includes changes in assets and liabilities from non-owner sources including foreign currency translation adjustments, unamortized prior service costs and unrecognized actuarial gains and losses associated with employee benefit plans, and changes in the fair value of derivatives designated and effective as cash flow hedges.

Certain components of other comprehensive income (loss) are presented net of income tax. Foreign currency translation adjustments exclude the effect of income tax since earnings of non-U.S. subsidiaries are deemed to be re-invested for an indefinite period of time.

Reclassification adjustments are amounts which are realized during the year and, accordingly, are deducted from other comprehensive income (loss) in the period in which they are included in net income (loss) or when a transaction no longer qualifies as a cash flow hedge. Foreign currency translation adjustments are included in net income (loss) upon sale or upon complete or substantially complete liquidation of an investment in a foreign entity. With respect to employee benefit plans, unamortized prior service costs are included in net income (loss), either immediately upon curtailment of the employee benefit plan or over the average remaining service period or life expectancy of the employees expected to receive benefits, and unrecognized actuarial gains and losses are included in net income (loss) indirectly as a result of lower/higher interest costs arising from a decrease/increase in the projected benefit obligation. Changes in the fair value of derivatives are included in net income (loss) when the projected sale occurs or, if a foreign currency purchase contract, over the estimated useful life of the underlying asset.

Foreign Currency Translation

Assets and liabilities of the Corporation's foreign operations are translated at year-end exchange rates, and the statements of operations are translated at the average exchange rates for the year. Gains or losses resulting from translating foreign currency financial statements are accumulated as a separate component of accumulated other comprehensive loss until the entity is sold or substantially liquidated.

Revenue Recognition

Revenue from sales is recognized when obligations under the terms of the contract with the customer are satisfied. Generally, this occurs when control of the product transfers to the customer. A contract with a customer is deemed to exist when there is persuasive evidence of an arrangement, the sales price is fixed or determinable and collectability is reasonably assured.

Persuasive evidence of an arrangement identifies the final understanding between the parties as to the specific nature and terms of the agreed-upon transaction that creates the enforceable obligations. It can be in the form of an executed purchase order from the

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customer, combined with an order acknowledgment from the Corporation, a sales agreement or a longer-term supply agreement between the customer and the Corporation, or a similar arrangement deemed to be a normal and customary business practice for that particular customer or class of customer (collectively, a sales agreement). Sales agreements typically include a single performance obligation for the manufacturing of product which is satisfied upon transfer of control of the product to the customer.

The sales price required to be paid by the customer is fixed or determinable from the sales agreement. It is not subject to refund or adjustment, except for a variable-index surcharge provision which is known at the time of shipment and increases or decreases, as applicable, the selling price of the product for corresponding changes in the published index cost of certain raw materials and energy. The variable-index surcharge is recognized as revenue when the corresponding revenue for the inventory is recognized.

Likelihood of collectability is assessed prior to acceptance of an order. In certain circumstances, the Corporation may require a deposit from the customer, a letter of credit or another form of assurance for payment. An allowance for doubtful accounts is maintained based on historical experience. Payment terms are standard to the industry and generally require payment 30 days after control transfers to the customer.

Transfer of control is assessed based on alternative use of the product manufactured and, under the terms of the sales agreement, an enforceable right to payment for performance to date. Transfer of control, and therefore revenue recognition, occurs when title, ownership and risk of loss pass to the customer. Typically, this occurs when the product is shipped to the customer (i.e., FOB shipping point), delivered to the customer (i.e., FOB destination) or, for foreign sales, in accordance with trading guidelines known as Incoterms. Incoterms are standard trade definitions used in international contracts and are developed, maintained and promoted by the ICC Commission on Commercial Law and Practice. Shipping terms vary across the businesses and typically depend on the product, country of origin and type of transportation (truck or vessel). There are no customer-acceptance provisions other than, perhaps, customer inspection and testing prior to shipment. Post-shipment obligations are insignificant.

Amounts billed to the customer for shipping and handling are recorded within net sales and the related costs are recorded within costs of products sold (excluding depreciation and amortization). Amounts billed for taxes assessed by various government authorities (e.g., sales tax, value-added tax, etc.) are excluded from the determination of net income (loss) and, instead, are recorded as a liability until remitted to the government authority.

Stock-Based Compensation

Stock-based compensation, such as stock options, restricted stock units and performance shares, is recognized over the vesting period based on the fair value of the award at the date of grant. For stock options, the fair value is determined by the Black-Scholes option pricing model and is expensed over the vesting period of three years. For restricted stock units, the fair value is equal to the closing price of the Corporation's common stock on the New York Stock Exchange ("NYSE") on the date of grant and is expensed over the service period, typically three years. For performance share awards that vest subject to a performance condition, the fair value is equal to the closing price of the Corporation's stock on the NYSE on the date of grant. For performance share awards that vest subject to a market condition, the fair value is determined using a Monte Carlo simulation model. The fair value of performance share awards is expensed over the performance period when it is probable that the performance condition will be achieved.

Asbestos-Related Costs

The amounts recorded for asbestos-related liabilities and insurance receivables for asbestos-related matters rely on assumptions that are based on currently known facts and strategies. Asbestos-related liabilities are recognized when a liability is probable of occurrence and can be reasonably estimated. The liability includes an estimate of future claims as well as settlement or indemnity costs that would be incurred to resolve both pending and future unasserted claims over the period which such claims can be reasonably estimated. Insurance receivables for asbestos-related matters are recognized for the estimated amount of probable insurance recoveries attributable to the claims for which an asbestos-related liability has been recognized, including the portion of incurred defense costs expected to be reimbursed. Neither the asbestos-related liabilities nor the insurance receivables for asbestos-related matters are discounted to their present values due to the inability to reliably forecast the timing of future cash flows. The asbestos-related liabilities and insurance receivables for asbestos-related matters, as well as the underlying assumptions, are reviewed on a regular basis to determine whether any adjustments to the estimates are required. If it is determined that there is an increase in asbestos-related liabilities net of insurance recoveries, then a charge to net income (loss) would be recorded. Similarly, if it is determined that there is a decrease in asbestos-related liabilities net of insurance recoveries, then a credit to net income (loss) would be recorded.

Derivative Instruments

Derivative instruments which include forward exchange (for foreign currency sales and purchases) and futures contracts are recorded on the consolidated balance sheet as either an asset or a liability measured at their fair value. The accounting for changes in the fair value of a derivative depends on the use of the derivative. To the extent that a derivative is designated and effective as a cash flow hedge of an exposure to future changes in value, the change in the fair value of the derivative is deferred in accumulated other

comprehensive loss. Any portion considered to be ineffective, including that arising from the unlikelihood of an anticipated transaction to occur, is reported as a component of earnings (other income/expense) immediately.

Upon occurrence of the anticipated sale, the foreign currency sales contract designated and effective as a cash flow hedge is de-designated as a fair value hedge, and the change in fair value previously deferred in accumulated other comprehensive loss is reclassified to earnings (net sales) with subsequent changes in fair value recorded as a component of earnings (other income/expense). Upon occurrence of the anticipated purchase, the foreign currency purchase contract is settled, and the change in fair value deferred in accumulated other comprehensive loss is reclassified to earnings (depreciation and amortization expense) over the life of the underlying asset. Upon settlement of a futures contract, the change in fair value deferred in accumulated other comprehensive loss is reclassified to earnings (costs of products sold, excluding depreciation and amortization) when the corresponding inventory is sold and revenue is recognized. To the extent that a derivative is designated and effective as a hedge of an exposure to changes in fair value, the change in the derivative's fair value will be offset in the consolidated statement of operations by the change in the fair value of the item being hedged and is recorded as a component of earnings (other income/expense). Cash flows associated with the derivative instruments are recorded as a component of operating activities on the consolidated statement of cash flows.

The Corporation does not enter into derivative transactions for speculative purposes and, therefore, holds no derivative instruments for trading purposes.

Fair Value

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. A hierarchy of inputs is used to determine fair value measurements with three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities and are considered the most reliable evidence of fair value. Level 2 inputs are observable prices that are not quoted on active exchanges. Level 3 inputs are unobservable inputs used for measuring the fair value of assets or liabilities.

Legal Costs

Legal costs expected to be incurred in connection with loss contingencies are accrued when such costs are probable and estimable.

Income Taxes

Income taxes are recognized during the year in which transactions enter into the determination of financial statement income (loss). Any taxes on foreign income in excess of a deemed return on tangible assets of foreign corporations are accounted for as period costs. Deferred income tax assets and liabilities are recognized for the future tax consequences of temporary differences between the book carrying amount and the tax basis of assets and liabilities including net operating loss carryforwards. A valuation allowance is provided against a deferred income tax asset when it is "more likely than not" the asset will not be realized. Similarly, if a determination is made that it is "more likely than not" the deferred income tax asset will be realized, the related valuation allowance would be reduced and a benefit to earnings would be recorded. Penalties and interest are recognized as a component of the income tax provision.

Tax benefits are recognized in the consolidated financial statements for tax positions taken or expected to be taken in a tax return when it is "more likely than not" that the tax authorities will sustain the tax position solely on the basis of the position's technical merits. Consideration is given primarily to legislation and statutes, legislative intent, regulations, rulings, and case law as well as their applicability to the facts and circumstances of the tax position when assessing the sustainability of the tax position. In the event a tax position no longer meets the "more likely than not" criteria, the tax benefit is reversed by recognizing a liability and recording a charge to earnings. Conversely, if a tax position subsequently meets the "more likely than not" criteria, a tax benefit would be recognized by reducing the liability and recording a credit to earnings.

Earnings Per Common Share

Basic earnings per common share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding for the period. The computation of diluted earnings per common share is similar to basic earnings per common share except that the denominator is increased to include the dilutive effect of the net additional common shares that would have been outstanding assuming exercise of outstanding stock awards and warrants, calculated using the treasury stock method. The computation of diluted earnings per share would not assume the exercise of an outstanding stock award or warrant if the effect on earnings per common share would be antidilutive. Similarly, the computation of diluted earnings per share would not assume the exercise of outstanding stock awards and warrants if the Corporation incurred a net loss since the effect on earnings per common share would be antidilutive. The weighted-average number of common shares outstanding assuming exercise of dilutive stock awards and warrants was 19,696,397 for 2021 and 14,636,022 for 2020. Weighted-average outstanding stock awards and warrants excluded from the diluted earnings per common share calculation, since the effect would have been antidilutive, were 359,940 for 2021 and 1,809,432

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for 2020. With respect to amounts attributable to Ampco-Pittsburgh common shareholders, net income (loss) attributable to Ampco-Pittsburgh common shareholders excludes net income (loss) attributable to noncontrolling interest.

Recently Implemented Accounting Pronouncements

In December 2019, the Financial Accounting Standards Board ("FASB") issued ASU 2019-12, *Income Taxes (Topic 740)*. ASU 2019-12 is intended to simplify the accounting for income taxes including removing the exception to the incremental approach for intraperiod tax allocation when there is a loss from continuing operations and income or a gain from other items, such as other comprehensive income, and accounting for franchise or similar tax, and requiring an entity to reflect the effect of an enacted change in tax laws or rates in the interim period that includes the enactment date. The guidance became effective for the Corporation on January 1, 2021, and did not impact the Corporation's consolidated financial position, operating results or liquidity.

In March 2020, the FASB issued ASU 2020-04, *Facilitation of the Effects of Reference Rate Reform on Financial Reporting*. ASU 2020-04 provides optional exceptions for applying generally accepted accounting principles to modifications of contracts, hedging relationships, and other transactions that reference LIBOR or another rate that will be discontinued by reference rate reform if certain criteria are met. The optional guidance is available as of March 12, 2020, through December 31, 2022. The Corporation adopted this guidance during 2021, and it did not impact the Corporation's consolidated financial position, operating results or liquidity.

In August 2020, the FASB issued ASU 2020-06, *Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*. ASU 2020-06 simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity's own equity. ASU 2020-06 requires entities to provide expanded disclosures about the terms and features of convertible instruments and amends certain guidance in ASC 260, *Earnings per Share*, relating to the computation of earnings per share for convertible instruments and contracts in an entity's own equity. The guidance becomes effective for the Corporation on January 1, 2024; however, as permitted, the Corporation early adopted the guidance in 2021, and it did not impact the Corporation's consolidated financial position, operating results or liquidity.

Recently Issued Accounting Pronouncements

In September 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses*, which adds a new impairment model, known as the current expected credit loss ("CECL") model, that is based on expected losses rather than incurred losses. Under the new guidance, an entity recognizes an allowance for its estimate of expected credit losses and applies it to most debt instruments, trade receivables, lease receivables, financial guarantee contracts, and other loan commitments. The CECL model does not have a minimum threshold for recognition of impairment losses and entities will need to measure expected credit losses on assets that have a low risk of loss. The guidance originally became effective for the Corporation on January 1, 2020; however, since the Corporation meets the definition of a Smaller Reporting Company, as defined by the Securities Exchange Commission, the effective date was subsequently revised to fiscal years beginning after December 15, 2022. The Corporation is currently evaluating the impact the guidance will have on its financial position and operating results. It will not, however, affect the Corporation's liquidity.

NOTE 2 – INVENTORIES:

	2021	2020
Raw materials	$ 22,332	$ 17,893
Work-in-progress	37,447	31,568
Finished goods	18,093	12,466
Supplies	10,326	11,316
Inventories	$ 88,198	$ 73,243

At December 31, 2021, and 2020, approximately 35% of the inventories were valued using the LIFO method. The LIFO reserve approximated $(18,407) and $(12,256) at December 31, 2021, and 2020, respectively. During each of the years, inventory quantities decreased for certain locations resulting in a liquidation of LIFO layers which were at lower costs. During 2021, the effect of the liquidations was insignificant. For 2020, the effect of the liquidations was to decrease costs of products sold (excluding depreciation and amortization) by approximately $3,262. There was no income tax expense recognized in the consolidated statement of operations due to the Corporation having a valuation allowance recorded against the deferred income tax assets for the jurisdiction where the income was recognized (see Note 20). Accordingly, the effect of the liquidations increased net income by approximately $3,262, or $0.23 per common share, for 2020.

NOTE 3 – PROPERTY, PLANT AND EQUIPMENT:

	2021	2020
Land and land improvements	$ 10,377	$ 10,473
Buildings	63,166	63,765
Machinery and equipment	345,118	339,203
Construction-in-process	11,019	4,896
Other	6,798	6,870
	436,478	425,207
Accumulated depreciation	(277,915)	(263,109)
Property, plant and equipment, net	$ 158,563	$ 162,098

The majority of the assets of the Corporation, except real property including the land and building of Union Electric Steel UK Limited, an indirect subsidiary of the Corporation ("UES-UK"), is pledged as collateral for the Corporation's revolving credit facility (see Note 8). Land and buildings of UES-UK, equal to approximately $2,867 (£2,122) at December 31, 2021, are held as collateral by the trustees of the UES-UK defined benefit pension plan (see Note 10). The gross value of assets under finance leases and the related accumulated amortization approximated $3,882 and $1,263 as of December 31, 2021, respectively, and $3,430 and $1,222 as of December 31, 2020, respectively. Depreciation expense approximated $17,336 and $17,420, including depreciation of assets under finance leases of approximately $473 and $415, for the years ended December 31, 2021, and 2020, respectively. The Corporation continues to evaluate the uncertainty associated with COVID-19, and, at December 31, 2021, there were no triggering events identified for the underlying asset groups.

NOTE 4 – OPERATING LEASE RIGHT-OF-USE ASSETS:

The Corporation leases certain factory and office space and equipment. Additionally, the manufacturing facilities of one of the Corporation's cast roll joint ventures in China are located on land leased by the joint venture from the other partner. The land lease commenced in 2007, the date the joint venture was formed, and continues through 2054, the expected end date of the joint venture, and includes variable lease payment provisions based on the land standard price prevailing in Taiyuan, China, where the joint venture is located.

Right-of-use assets associated with operating leases as of December 31, 2021, and 2020, were comprised of the following:

	2021	2020
Land	$ 2,928	$ 2,850
Buildings	1,953	1,825
Machinery and equipment	511	495
Other	429	404
	5,821	5,574
Accumulated amortization	(1,765)	(1,230)
Operating lease right-of-use assets, net	$ 4,056	$ 4,344

NOTE 5 – INTANGIBLE ASSETS:

	2021	2020
Customer relationships	$ 5,850	$ 6,191
Developed technology	4,201	4,457
Trade name	2,442	2,646
	12,493	13,294
Accumulated amortization	(6,289)	(6,077)
Intangible assets, net	$ 6,204	$ 7,217

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The trade name is an indefinite-lived asset and, accordingly, is not subject to amortization. The fluctuation between the years is due to changes in foreign currency exchange rates. The following summarizes changes in intangible assets for the years ended December 31:

	2021	2020
Balance at the beginning of the year	$ 7,217	$ 7,625
Amortization of intangible assets	(541)	(1,155)
Other, primarily impact from changes in foreign currency exchange rates	(472)	747
Balance at the end of the year	$ 6,204	$ 7,217

Identifiable intangible assets are reviewed for impairment whenever events or circumstances indicate that the carrying values may not be recoverable. The Corporation continues to evaluate the uncertainty associated with COVID-19, and, at December 31, 2021, there were no triggering events identified for the underlying asset groups. Identifiable intangible assets are expected to be amortized over a weighted-average period of approximately 13 years or $378 for 2022, $378 for 2023, $378 for 2024, $324 for 2025, $228 for 2026 and $2,076 thereafter.

NOTE 6 – INVESTMENTS IN JOINT VENTURES:

The Corporation has interests in three joint ventures:

- Shanxi Åkers TISCO Roll Co., Ltd. ("ATR") – a cast roll joint venture in China for which the Corporation accounts using the consolidated method of accounting. ATR principally manufactures and sells cast rolls for hot strip mills, steckel mills and medium plate mills.
- Magong Gongchang United Rollers Co., Ltd., previously known as Masteel Gongchang Roll Co., Ltd. ("MG") – a forged roll joint venture in China for which the Corporation accounts using the cost method of accounting. MG principally manufactures and sells large forged backup rolls for hot and cold strip mills.
- Jiangsu Gong-Chang Roll Co., Ltd., previously known as Jiangsu Gongchang Roll Joint-Stock Co., Ltd. ("Gongchang") – a cast roll joint venture in China for which the Corporation accounts using the cost method of accounting. Gongchang principally manufactures and sells cast rolls for hot and cold strip mills, medium/heavy section mills and plate mills.

ATR

In 2007, Åkers AB, a subsidiary of Union Electric Steel Corporation, a wholly owned subsidiary of the Corporation ("UES"), entered into an agreement with Taiyuan Iron & Steel Co., Ltd. ("TISCO") to form ATR, with Åkers AB owning 59.88% and TISCO owning 40.12%. Since Åkers AB is the majority shareholder, has voting rights proportional to its ownership interest and exercises control over TISCO, Åkers AB is considered the primary beneficiary and, accordingly, accounts for its investment in ATR using the consolidated method of accounting. The net assets and net income (loss) attributable to TISCO are reflected as non-controlling interest in the consolidated financial statements.

MG

The Corporation has a 33% interest in MG, which is recorded at cost, or $835. The Corporation does not participate in the management or daily operation of MG, has not guaranteed any of its obligations and has no ongoing responsibilities to it. Dividends may be declared by the Board of Directors of the joint venture after allocation of after-tax profits to various "funds" equal to the minimum amount required under Chinese law. No dividends were declared or received in 2021 or 2020.

Gongchang

The Corporation has a 24.03% interest in Gongchang, which is recorded at cost, or $1,340. The Corporation does not participate in the management or daily operation of Gongchang, has not guaranteed any of its obligations and has no ongoing responsibilities to it. Dividends may be declared by the Board of Directors of the joint venture after allocation of after-tax profits to various "funds" equal to the minimum amount required under Chinese law. Dividends of $1,025 and $1,203 were declared and received in 2021 and 2020, respectively.

NOTE 7 – OTHER CURRENT LIABILITIES:

	2021	2020
Customer-related liabilities	$ 12,548	$ 16,144
Accrued interest payable	1,772	2,131
Accrued sales commissions	1,864	1,419
Other	5,026	4,546
Other current liabilities	$ 21,210	$ 24,240

Customer-related liabilities primarily include liabilities for product warranty claims and deposits received on future orders. The following summarizes changes in the liability for product warranty claims for the years ended December 31:

	2021	2020
Balance at the beginning of the year	$ 8,105	$ 9,065
Satisfaction of warranty claims	(3,220)	(3,854)
Provision for warranty claims	2,509	2,737
Other, primarily impact from changes in foreign currency exchange rates	(63)	157
Balance at the end of the year	$ 7,331	$ 8,105

Customer deposits represent amounts collected from, or invoiced to, a customer in advance of revenue recognition and are recorded as an other current liability on the consolidated balance sheet. The liability for customer deposits is reversed when the Corporation satisfies its performance obligations and control of the inventory transfers to the customer, typically when title transfers. Performance obligations related to customer deposits are expected to be satisfied in less than one year.

Changes in customer deposits consisted of the following:

	2021	2020
Balance at the beginning of the year	$ 6,507	$ 4,895
Satisfaction of performance obligations	(12,870)	(13,915)
Receipt of additional deposits	10,729	15,458
Other, primarily changes in foreign currency exchange rates	(38)	69
Balance at the end of the year	$ 4,328	$ 6,507

NOTE 8 – DEBT:

	2021	2020
Revolving credit facility	$ 29,744	$ 6,000
Sale and leaseback financing obligation	20,546	19,931
Industrial Revenue Bonds	9,191	9,191
Minority shareholder loan	0	1,056
Finance leases	1,438	1,065
Outstanding borrowings	60,919	37,243
Debt – current portion	(20,007)	(12,436)
Long-term debt	$ 40,912	$ 24,807

The current portion of debt includes primarily swing loans under the revolving credit facility and the Industrial Revenue Bonds ("IRBs"). By definition, swing loans are temporary advances under the revolving credit facility and short-term in nature. Accordingly, swing loans are classified as a current liability until the amount is either repaid, as customers remit payments, or, if elected by the Corporation, refinanced as a longer-term loan under the revolving credit facility. At December 31, 2021, the swing loans balance was $8,744. At December 31, 2020, no swing loans were outstanding. Although the IRBs begin to become due in 2027, the bonds can be put back to the Corporation on short notice if they are not able to be remarketed, which is considered remote by the Corporation; accordingly, the IRBs are classified as a current liability. Future principal payments, assuming the swing loans balance is repaid in 2022 and the IRBs are called in 2022, are $20,007 for 2022, $2,123 for 2023, $2,033 for 2024, $15,409 for 2025, $21,124 for 2026, and $223 thereafter.

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Revolving Credit Facility

On May 20, 2016, the Corporation became a party to a Revolving Credit and Security Agreement, which had been amended periodically. On June 29, 2021, the Corporation entered into an amended and restated credit agreement (the "Restated Credit Agreement") with a syndicate of banks that provides for a senior secured asset-based revolving credit facility of $100,000, which can be increased up to $130,000 at the option of the Corporation and with the approval of the lenders, and an allowance of $20,000 for new capital equipment financing but otherwise restricts the Corporation from incurring additional indebtedness outside of the agreement, unless approved by the banks. The Restated Credit Agreement includes sub-limits for letters of credit not to exceed $40,000 and European borrowings not to exceed $30,000. The maturity date for the Restated Credit Agreement is June 29, 2026, and, subject to other terms and conditions of the Restated Credit Agreement, would become due on that date.

Availability under the Restated Credit Agreement is based on eligible accounts receivable, inventory and fixed assets. Amounts outstanding under the credit facility bear interest, at the Corporation's option, at either (i) LIBOR plus an applicable margin ranging between 2.00% to 2.50% based on the quarterly average excess availability or (ii) the alternate base rate plus an applicable margin ranging between 1.00% to 1.50% based on the quarterly average excess availability. Additionally, the Corporation is required to pay a commitment fee of 0.25% based on the daily unused portion of the credit facility. On December 17, 2021, as a result of reference rate reform, the Restated Credit Agreement was amended whereby interest for advances or other extensions of credit under the Restated Credit Agreement denominated in euros or pound sterling would no longer be based on LIBOR but, instead, on its successor rate as defined in the Restated Credit Agreement. As of December 31, 2021, there were no borrowings under the Restated Credit Agreement denominated in euros or pound sterling.

As of December 31, 2021, the Corporation had outstanding borrowings under the Restated Credit Agreement of $29,744. The average interest rate approximated 4% for 2021 and 2020. Additionally, the Corporation had utilized a portion of the credit facility for letters of credit (see Note 11). As of December 31, 2021, the remaining availability under the Restated Credit Agreement approximated $34,000, net of standard availability reserves. Deferred financing fees of $485 have been incurred related to the Restated Credit Agreement and are being amortized over the remaining term of the agreement.

Borrowings outstanding under the Restated Credit Agreement are collateralized by a first priority perfected security interest in substantially all assets of the Corporation and its subsidiaries (other than real property). Additionally, the Restated Credit Agreement contains customary affirmative and negative covenants and limitations, including, but not limited to, investments in certain of its subsidiaries, payment of dividends, incurrence of additional indebtedness and guaranties, and acquisitions and divestures. In addition, the Corporation must maintain a certain level of excess availability or otherwise maintain a minimum fixed charge coverage ratio of not less than 1.05 to 1.00. The Corporation was in compliance with the applicable covenants under the Restated Credit Agreement as of December 31, 2021.

Sale and Leaseback Financing Obligation

In September 2018, UES completed a sale and leaseback financing transaction for certain of its real property, including the land and buildings of its manufacturing facilities in Valparaiso, Indiana and Burgettstown, Pennsylvania, and its manufacturing facility and corporate headquarters located in Carnegie, Pennsylvania (the "Properties"). Simultaneously with the sale, UES entered into a lease agreement pursuant to which UES would lease the Properties from the buyer. The lease provides for an initial term of 20 years; however, UES may extend the lease for four successive periods of approximately five years each. If fully extended, the lease would expire in September 2058. UES also has the option to repurchase the Properties, which it may exercise, and currently intends to exercise, in 2025, for a price equal to the greater of (i) the Fair Market Value of the Properties, or (ii) 115% of Lessor's Total Investment for the Facilities, with such terms defined in the lease agreement. Annual payments will increase each anniversary date by an amount equal to the lesser of 2% or 1.25% of the change in the consumer price index, as defined in the lease agreement. The effective interest rate approximated 8.06% and 7.98% for 2021 and 2020, respectively.

Industrial Revenue Bonds

At December 31, 2021, the Corporation had the following IRBs outstanding: (i) $7,116 taxable IRB maturing in 2027, interest at a floating rate which averaged 0.19% and 0.83% for 2021 and 2020, respectively; and (ii) $2,075 tax-exempt IRB maturing in 2029, interest at a floating rate which averaged 0.09% and 0.85% for 2021 and 2020, respectively. The IRBs are secured by letters of credit of equivalent amounts and are remarketed periodically at which time the interest rates are reset. If the IRBs are not able to be remarketed, although considered remote by the Corporation, the bondholders can seek reimbursement immediately from the letters of credit which serve as collateral for the bonds. Accordingly, the IRBs are recorded as current debt on the consolidated balance sheets.

Minority Shareholder Loan

ATR had a loan outstanding with its minority shareholder, which was fully repaid in 2021. The loan originally matured in 2008 but had been renewed continually for one-year periods. At December 31, 2020, the loan balance approximated $1,056 (RMB 6,901). Interest did not compound and had accrued on the outstanding loan balance, since inception, at the three-to-five-year loan interest rate

set by the People's Bank of China in effect at the time of renewal. In 2021, in addition to repaying the balance of the loan, ATR paid $479 (RMB 3,046) in accrued interest. In 2020, ATR repaid $1,882 (RMB 13,000) in principal and $290 (RMB 2,000) in accrued interest. The interest rate for 2021 and 2020 approximated 5%. Accrued interest as of December 31, 2021, and 2020, approximated $1,713 (RMB 10,901) and $2,117 (RMB 13,842), respectively, and is recorded in other current liabilities on the consolidated balance sheets.

Finance Leases

The Corporation leases equipment under various noncancelable lease agreements ending 2022 to 2028. Effective interest rates ranged between approximately 1% and 3% for 2021 and 2020. The weighted-average remaining lease term approximated 5 years at December 31, 2021, and 2 years at December 31, 2020. Cash paid for amounts included in the measurement of finance lease liabilities totaled $884 and $570 for the years ended December 31, 2021, and 2020, respectively, of which $29 and $18 were classified as operating cash flows and $855 and $552 were classified as financing cash flows in the consolidated statements of cash flows for each of the respective years. Interest on the finance lease liabilities was insignificant for both years.

NOTE 9 – OPERATING LEASE LIABILITIES:

The current and noncurrent portions of the Corporation's operating lease arrangements as of December 31, 2021, and 2020, were as follows:

	2021	2020
Operating lease liabilities – current portion	$ 641	$ 674
Noncurrent operating lease liabilities	3,415	3,670
Total operating lease liabilities	**$ 4,056**	**$ 4,344**

Future operating lease payments as of December 31, 2021, were as follows:

2022	$ 653
2023	604
2024	544
2025	308
2026	179
2027 and thereafter	3,841
Total undiscounted payments	**6,129**
Less: amount representing interest	(2,073)
Present value of net minimum lease payments	**$ 4,056**

At December 31, 2021, and 2020, the weighted-average remaining lease term approximated 8.76 years and 8.71 years, respectively, and the weighted-average discount rate approximated 4.66% and 3.95%, respectively.

The components of lease cost for the years ended December 31, 2021, and 2020, were as follows:

	2021	2020
Short-term operating lease costs	$ 29	$ 30
Long-term operating lease costs	642	697
Total operating lease costs	**$ 671**	**$ 727**

Cash paid for amounts included in the measurement of operating lease liabilities totaled $671 and $727 for the years ended December 31, 2021, and 2020, respectively, and was classified as operating cash flows in the consolidated statements of cash flows.

NOTE 10 – PENSION AND OTHER POSTRETIREMENT BENEFITS:

U.S. Pension Benefits

The Corporation has two qualified domestic defined benefit pension plans that cover substantially all of its U.S. employees. For all locations except one, benefit accruals and participation in the plans have been curtailed and replaced with a defined contribution pension plan. The defined benefit pension plans are covered by the Employee Retirement Income Security Act of 1974 ("ERISA"); accordingly, the Corporation's policy is to fund at least the minimum actuarially-computed annual contribution required under ERISA. No minimum contributions were due for 2021 due to relief provided by the ARP Act. Minimum contributions for 2020 approximated

20221031111049

$5,562 and are expected to approximate $770 in 2022. The fair value of the plan assets as of December 31, 2021, and 2020, approximated $214,937 and $210,880, respectively, in comparison to accumulated benefit obligations of $249,180 and $264,750 for the same periods. Employer contributions to the defined contribution plan totaled $2,893 and $2,796 for 2021 and 2020, respectively, and are expected to approximate $2,400 in 2022.

The Corporation also maintains nonqualified defined benefit pension plans for selected executive officers in addition to the benefits provided under one of the Corporation's qualified defined benefit pension plans. The objectives of the nonqualified plans are to provide supplemental retirement benefits or restore benefits lost due to limitations set by the Internal Revenue Service. The assets of the nonqualified plans are held in a grantor tax trust known as a "Rabbi" trust and are subject to claims of the Corporation's creditors, but otherwise must be used only for purposes of providing benefits under the plans. The fair market value of the trust at December 31, 2021, and 2020, which is included in other noncurrent assets on the consolidated balance sheets, was $4,860 and $4,402, respectively. The plan is treated as a non-funded pension plan for financial reporting purposes. Accordingly, benefit payments would represent employer contributions. Accumulated benefit obligations approximated $11,121 and $8,813 at December 31, 2021, and 2020, respectively.

Employees at one location participate in a multi-employer plan, *I.A.M. National Pension Fund* (employer identification number 51-6031295, plan number 002), in lieu of the Corporation's defined benefit pension plans. A multi-employer plan generally receives contributions from two or more unrelated employers pursuant to one or more collective bargaining agreements. The assets contributed by one employer may be used to fund the benefits provided to employees of other employers in the plan because the plan assets, once contributed, are not restricted to individual employers. The latest report of summary plan information (for the 2020 plan year) provided by *I.A.M. National Pension Fund* indicates:

- Approximately 1,700 employer locations contribute to the plan;
- Approximately 100,000 active employees participate in the plan; and
- Assets of approximately $12.7 billion and a funded status of approximately 85%.

Less than 100 of the Corporation's employees participate in the plan and contributions are based on a rate per hour. The Corporation's contributions to the plan were less than $275 for 2021 and 2020 and represent less than five percent of total contributions to the plan by all contributing employers. Contributions are expected to approximate $300 in 2022.

Foreign Pension Benefits

Employees of UES-UK participated in a defined benefit pension plan that was curtailed effective December 31, 2004, and replaced with a defined contribution pension plan. The plans are non-U.S. plans and, therefore, are not covered by ERISA. Employer contributions to the defined benefit pension plan, when necessary, are agreed to by the Trustees and UES-UK, based on U.K. regulations, with the objective of maintaining the self-sufficiency of the plan. Accordingly, estimated contributions are subject to change based on the future investment performance of the plan's assets. Currently, the plan is fully funded and no contributions were required in 2021 or 2020, and none are expected in 2022. The fair value of the plan's assets as of December 31, 2021, and 2020, approximated $71,614 (£53,008) and $66,957 (£49,056), respectively, in comparison to accumulated benefit obligations of $59,651 (£44,153) and $61,629 (£45,153) for the same periods. Contributions to the defined contribution pension plan approximated $322 and $292 in 2021 and 2020, respectively, and are expected to approximate $324 in 2022.

The Corporation has two additional foreign defined benefit pension plans, which are not funded. Accordingly, benefit payments would represent employer contributions. Projected and accumulated benefit obligations approximated $7,356 and $8,294 at December 31, 2021, and 2020, respectively.

Other Postretirement Benefits

The Corporation provides a monthly reimbursement of postretirement health care benefits for up to a 6-year period principally to the bargaining groups of two subsidiaries. The plans cover participants and their spouses who retire under an existing pension plan on other than a deferred vested basis and at the time of retirement also have rendered 10 or more years of continuous service irrespective of age. Retiree life insurance is provided to substantially all retirees. The Corporation's postretirement health care and life insurance plans are not funded or subject to any minimum regulatory funding requirements. Instead, benefit payments are made from the general assets of the Corporation at the time they are due.

Significant Activity

Actuarial (gains) losses were comprised of the following components:

	U.S. Pension Benefits		Foreign Pension Benefits		Other Postretirement Benefits	
	2021	2020	2021	2020	2021	2020
Changes in assumptions	$ (6,234)	$ 21,494	$ (164)	$ 5,674	$ (365)	$ 811
Other	2,027	(1,851)	167	(333)	(442)	(85)
Total actuarial (gains) losses	$ (4,207)	$ 19,643	$ 3	$ 5,341	$ (807)	$ 726

Changes in actuarial assumptions principally include the effect of changes in discount rates and mortality tables which are used to estimate plan liabilities. A 1/4 percentage point decrease in the discount rate would increase projected and accumulated benefit obligations by approximately $10,300. Conversely, a 1/4 percentage point increase in the discount rate would decrease projected and accumulated benefit obligations by approximately $10,300. It is not possible to quantify the effects of future changes to mortality tables.

Reconciliations

The following tables provide a reconciliation of projected benefit obligations ("PBO"), plan assets and the funded status of the plans for the Corporation's defined benefit plans calculated using a measurement date as of the end of the respective years.

	U.S. Pension Benefits[a]		Foreign Pension Benefits[b]		Other Postretirement Benefits	
	2021	2020	2021	2020	2021	2020
Change in projected benefit obligations:						
PBO at January 1	$ 273,776	$ 261,902	$ 69,923	$ 62,339	$ 11,410	$ 11,398
Service cost	243	223	375	444	245	225
Interest cost	5,349	7,175	829	1,058	182	281
Special termination benefits	0	12	0	0	0	0
Foreign currency exchange rate changes	0	0	(1,354)	3,209	0	0
Actuarial (gains) losses	(4,207)	19,643	3	5,341	(807)	726
Participant contributions	0	0	0	0	161	274
Benefits paid from plan assets	(14,457)	(14,776)	(2,114)	(1,796)	0	0
Benefits paid by the Corporation	(403)	(403)	(655)	(672)	(761)	(1,494)
PBO at December 31	$ 260,301	$ 273,776	$ 67,007	$ 69,923	$ 10,430	$ 11,410
Change in plan assets:						
Fair value of plan assets at January 1	$ 210,880	$ 195,667	$ 66,957	$ 57,900	$ 0	$ 0
Actual return on plan assets	18,514	24,427	7,550	8,396	0	0
Foreign currency exchange rate changes	0	0	(779)	2,457	0	0
Corporate contributions	403	5,965	655	672	600	1,220
Participant contributions	0	0	0	0	161	274
Gross benefits paid	(14,860)	(15,179)	(2,769)	(2,468)	(761)	(1,494)
Fair value of plan assets at December 31	$ 214,937	$ 210,880	$ 71,614	$ 66,957	$ 0	$ 0
Funded status of the plans:						
Fair value of plan assets	$ 214,937	$ 210,880	$ 71,614	$ 66,957	$ 0	$ 0
Less benefit obligations	260,301	273,776	67,007	69,923	10,430	11,410
Funded status at December 31	$ (45,364)	$ (62,896)	$ 4,607	$ (2,966)	$ (10,430)	$ (11,410)

(a) Includes the nonqualified defined benefit pension plan.

(b) Includes the over-funded U.K. defined benefit pension plan and two smaller unfunded defined benefit pension plans.

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The following tables provide a summary of amounts recognized in the consolidated balance sheets at December 31, 2021, and 2020.

	U.S. Pension Benefits		Foreign Pension Benefits		Other Postretirement Benefits	
	2021	2020	**2021**	2020	**2021**	2020
Employee benefit obligations:						
Prepaid pensions[a]	**$ 0**	$ 0	**$ 11,963**	$ 5,327	**$ 0**	$ 0
Accrued payrolls and employee benefits[b]	**(740)**	(477)	**0**	0	**(932)**	(1,028)
Employee benefit obligations[c]	**(44,624)**	(62,419)	**(7,356)**	(8,293)	**(9,498)**	(10,382)
Total employee benefit obligations	**$ (45,364)**	$ (62,896)	**$ 4,607**	$ (2,966)	**$ (10,430)**	$ (11,410)
Accumulated other comprehensive loss:[d]						
Net actuarial loss (gain)	**$ 51,476**	$ 63,834	**$ 16,046**	$ 18,341	**$ (405)**	$ 324
Prior service cost (credit)	**15**	38	**(6,952)**	(7,327)	**(5,803)**	(6,833)
Total accumulated other comprehensive loss	**$ 51,491**	$ 63,872	**$ 9,094**	$ 11,014	**$ (6,208)**	$ (6,509)

(a) Represents the over-funded U.K. defined benefit pension plan which is recorded as a noncurrent asset in the consolidated balance sheets.

(b) Recorded as a current liability in the consolidated balance sheets.

(c) Recorded as a noncurrent liability in the consolidated balance sheets.

(d) Amounts are pre-tax.

As of December 31, 2021, estimated benefit payments for subsequent years are as follows:

	U.S. Pension Benefits	Foreign Pension Benefits	Other Postretirement Benefits
2022	$ 16,050	$ 1,993	$ 945
2023	16,005	2,096	934
2024	15,925	2,036	939
2025	15,768	2,803	909
2026	15,535	2,594	640
2027-2031	73,709	13,535	2,684
Total benefit payments	**$ 152,992**	**$ 25,057**	**$ 7,051**

Investment Policies and Strategies

The investment policies and strategies are determined by the Ampco-Pittsburgh Corporation Retirement Committee (the "Retirement Committee") and monitored by the Investment Committee of the Board of Directors for the U.S. pension plans and by the Trustees (as appointed by UES-UK and the employees of UES-UK) for the UES-UK pension plan, each of whom employ their own investment managers to manage the plan's assets in accordance with the policy guidelines. The U.S. defined benefit pension plans follow a glide-path strategy whereby target asset allocations are rebalanced based on projected payment obligations and the funded status of the plans. The U.K. defined benefit pension plan employs a liability-matching portfolio whereby a higher percentage of plan assets are invested in fixed-income securities. Pension assets of the UES-UK plan are invested with the objective of the plan maintaining self-sufficiency.

Attempts to minimize risk include allowing temporary changes to the allocation mix in response to market conditions, diversifying investments among asset categories (e.g., equity securities, fixed-income securities, alternative investments, cash and cash equivalents) and within these asset categories (e.g., economic sector, industry, geographic distribution, size) and consulting with independent financial and legal counsels to assure that the investments and their expected returns and risks are consistent with the goals of the Retirement and Investment Committees or Trustees.

Investments in equity securities are primarily in common stocks of publicly-traded U.S. and international companies across a broad spectrum of industry sectors. Investments in fixed-income securities are principally A-rated or better bonds with maturities of less than ten years, preferred stocks and convertible bonds. Investments in equity and fixed-income securities are either direct or through designated mutual funds. The Corporation believes there are no significant concentrations of risk associated with the plans' assets. With respect to the U.S. pension plans, the following investments are prohibited unless otherwise approved by the Board of Directors: stock of the Corporation, futures and options except for hedging purposes, unregistered or restricted stock, warrants, margin trading, short-selling, real estate excluding public or real estate partnerships, and commodities including art, jewelry and gold. The UES-UK pension plan invests in specific funds. Any investments other than those specifically identified would be considered prohibited.

The following table summarizes target asset allocations for 2021 (within +/-5% considered acceptable) and major asset categories. Certain investments are classified differently for target asset allocation purposes and external reporting purposes. The Corporation intends to continue to liquidate the alternative investments of the U.S. plans to provide additional flexibility with investment allocation.

	U.S. Pension Benefits			Foreign Pension Benefits		
	Target Allocation	Percentage of Plan Assets		Target Allocation	Percentage of Plan Assets	
	Dec. 31, 2021	2021	2020	Dec. 31, 2021	2021	2020
Equity securities	48%	50%	52%	17%	15%	34%
Fixed-income securities	43%	43%	40%	46%	44%	48%
Alternative investments	6%	4%	5%	28%	29%	11%
Other (primarily cash and cash equivalents)	3%	3%	3%	9%	12%	7%

Fair Value Measurement of Plan Assets

Equity securities, exchange-traded funds ("ETFs"), mutual funds and treasury bonds are actively traded on exchanges or broker networks and price quotes for these investments are readily available. While not quoted on active exchanges, price quotes for corporate and agency bonds are readily available. Similarly, certain commingled funds are not traded publicly, but the underlying assets (such as stocks and bonds) held in the funds are traded on active markets and the prices for the underlying assets are readily observable. For securities not actively traded, the fair value may be based on third-party appraisals, discounted cash flow analysis, benchmark yields, and inputs that are currently observable in markets for similar securities.

Investment Strategies

The significant investment strategies of the various funds are summarized below.

Fund	Investment Strategy	Primary Investment Objective
Temporary Investment Funds	Invests primarily in a diversified portfolio of investment grade money market instruments.	Achieve a market level of current income while maintaining stability of principal and liquidity.
Various Equity Funds	Each fund maintains a diversified holding in common stock of applicable companies (e.g., common stock of small capitalization companies if a small-cap fund, common stock of medium capitalization companies if a mid-cap fund, common stock of foreign corporations if an international fund, etc.).	Outperform the fund's related index.
Various Fixed-Income Funds	Invests primarily in a diversified portfolio of fixed-income securities of varying maturities or in commingled funds which invest in a diversified portfolio of fixed-income securities of varying maturities.	Achieve a rate of return that matches or exceeds the expected growth in plan liabilities.
Alternative Investments – Managed Funds	Invests in equities and equity-like asset classes and strategies (such as public equities, venture capital, private equity, real estate, natural resources, and hedged strategies) and fixed-income securities approved by the Retirement Committee.	Generate a minimum annual inflation adjusted return of 5% and outperform a traditional 70/30 equities/bond portfolio.
Alternative Investments – Absolute Return Funds	Invests in a diversified portfolio of alternative investment styles and strategies approved by the Trustees of the UES-UK defined benefit pension plan.	Generate long-term capital appreciation while maintaining a low correlation with the traditional global financial markets.

20221031111051

Categories of Plan Assets

Asset categories based on the nature and risks of the U.S. pension benefit plans' assets as of December 31, 2021, are summarized below.

	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity Securities:				
U.S.				
Consumer discretionary	$ 6,442	$ 0	$ 0	$ 6,442
Consumer staples	3,050	0	0	3,050
Energy	1,167	0	0	1,167
Financial	4,617	0	0	4,617
Healthcare	10,526	0	0	10,526
Industrials	8,089	0	0	8,089
Information technology	11,819	0	0	11,819
Materials	938	0	0	938
Mutual funds and ETFs	58,440	0	0	58,440
Real estate	824	0	0	824
Telecommunications	2,388	0	0	2,388
Utilities	146	0	0	146
International				
Consumer discretionary	426	0	0	426
Financial	751	0	0	751
Healthcare	880	0	0	880
Industrials	1,410	0	0	1,410
Information technology	2,065	0	0	2,065
Materials	1,330	0	0	1,330
Total Equity Securities	115,308	0	0	115,308
Fixed-Income Securities:				
U.S.				
Corporate bonds	0	41,991	0	41,991
Treasury bonds	28,694	0	0	28,694
Agency bonds	0	257	0	257
Mutual funds and ETFs	7,334	0	0	7,334
International				
Corporate bonds	0	3,711	0	3,711
Total Fixed-Income Securities	36,028	45,959	0	81,987
Alternative Investments:				
Managed funds[a]	0	0	8,167	8,167
Total Alternative Investments	0	0	8,167	8,167
Other:				
Cash and cash equivalents[b]	9,349	0	0	9,349
Other[c]	76	0	50	126
Total Other	9,425	0	50	9,475
Total assets	$ 160,761	$ 45,959	$ 8,217	$ 214,937

(a) Includes approximately 89.6% in alternative investments (real assets, commodities and resources, absolute return funds) and 10.4% in cash and cash equivalents.

(b) Includes investments in temporary funds.

(c) Includes accrued receivables and pending broker settlements.

Asset categories based on the nature and risks of the U.S. pension benefit plans' assets as of December 31, 2020, are summarized below.

	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity Securities:				
U.S.				
Consumer discretionary	$ 6,012	$ 0	$ 0	$ 6,012
Consumer staples	2,591	0	0	2,591
Energy	569	0	0	569
Financial	3,199	0	0	3,199
Healthcare	9,831	0	0	9,831
Industrials	7,026	0	0	7,026
Information technology	11,450	0	0	11,450
Materials	736	0	0	736
Mutual funds and ETFs	52,101	0	0	52,101
Real estate	1,180	0	0	1,180
Telecommunications	2,343	0	0	2,343
Utilities	325	0	0	325
International				
Consumer discretionary	1,070	0	0	1,070
Consumer staples	2,478	0	0	2,478
Energy	419	0	0	419
Financial	2,252	0	0	2,252
Healthcare	1,107	0	0	1,107
Industrials	2,113	0	0	2,113
Information technology	1,743	0	0	1,743
Materials	987	0	0	987
Total Equity Securities	109,532	0	0	109,532
Fixed-Income Securities:				
U.S.				
Corporate bonds	0	45,567	0	45,567
Treasury bonds	24,967	0	0	24,967
Agency bonds	0	624	0	624
Mutual funds and ETFs	7,794	0	0	7,794
International				
Corporate bonds	0	2,699	0	2,699
Total Fixed-Income Securities	32,761	48,890	0	81,651
Alternative Investments:				
Managed funds[a]	0	0	7,557	7,557
Total Alternative Investments	0	0	7,557	7,557
Other:				
Cash and cash equivalents[b]	12,142	0	0	12,142
Other[c]	88	0	(90)	(2)
Total Other	12,230	0	(90)	12,140
Total assets	$ 154,523	$ 48,890	$ 7,467	$ 210,880

(a) Includes approximately 82.8% in alternative investments (real assets, commodities and resources, absolute return funds) and 17.2% in cash and cash equivalents.

(b) Includes investments in temporary funds.

(c) Includes accrued receivables and pending broker settlements.

20221031111052

Asset categories based on the nature and risks of the foreign pension benefit plan's assets as of December 31, 2021, are summarized below.

	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity Securities:				
Commingled funds (U.K.)	$ 0	$ 0	$ 1,079	$ 1,079
Commingled funds (International)	0	1,663	8,205	9,868
Total Equity Securities	0	1,663	9,284	10,947
Fixed-Income Securities:				
Commingled funds (U.K.)	0	16,320	0	16,320
Commingled funds (International)	0	15,281	10,197	25,478
Total Fixed-Income Securities	0	31,601	10,197	41,798
Multi-Asset Commingled Funds (International)	0	9,077	0	9,077
Alternative Investments:				
Absolute return funds	0	0	1,347	1,347
Cash and cash equivalents	0	8,445	0	8,445
Total assets	$ 0	$ 50,786	$ 20,828	$ 71,614

Asset categories based on the nature and risks of the foreign pension benefit plan's assets as of December 31, 2020, are summarized below.

	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity Securities:				
Commingled funds (U.K.)	$ 0	$ 0	$ 2,925	$ 2,925
Commingled funds (International)	0	2,343	17,746	20,089
Total Equity Securities	0	2,343	20,671	23,014
Fixed-Income Securities:				
Commingled funds (U.K.)	0	17,883	0	17,883
Commingled funds (International)	0	14,118	0	14,118
Total Fixed Income Securities	0	32,001	0	32,001
Multi-Asset Commingled Funds (International)	0	4,381	0	4,381
Alternative Investments:				
Absolute return funds	0	0	3,094	3,094
Cash and cash equivalents	73	4,394	0	4,467
Total assets	$ 73	$ 43,119	$ 23,765	$ 66,957

The following table sets forth a summary of changes in the fair value of the Level 3 plan assets for the U.S. and foreign pension benefit plans for the years ended December 31, 2021, and 2020.

	U.S. Pension Benefits		Foreign Pension Benefits	
	2021	2020	2021	2020
Fair value as of January 1	$ 7,557	$ 19,341	$ 23,765	$ 6,495
Transfers from other plan assets	0	0	10,214	16,418
Transfers to other plan assets	(1,600)	(10,784)	(16,957)	(7,066)
Realized gains (losses)	273	1,706	5,989	(197)
Change in net unrealized gains (losses)	1,937	(2,706)	(2,085)	6,024
Other, primarily impact from changes in foreign currency exchange rates	0	0	(98)	2,091
Fair value as of December 31	$ 8,167	$ 7,557	$ 20,828	$ 23,765

Net Periodic Pension and Other Postretirement Benefit Costs

The actual return on the fair value of the plan assets is included in determining the funded status of the plans. In determining net periodic pension benefit costs, the expected long-term rate of return on the market-related value of the plan assets is used. Differences

20221031111053

between the actual return on the fair value of the plan assets and the expected long-term rate of return on the market-related value of the plan assets are classified as part of unrecognized actuarial gains or losses and are recorded as a component of accumulated other comprehensive loss on the consolidated balance sheet. When these gains or losses exceed 10% of the greater of the projected benefit obligation or the market-related value of plan assets, they are amortized to net periodic pension and other postretirement benefit costs over the average remaining service period or life expectancy of the employees expected to receive benefits under the plans. When the gains or losses are less than 10% of the greater of the projected benefit obligation or the market-related value of plan assets, they are included in net periodic pension and other postretirement benefit costs indirectly as a result of lower/higher interest costs arising from a decrease/increase in the projected benefit obligation.

Net periodic pension and other postretirement benefit costs include the following components for each of the years.

	U.S. Pension Benefits		Foreign Pension Benefits		Other Postretirement Benefits	
	2021	2020	**2021**	2020	**2021**	2020
Service cost	**$ 243**	$ 223	**$ 375**	$ 444	**$ 245**	$ 225
Interest cost	**5,349**	7,175	**829**	1,058	**182**	281
Expected return on plan assets	**(12,995)**	(12,828)	**(1,935)**	(1,972)	**0**	0
Amortization of:						
Prior service cost (credit)	**23**	41	**(306)**	(285)	**(1,030)**	(1,017)
Actuarial loss (gain)	**2,632**	2,094	**635**	701	**(78)**	(139)
Special termination benefits	**0**	12	**0**	0	**0**	0
Total net periodic pension and other postretirement benefit costs	**$ (4,748)**	$ (3,283)	**$ (402)**	$ (54)	**$ (681)**	$ (650)

Assumptions

Assumptions are reviewed on an annual basis. The expected long-term rate of return on plan assets is an estimate of average rates of earnings expected to be earned on funds invested, or to be invested, to provide for the benefits included in the projected benefit obligation. Since these benefits will be paid over many years, the expected long-term rate of return is reflective of current investment returns and investment returns over a longer period. Consideration is also given to target and actual asset allocations, inflation and real risk-free return. A percentage point decrease in the expected long-term rate of return would increase annual pension expense by approximately $2,500. Conversely, a percentage point increase in the expected long-term rate of return would decrease annual pension expense by approximately $2,500. The discount rates used in determining future pension obligations and other postretirement benefits for each of the plans are based on rates of return on high-quality fixed-income investments currently available, and expected to be available, during the period to maturity of the pension and other postretirement benefits. High-quality fixed-income investments are defined as those investments which have received one of the two highest ratings given by a recognized rating agency with maturities of 10+ years. Assumptions about wage increases are not relevant since substantially all the benefits available under the defined benefit pension plans are either frozen or based on a multiplier, versus wages.

The discount rates used to determine the benefit obligations as of December 31, 2021, and 2020, are summarized below.

	U.S. Pension Benefits		Foreign Pension Benefits		Other Postretirement Benefits	
	2021	2020	**2021**	2020	**2021**	2020
Discount rate	**2.79-2.91%**	2.50-2.63%	**1.95%**	1.45%	**2.91%**	2.61%

In addition, the assumed health care cost trend rate at December 31, 2021, for other postretirement benefits is 5.65% for 2022 gradually decreasing to 4.75% in 2027. In selecting rates for current and long-term health care assumptions, the Corporation considers known health care cost increases, the design of the benefit programs, the demographics of its active and retiree populations, and expectations of inflation rates in the future.

The following assumptions were used to determine net periodic pension and other postretirement benefit costs for the years ended December 31, 2021, and 2020.

	U.S. Pension Benefits		Foreign Pension Benefits		Other Postretirement Benefits	
	2021	2020	**2021**	2020	**2021**	2020
Discount rate	**2.50-2.63%**	3.25-3.31%	**1.45%**	2.05%	**2.61%**	2.98-3.35%
Expected long-term rate of return	**6.50-7.00%**	6.60-7.25%	**2.90%**	3.55%	**n/a**	n/a

NOTE 11 – COMMITMENTS AND CONTINGENT LIABILITIES:

Outstanding standby and commercial letters of credit as of December 31, 2021, approximated $14,093, the majority of which serves as collateral for the IRB debt. In addition, outstanding surety bonds guaranteeing certain obligations of the two unfunded foreign defined benefit pension plans approximated $4,000 (SEK 33,900) as of December 31, 2021.

The Corporation has undertaken a significant capital program to upgrade existing equipment at certain of its FCEP locations which is anticipated to occur over the next two years and cost approximately $27,000. At December 31, 2021, commitments for future capital expenditures, including those associated with the FCEP capital program, approximated $20,800.

Approximately 36% of the Corporation's employees are covered by collective bargaining agreements or agreements with works councils that have expiration dates ranging from May 2022 to March 2025. Collective bargaining agreements and agreements with works councils expiring in 2022 (representing approximately 52% of the covered employees) will be negotiated with the intent to secure mutually beneficial, long-term arrangements.

See Note 14 regarding derivative instruments, Note 19 regarding litigation and Note 21 for environmental matters.

NOTE 12 – EQUITY RIGHTS OFFERING:

In September 2020, the Corporation completed an equity rights offering, issuing 5,507,889 shares of its common stock and 12,339,256 Series A warrants to existing shareholders for total gross proceeds of $19,279. The shares of common stock and warrants are classified as equity instruments in the consolidated statements of shareholders' equity. Additional proceeds may be received from the future exercise of the Series A warrants. Each Series A warrant provides the holder with the right to purchase 0.4464 shares of common stock at an exercise price of $2.5668, or $5.75 per whole share of common stock, and expires on August 1, 2025.

The following summarizes outstanding warrants as of December 31, 2021, and 2020, and activity for the years then ended.

	Number of Warrants
Outstanding as of January 1, 2020	**0**
Issued	12,339,256
Converted to common stock	**0**
Outstanding as of December 31, 2020	12,339,256
Issued	**0**
Converted to common stock	**(1,289,009)**
Outstanding as of December 31, 2021	**11,050,247**

Stock issuance costs equaled $1,140 in 2020 and were recorded against the proceeds from the equity rights offering in additional paid-in capital.

NOTE 13 – ACCUMULATED OTHER COMPREHENSIVE LOSS:

Net changes and ending balances for the various components of other comprehensive income (loss) and for accumulated other comprehensive loss as of and for the years ended December 31, 2020, and 2021, are summarized below.

	Foreign Currency Translation Adjustments	Unrecognized Components of Employee Benefit Plans	Derivatives	Total Accumulated Other Comprehensive Loss	Noncontrolling Interest	Accumulated Other Comprehensive Loss Attributable to Ampco-Pittsburgh
January 1, 2020	**$ (18,352)**	**$ (50,859)**	**$ 291**	**$ (68,920)**	**$ (258)**	**$ (68,662)**
Net change	6,981	(6,793)	298	486	519	(33)
December 31, 2020	**(11,371)**	**(57,652)**	**589**	**(68,434)**	**261**	**(68,695)**
Net change	(2,951)	17,089	(312)	13,826	237	13,589
December 31, 2021	**$ (14,322)**	**$ (40,563)**	**$ 277**	**$ (54,608)**	**$ 498**	**$ (55,106)**

The following summarizes the line items affected on the consolidated statements of operations for components reclassified from accumulated other comprehensive loss for the years ended December 31, 2021, and 2020. Amounts in parentheses represent credits to net income (loss).

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	2021	2020
Amortization of unrecognized employee benefit costs:		
Other – net	$ 1,876	$ 1,395
Income tax (provision) benefit	(50)	0
Net of income tax	$ 1,826	$ 1,395
Settlement of cash flow hedges:		
Depreciation and amortization (foreign currency purchase contracts)	$ (27)	$ (27)
Costs of products sold (excluding depreciation and amortization) (futures contracts – copper and aluminum)	(1,092)	(65)
Total before income tax	(1,119)	(92)
Income tax (provision) benefit	33	0
Net of income tax	$ (1,086)	$ (92)

The income tax effect associated with the various components of other comprehensive income for the years ended December 31, 2021, and 2020, is summarized below. Amounts in parentheses represent credits to net income (loss) when reclassified to earnings. Certain amounts have no tax effect due to the Corporation having a valuation allowance recorded against the deferred income tax assets for the jurisdiction where the income or expense is recognized. Foreign currency translation adjustments exclude the effect of income taxes since earnings of non-U.S. subsidiaries are deemed to be re-invested for an indefinite period of time.

	2021	2020
Income tax effect associated with changes in:		
Unrecognized employee benefit costs	$ (1,049)	$ 0
Fair value of cash flow hedges	(38)	0
Income tax effect associated with reclassification adjustments:		
Amortization of unrecognized employee benefit costs	(50)	0
Settlement of cash flow hedges	33	0

NOTE 14 – DERIVATIVE INSTRUMENTS:

Certain operations of the Corporation are subject to risk from exchange rate fluctuations in connection with sales in foreign currencies. To minimize this risk, foreign currency sales contracts are periodically entered into which are designated as cash flow or fair value hedges. As of December 31, 2021, no anticipated foreign-denominated sales have been hedged. As of December 31, 2020, approximately $4,370 of anticipated foreign-denominated sales were hedged.

Certain divisions of the ALP segment are subject to risk from increases in the price of commodities (copper and aluminum) used in the production of inventory. To minimize this risk, futures contracts are entered into which are designated as cash flow hedges. At December 31, 2021, approximately 67% or $3,434 of anticipated copper purchases over the next eight months and 56% or $684 of anticipated aluminum purchases over the next six months are hedged. At December 31, 2020, approximately 39% or $2,138 of anticipated copper purchases over the following eight months and 56% or $470 of anticipated aluminum purchases over the following six months were hedged.

At December 31, 2021, the Corporation has purchase commitments covering approximately 29% or $1,753 of anticipated natural gas usage through December 31, 2023, for one of its subsidiaries and approximately 34% or $2,125 of anticipated electricity usage through December 31, 2024, for two of its subsidiaries. The commitments qualify as normal purchases and, accordingly, are not reflected on the consolidated balance sheet. Purchases of natural gas under previously existing commitments approximated $1,368 for 2020. No purchase commitments for anticipated natural gas usage were outstanding during 2021 or as of December 31, 2020.

The Corporation previously entered into foreign currency purchase contracts to manage the volatility associated with euro-denominated progress payments to be made for certain machinery and equipment. Upon occurrence of an anticipated purchase and placement of the underlying fixed assets in service, the foreign currency purchase contract is settled and the change in fair value deferred in accumulated other comprehensive loss is reclassified to earnings (depreciation and amortization expense) over the life of the underlying asset. As of December 31, 2010, all contracts had been settled, the underlying fixed assets were placed in service and the change in fair value of the foreign currency purchase contract deferred in accumulated other comprehensive loss is being amortized to earnings over the life of the underlying assets.

No portion of the existing cash flow hedges is considered to be ineffective, including any ineffectiveness arising from the unlikelihood of an anticipated transaction to occur. Additionally, no amounts have been excluded from assessing the effectiveness of a hedge. The Corporation does not enter into derivative transactions for speculative purposes and, therefore, holds no derivative instruments for trading purposes.

No foreign currency sales contracts are outstanding as of December 31, 2021. The following summarizes location and fair value of the outstanding foreign currency sales contracts recorded on the consolidated balance sheet as of December 31, 2020.

	Location	Total
Fair value hedge contracts	Other current assets	$ 1,123
	Other noncurrent assets	332
	Other current liabilities	12
Fair value hedged item	Receivables	(960)
	Other current liabilities	201
	Other noncurrent liabilities	327

The change in the fair value of the cash flow contracts is recorded as a component of accumulated other comprehensive loss. Amounts recognized as and reclassified from accumulated other comprehensive loss are recorded as a component of other comprehensive income (loss) and are summarized below. Amounts are after-tax, where applicable. Certain amounts recognized as or reclassified from comprehensive income (loss) for 2021 and 2020 have no tax effect due to the Corporation recording a valuation allowance against the deferred income tax assets in the related jurisdictions.

For the Year Ended December 31, 2021	Beginning of the Year	Recognized	Reclassified	End of the Year
Foreign currency purchase contracts	**$ 162**	**$ 0**	**$ 27**	**$ 135**
Future contracts – copper and aluminum	427	774	1,059	142
Change in fair value	**$ 589**	**$ 774**	**$ 1,086**	**$ 277**

For the Year Ended December 31, 2020				
Foreign currency purchase contracts	$ 189	$ 0	$ 27	$ 162
Future contracts – copper and aluminum	102	390	65	427
Change in fair value	$ 291	$ 390	$ 92	$ 589

The change in fair value reclassified or expected to be reclassified from accumulated other comprehensive loss to earnings is summarized below. All amounts are pre-tax.

	Location of Gain (Loss) in Consolidated Statements of Operations	Estimated to be Reclassified in the Next 12 Months	Years Ended December 31, 2021	2020
Foreign currency purchase contracts	**Depreciation and amortization**	**$ 27**	**$ 27**	$ 27
Futures contracts – copper and aluminum	Costs of products sold (excluding depreciation and amortization)	**142**	**1,059**	65

Losses on foreign exchange transactions included in other expense approximated $(1,134) and $(97) for 2021 and 2020, respectively.

NOTE 15 – FAIR VALUE:

The following summarizes financial assets and liabilities reported at fair value on a recurring basis in the consolidated balance sheets at December 31:

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2021	Quoted Prices in Active Markets for Identical Inputs (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Investments				
Other noncurrent assets	$ 4,860	$ 0	$ 0	$ 4,860
2020				
Investments				
Other noncurrent assets	$ 4,402	$ 0	$ 0	$ 4,402
Foreign currency exchange contracts				
Accounts receivable	0	(960)	0	(960)
Other current assets	0	1,123	0	1,123
Other noncurrent assets	0	332	0	332
Other current liabilities	0	213	0	213
Other noncurrent liabilities	0	327	0	327

The investments held as other noncurrent assets represent assets held in the "Rabbi" trust for the purpose of providing benefits under the non-qualified defined benefit pension plan. The fair value of the investments is based on quoted prices of the investments in active markets. The fair value of foreign currency exchange contracts is determined based on the fair value of similar contracts with similar terms and remaining maturities. The fair value of futures contracts is based on market quotations. The fair values of the variable-rate IRB debt and borrowings under the revolving credit facility approximate their carrying values. Additionally, the fair values of trade receivables and trade payables approximate their carrying values.

NOTE 16 – REVENUE:

Net sales by geographic area and product line for the years ended December 31, 2021, and 2020, are outlined below. Net sales are attributed to the geographic areas based on the location of the customer. Sales to individual foreign countries were less than 10% of consolidated net sales for each of the years.

Net Sales by Geographic Area	2021	2020
United States	$ 178,090	$ 159,908
Foreign	166,830	168,636
Consolidated total	$ 344,920	$ 328,544

Net Sales by Product Line	2021	2020
Forged and cast mill rolls	$ 234,926	$ 228,219
Forged engineered products	25,278	9,670
Heat exchange coils	24,372	25,249
Centrifugal pumps	33,867	36,911
Air handling systems	26,477	28,495
Consolidated total	$ 344,920	$ 328,544

NOTE 17 – STOCK-BASED COMPENSATION:

The Ampco-Pittsburgh Corporation 2016 Omnibus Incentive Plan (the "Incentive Plan") originally authorized the issuance of up to 1,100,000 shares of the Corporation's common stock for awards under the Incentive Plan. In May 2021, the shareholders of the Corporation approved an amendment and restatement of the Incentive Plan providing for an additional 1,600,000 shares that could be issued under the Incentive Plan. Awards under the Incentive Plan may include incentive stock options and non-qualified stock options, stock appreciation rights, restricted shares and restricted stock units, performance awards, other stock-based awards, or short-term cash incentive awards. If any award is canceled, terminates, expires, or lapses for any reason prior to the issuance of the shares, or if the shares are issued under the Incentive Plan and thereafter are forfeited to the Corporation, the shares subject to such awards and the forfeited shares will not count against the aggregate number of shares available under the Incentive Plan. Shares tendered or withheld to pay the option exercise price or tax withholding will continue to count against the aggregate number of shares of common stock

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available for grant under the Incentive Plan. Any shares repurchased by the Corporation with cash proceeds from the exercise of options will not be added back to the pool of shares available for grant under the Incentive Plan.

The Incentive Plan may be administered by the Board of Directors or the Compensation Committee of the Board of Directors. The Compensation Committee has the authority to determine, within the limits of the express provisions of the Incentive Plan, the individuals to whom the awards will be granted and the nature, amount and terms of such awards. The Incentive Plan also provides for equity-based awards during any one year to non-employee members of the Board of Directors, based on the grant date fair value, not to exceed $200. The limit does not apply to shares received by a non-employee director at his or her election in lieu of all or a portion of the director's retainer for board service.

The Compensation Committee has granted stock options, time-vesting restricted stock units (RSUs) and performance-vesting restricted stock units (PSUs) to select individuals. Each stock option represents the right to purchase one share of common stock of the Corporation at a designated price, subject to the terms and conditions of the stock option award agreement. All stock options are fully vested. Each RSU represents the right to receive one share of common stock of the Corporation at a future date after the RSU has become earned and vested, subject to the terms and conditions of the RSU award agreement. The RSUs typically vest over a three-year period. The PSUs can be earned depending upon the achievement of a performance or market condition and a time-vesting condition as follows: (i) achievement of a targeted return on invested capital over a three-year performance period; (ii) achievement of a three-year cumulative relative total shareholder return as ranked against other companies included in the Corporation's peer group; and (iii) remaining continuously employed with the Corporation through the end of the third year following the date of grant. Earlier vesting of the stock units is permitted under certain conditions, such as upon a change of control of the Corporation, or as approved by the Board of Directors. In 2021, in connection with the early retirement of two executive officers, the Board of Directors approved modifying certain terms of their outstanding awards including accelerating the vesting requirements. The modifications increased stock-based compensation expense for 2021 by approximately $369.

The grant date fair value for the RSUs equals the closing price of the Corporation's common stock on the NYSE on the date of grant. The grant date fair value for PSUs subject to a market condition is determined using a Monte Carlo simulation model and the grant date fair value for PSUs that vest subject to a performance condition is equal to the closing price of the Corporation's stock on the NYSE on the date of grant. The determination of the fair value of these awards takes into consideration the likelihood of achievement of the market or performance condition and, in certain circumstances, is adjusted for subsequent changes in the estimated or actual outcome of the condition. Unrecognized compensation expense associated with the RSUs and PSUs equaled $2,013 at December 31, 2021, and is expected to be recognized over a weighted-average period of approximately 2 years.

Outstanding RSUs and PSUs, which would represent non-vested awards, as of December 31, 2021, and 2020, and activity for the years then ended are as follows:

	Number of RSUs	Weighted-Average Fair Value	Number of PSUs	Weighted-Average Fair Value
Outstanding at January 1, 2020	219,851	$ 5.45	214,191	$ 5.74
Granted	162,503	3.22	169,178	4.19
Converted to common stock	(95,391)	6.81	(5,793)	14.00
Forfeited	(8,305)	5.59	(29,380)	10.46
Outstanding at December 31, 2020	278,658	3.68	348,196	4.45
Granted	**207,381**	**5.74**	**215,150**	**6.78**
Converted to common stock	**(169,757)**	**4.39**	**(133,745)**	**5.98**
Forfeited	**(15,435)**	**4.80**	**(96,994)**	**4.30**
Outstanding at December 31, 2021	**300,847**	**$ 4.64**	**332,607**	**$ 5.39**

Outstanding stock options, all of which are fully vested, as of December 31, 2021, and 2020, and activity for the years then ended are as follows:

	Number of Shares Under Options	Weighted-Average Exercise Price	Remaining Contractual Life In Years	Intrinsic Value
Outstanding at January 1, 2020	408,750	$ 21.64	2.1	$ 0
Granted	0	N/A		
Exercised	0	N/A		
Forfeited	(17,000)	20.31		
Expired	(122,500)	25.77		
Outstanding at December 31, 2020	269,250	19.85	2.0	0
Granted	**0**	**N/A**		
Exercised	**0**	**N/A**		
Forfeited	**(5,000)**	**20.00**		
Expired	**(58,750)**	**25.18**		
Outstanding at December 31, 2021	**205,500**	**$ 18.32**	**1.4**	**$ 0**
Exercisable at December 31, 2021	**205,500**	**$ 18.32**	**1.4**	**$ 0**
Vested or expected to vest at December 31, 2021	**205,500**	**$ 18.32**	**1.4**	**$ 0**

Stock-based compensation expense for all awards, including expense associated with the modified awards and equity-based awards granted to non-employee members of the Board of Directors, approximated $2,438 and $1,329 for 2021 and 2020, respectively. The income tax benefit recognized in the consolidated statements of operations was not significant due to the Corporation having a valuation allowance recorded against its deferred income tax assets for the jurisdiction where the expense was recognized (see Note 20).

NOTE 18 – RESEARCH AND DEVELOPMENT COSTS:

Expenditures relating to the development of new products, identification of products or process alternatives and modifications and improvements to existing products and processes are expensed as incurred. These expenses approximated $1,229 for 2021 and $2,047 for 2020.

NOTE 19 – LITIGATION:

The Corporation and its subsidiaries are involved in various claims and lawsuits incidental to their businesses and are also subject to asbestos litigation as described below.

Asbestos Litigation

Claims have been asserted alleging personal injury from exposure to asbestos-containing components historically used in some products manufactured by predecessors of Air & Liquid (the "Asbestos Liability"). Air & Liquid, and in some cases the Corporation, are defendants (among a number of defendants, often in excess of 50) in cases filed in various state and federal courts.

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Asbestos Claims

The following table reflects approximate information about the claims for the Asbestos Liability against Air & Liquid and the Corporation for the years ended December 31, 2021, and 2020. The majority of the settlement and defense costs were reported and paid by insurers. Because claims are often filed and can be settled or dismissed in large groups, the amount and timing of settlements, as well as the number of open claims, can fluctuate significantly from period to period.

	2021	2020
Total claims pending at the beginning of the period	**5,891**	6,102
New claims served	**1,233**	1,016
Claims dismissed	**(605)**	(855)
Claims settled	**(422)**	(372)
Total claims pending at the end of the period (1)	**6,097**	5,891
Administrative closures (2)	**(2,941)**	
Total active claims pending at the end of the period (2)	**3,156**	
Gross settlement and defense costs paid (in 000's)	**$ 23,215**	$ 27,437
Average gross settlement and defense costs per claim resolved (in 000's) (3)	**$ 22.60**	$ 22.36

(1) Included as "open claims" are approximately 661 and 688 claims in 2021 and 2020, respectively, classified in various jurisdictions as "inactive" or transferred to a state or federal judicial panel on multi-district litigation, commonly referred to as the MDL.

(2) In 2021, the Corporation adopted the same methodology used by the liability expert who values the Corporation's asbestos claims, in order to better align the Corporation's data with the expert's liability valuation. The expert's methodology treats all claims filed six or more years ago as "administratively closed." Therefore, the Corporation changed its prior practice of reporting "Total claims pending at the end of the period" into two categories – "Administrative closures" and "Total active claims at the end of the period." Administrative closures now include (i) those claims that were filed six or more years ago; (ii) claims that were previously classified in various jurisdictions as "inactive;" and (iii) claims that were transferred to a state or federal judicial panel on multi-district litigation. Collectively, these claims are unlikely to result in any liability to the Corporation. Accordingly, the Corporation believes that presentation of "Total active claims pending at the end of the period" is a better indicator of total claims which may result in future payment.

(3) Claims resolved do not include claims that were administratively closed.

Asbestos Insurance

The Corporation and Air & Liquid are parties to a series of settlement agreements ("Settlement Agreements") with insurers that have coverage obligations for the Asbestos Liability (the "Settling Insurers"). Under the Settlement Agreements, the Settling Insurers accept financial responsibility, subject to the terms and conditions of the respective agreements, including overall coverage limits, for pending and future claims for the Asbestos Liability. The Settlement Agreements encompass the majority of insurance policies that provide coverage for claims for the Asbestos Liability.

The Settlement Agreements include acknowledgements that Howden North America, Inc. ("Howden") is entitled to coverage under policies covering the Asbestos Liability for claims arising out of the historical products manufactured or distributed by Buffalo Forge, a former subsidiary of the Corporation (the "Products"), which was acquired by Howden. The Settlement Agreements do not provide for any prioritization on access to the applicable policies or any sub-limits of liability as to Howden or the Corporation and Air & Liquid and, accordingly, Howden may access the coverage afforded by the Settling Insurers for any covered claim arising out of the Products. In general, access by Howden to the coverage afforded by the Settling Insurers for the Products will erode coverage under the Settlement Agreements available to the Corporation and Air & Liquid for the Asbestos Liability.

Asbestos Valuations

At December 31, 2006, with the assistance of a nationally recognized expert in the valuation of asbestos liabilities, the Corporation recorded its initial reserve for the Asbestos Liability. Since then, the Corporation and the expert have reviewed the Asbestos Liability and the underlying assumptions on a regular basis to determine whether any adjustment to the Asbestos Liability or the underlying assumptions were necessary. When warranted, the Asbestos Liability was adjusted to consider the current trends and new information that became available and, if reasonably estimable, to extend the valuation of asbestos liabilities further into the future. In 2018, the valuation was extended to include claims projected to be asserted through 2052, the estimated final date by which the Corporation expects to have settled all asbestos-related claims.

In conjunction with the regular updates of the estimated Asbestos Liability, the Corporation also develops an estimate of defense costs expected to be incurred with settling the Asbestos Liability and probable insurance recoveries for the Asbestos Liability and defense costs. In developing the estimate of probable defense costs, the Corporation considers several factors including, but not limited to, current and historical defense-to-indemnity cost ratios. In developing the estimate of probable insurance recoveries, the Corporation considers the expert's projection of settlement costs for the Asbestos Liability and management's projection of associated defense costs. In addition, the Corporation consults with its outside legal counsel on insurance matters and a nationally recognized insurance

20221031111058

consulting firm that it retains to assist with certain policy allocation matters. The Corporation also considers a number of other factors including the Settlement Agreements in effect, policy exclusions, policy limits, policy provisions regarding coverage for defense costs, attachment points, gaps in the coverage, policy exhaustions, the nature of the underlying claims for the Asbestos Liability, estimated erosion of insurance limits on account of claims against Howden arising out of the Products, prior impairment of policies, insolvencies among certain of the insurance carriers, and creditworthiness of the remaining insurers based on publicly available information. Based on these factors, the Corporation estimates the probable insurance recoveries for the Asbestos Liability and defense costs for the corresponding timeframe of the Asbestos Liability.

In 2021, primarily as a result of identified changes in claim data and availability of new information, the Corporation engaged GNARUS Advisors LLC ("GNARUS") to update the estimated Asbestos Liability. The methodology used by GNARUS in its updated projection was substantially the same methodology employed previously, which has been accepted by numerous courts, and included the following factors:

- interpretation of a widely accepted forecast of the population likely to have been exposed to asbestos;
- epidemiological studies estimating the number of people likely to develop asbestos-related diseases;
- analysis of the number of people likely to file an asbestos-related injury claim against the subsidiaries and the Corporation based on such epidemiological data and relevant claims history from January 1, 2018, to July 31, 2021;
- an analysis of pending cases, by type of injury claimed and jurisdiction where the claim is filed; and
- an analysis of claims resolution history from January 1, 2018, to July 31, 2021, to determine the average settlement value of claims, by type of injury claimed and jurisdiction of filing.

Based on this analysis, the Corporation recorded an increase to its estimated Asbestos Liability of $23,333 for claims pending or projected to be asserted through 2052. The increase is primarily attributable to recent claim experience, including a higher expected proportion of mesothelioma claims which typically have a higher settlement value, offset by a lower defense-to-indemnity cost ratio (reduced to 70% from 80% based on experience over the past five years) and elimination of an inflationary factor based on historical experience over the past 10+ years which provided no evidence that inflationary pressures influenced settlement averages. In addition, the Corporation increased its estimated insurance receivable by $16,672 for the estimated insurance recoveries attributable to the claims for which the Asbestos Liability reserve has been established and the portion of defense costs covered by the Settlement Agreements. The difference between the increase to the Asbestos Liability and the increase to the insurance receivable of $6,661 is recorded as a charge for asbestos-related costs in the consolidated statement of operations for 2021. In addition, in the prior year, the Corporation recognized expense equaling $283 for the potential insolvency of an insurance carrier, which was recorded as a charge for asbestos-related costs in the consolidated statement of operations for 2020.

The following table summarizes activity relating to insurance recoveries for the years ended December 31, 2021, and 2020.

	2021	2020
Insurance receivable – asbestos, beginning of the year	$ 117,937	$ 136,932
Settlement and defense costs paid by insurance carriers	(13,312)	(18,712)
Change in estimated coverage	16,672	(283)
Insurance receivable – asbestos, end of the year	$ 121,297	$ 117,937

The balance of the insurance receivable does not assume any recovery from insolvent carriers. A substantial majority of the insurance recoveries deemed probable is from insurance companies rated A – (excellent) or better by A.M. Best Corporation. There can be no assurance, however, that there will not be insolvencies among the relevant insurance carriers, or that the assumed percentage recoveries for certain carriers will prove correct. The difference between insurance recoveries and projected costs is not due to exhaustion of all insurance coverage for the Asbestos Liability.

The amounts recorded for the Asbestos Liability and insurance receivable rely on assumptions that are based on currently known facts and strategy. The Corporation's actual expenses or insurance recoveries could be significantly higher or lower than those recorded if assumptions used in the Corporation's or the experts' calculations vary significantly from actual results. Key variables in these assumptions are identified above and also include the number and nature of new claims to be filed each year, the average cost of disposing of each new claim, average annual defense costs, compliance by relevant parties with the terms of the Settlement Agreements, and the solvency risk with respect to the relevant insurance carriers. Other factors that may affect the Asbestos Liability and ability to recover under the Corporation's insurance policies include uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, reforms that may be made by state and federal courts, and the passage of state or federal tort reform legislation.

The Corporation intends to continue to evaluate the Asbestos Liability and related insurance receivable, as well as the underlying assumptions, on a regular basis to determine whether any adjustments to the estimates are required. Due to the uncertainties

surrounding asbestos litigation and insurance, these regular reviews may result in the Corporation adjusting its current reserve; however, the Corporation is currently unable to estimate such future adjustments. Adjustments, if any, to the Corporation's estimate of the Asbestos Liability and/or insurance receivable could be material to the operating results for the periods in which the adjustments to the liability or receivable are recorded and to the Corporation's consolidated financial position and liquidity.

NOTE 20 – INCOME TAXES:

(Loss) income from operations before income taxes for the years ended December 31, 2021, and 2020, is summarized below. (Loss) income from operations before income taxes for certain foreign entities is classified differently for book reporting and income tax reporting purposes.

	2021	2020
Domestic	$ (18,057)	$ (1,587)
Foreign	8,228	10,287
(Loss) income from operations before income taxes	$ (9,829)	$ 8,700

The income tax provision (benefit) for the years ended December 31, 2021, and 2020, consisted of the following:

	2021	2020
Current:		
Federal	$ 0	$ (3,614)
State	(16)	107
Foreign	1,017	2,079
Current income tax provision (benefit)	1,001	(1,428)
Deferred:		
Federal	(2,978)	2,485
State	(1,085)	1,329
Foreign	1,138	(178)
Increase (decrease) in valuation allowance	4,229	(2,678)
Deferred income tax provision	1,304	958
Total income tax provision (benefit)	$ 2,305	$ (470)

The income tax benefit recorded in 2020 includes a benefit of $3,502 for the carryback of net operating losses, as enabled by the CARES Act, to an earlier period when the Corporation was subject to a higher tax rate, resulting in the release of a portion of the valuation allowance previously established against the deferred income tax assets of the Corporation.

The difference between statutory U.S. federal income tax and the Corporation's effective income tax for the years ended December 31, 2021, and 2020, was as follows:

	2021	2020
Computed at statutory rate	$ (2,064)	$ 1,827
State income taxes	(1,098)	1,413
Rate change	482	0
Tax differential on non-U.S. earnings	(49)	(44)
GILTI inclusion	305	1,586
Stock-based compensation	152	0
Meals and entertainment	10	32
Net operating loss carryback	0	(3,502)
Adjustments to net operating losses	275	53
Increase (decrease) in valuation allowance	4,229	(2,678)
Other – net	63	843
Total income tax provision (benefit)	$ 2,305	$ (470)

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Deferred income tax assets and liabilities as of December 31, 2021, and 2020, are summarized in the following table. Unremitted earnings of the Corporation's non-U.S. subsidiaries and affiliates are deemed to be permanently re-invested and, accordingly, no deferred income tax liability has been recorded. If the Corporation were to remit any foreign earnings to the U.S., the estimated tax impact would be insignificant.

	2021	2020
Assets:		
Employment – related liabilities	$ 7,378	$ 8,709
Pension liability – foreign	0	688
Pension liability – domestic	7,984	11,991
Capital loss carryforwards	204	157
Asbestos-related liability	14,685	15,521
Net operating loss – domestic	13,156	8,735
Net operating loss – state	5,415	4,711
Net operating loss – foreign	9,666	10,940
Inventory related	3,232	2,056
Impairment charge associated with investment in MG	961	949
Operating lease right-of-use assets	980	1,026
Interest expense limitation	2,517	1,770
Other	797	798
Gross deferred income tax assets	66,975	68,051
Valuation allowance	(42,441)	(42,454)
	24,534	25,597
Liabilities:		
Depreciation	(22,015)	(22,165)
Pension asset – foreign	(1,482)	0
Intangible assets – finite life	(565)	(707)
Intangible assets – indefinite life	(510)	(552)
Operating lease liabilities	(980)	(1,026)
Other	(664)	(57)
Gross deferred income tax liabilities	(26,216)	(24,507)
Net deferred income tax (liabilities) assets	$ (1,682)	$ 1,090

At December 31, 2021, the Corporation has U.S. federal net operating loss carryforwards of $62,649, of which $55,914 can be carried forward indefinitely but will be limited to 80 percent of taxable income in any given year. The balance of $6,735 will begin to expire in 2035 and can be used without taxable income limitation. Additionally, at December 31, 2021, the Corporation had state net operating loss carryforwards of $81,909, which begin to expire in 2022, and foreign net operating loss carryforwards of $45,049 and capital loss carryforwards of $815, which do not expire.

Unrecognized tax benefits and changes in unrecognized tax benefits for the years ended December 31, 2021, and 2020, are insignificant. If the unrecognized tax benefits were recognized, the effect on the Corporation's effective income tax rate would also be insignificant. The amount of penalties and interest recognized in the consolidated balance sheets as of December 31, 2021, and 2020, and in the consolidated statements of operations for 2021 and 2020 is insignificant.

The Corporation is subject to taxation in the United States, various states and foreign jurisdictions, and remains subject to examination by tax authorities for 2013, due to the carryback of net operating losses enabled by the CARES Act, and for tax years 2018 – 2021.

NOTE 21 – ENVIRONMENTAL MATTERS:

The Corporation is currently performing certain remedial actions in connection with the sale of real estate previously owned and periodically incurs costs to maintain compliance with environmental laws and regulations. Environmental exposures are difficult to assess and estimate for numerous reasons, including lack of reliable data, the multiplicity of possible solutions, the years of remedial and monitoring activity required, and identification of new sites. The undiscounted potential liability for remedial actions and environmental compliance measures approximated $100 as of December 31, 2021, and 2020.

NOTE 22 – RELATED PARTIES:

ATR had a loan outstanding with its minority shareholder, which was fully repaid in 2021. The loan originally matured in 2008 but had been renewed continually for one-year periods. At December 31, 2020, the loan balance approximated $1,056 (RMB 6,901).

Interest did not compound and had accrued on the outstanding loan balance, since inception, at the three-to-five-year loan interest rate set by the People's Bank of China in effect at the time of renewal. In 2021, in addition to repaying the balance of the loan, ATR paid $479 (RMB 3,046) in accrued interest. In 2020, ATR repaid $1,882 (RMB 13,000) in principal and $290 (RMB 2,000) in accrued interest. The interest rate for 2021 and 2020 approximated 5%. Accrued interest as of December 31, 2021, and 2020, approximated $1,713 (RMB 10,901) and $2,117 (RMB 13,842), respectively, and is recorded in other current liabilities on the consolidated balance sheets.

Purchases from ATR's minority shareholder and its affiliates, which were in the ordinary course of business, approximated $11,368 (RMB 73,299) and $7,556 (RMB 52,255) in 2021 and 2020, respectively. At December 31, 2021, and 2020, the amount payable to ATR's minority shareholder and its affiliates for purchases approximated $1,125 (RMB 7,157) and $344 (RMB 2,249), respectively. Additionally, customer deposits from ATR's minority shareholder and its affiliates approximated $616 (RMB 3,921) and $456 (RMB 2,984) at December 31, 2021, and 2020, respectively. Sales to ATR's minority shareholder and its affiliates, which were in the ordinary course of business, approximated $9,842 (RMB 63,460) and $9,154 (RMB 63,222) for 2021 and 2020, respectively. No amounts were due from ATR's minority shareholder or its affiliates as of December 31, 2021, or 2020.

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NOTE 23 – BUSINESS SEGMENTS:

The Corporation organizes its business into two operating segments – *Forged and Cast Engineered Products* and *Air and Liquid Processing*. Summarized financial information concerning the Corporation's reportable segments is shown in the following tables. Corporate assets included under Identifiable Assets represent primarily cash and cash equivalents and other items not allocated to reportable segments. Long-lived assets exclude deferred income tax assets. Corporate costs are comprised of operating costs of the corporate office and other costs not allocated to the segments. The accounting policies are the same as those described in Note 1, *Summary of Significant Accounting Policies.*

	Net Sales(1)		(Loss) Income from Operations Before Income Taxes	
	2021	2020	**2021**	2020
Forged and Cast Engineered Products	**$ 260,204**	$ 237,889	**$ (3,065)**	$ 8,621
Air and Liquid Processing (2)	**84,716**	90,655	**1,905**	10,133
Total Reportable Segments	**344,920**	328,544	**(1,160)**	18,754
Corporate costs, including other income (expense)	**0**	0	**(8,669)**	(10,054)
Consolidated total	**$ 344,920**	$ 328,544	**$ (9,829)**	$ 8,700

	Capital Expenditures		Depreciation and Amortization Expense		Identifiable Assets(3)	
	2021	2020	**2021**	2020	**2021**	2020
Forged and Cast Engineered Products	**$ 14,929**	$ 7,972	**$ 17,051**	$ 17,583	**$ 317,562**	$ 297,552
Air and Liquid Processing	**307**	494	**749**	824	**155,718**	156,322
Corporate	**0**	0	**77**	168	**12,352**	9,334
Consolidated total	**$ 15,236**	$ 8,466	**$ 17,877**	$ 18,575	**$ 485,632**	$ 463,208

	Long-Lived Assets(4)		(Loss) Income from Operations Before Income Taxes	
Geographic Areas:	**2021**	2020	**2021**	2020
United States (5)	**$ 218,712**	$ 220,372	**$ (18,148)**	$ (1,706)
Foreign	**76,447**	68,511	**8,319**	10,406
Consolidated total	**$ 295,159**	$ 288,883	**$ (9,829)**	$ 8,700

(1) For the Forged and Cast Engineered Products segment, one customer accounted for 11% of its net sales in 2020.

(2) (Loss) income from operations before income taxes for the Air and Liquid Processing segment for 2021 includes a charge of $6,661 representing the estimated increase in the costs of asbestos-related litigation through 2052, the estimated final date by which the Corporation expects to have settled all asbestos-related claims, net of estimated insurance recoveries. (Loss) income from operations before income taxes for the Air and Liquid Processing segment for 2020 includes a charge of $283 for the potential insolvency of an asbestos-related insurance carrier.

(3) Identifiable assets for the Forged and Cast Engineered Products segment include investments in joint ventures of $2,175 at December 31, 2021, and 2020.

(4) Foreign long-lived assets primarily represent assets of the foreign operations. Long-lived assets of the U.S. include noncurrent asbestos-related insurance receivables of $105,297 and $101,937 at December 31, 2021, and 2020. respectively.

(5) (Loss) income from operations before income taxes for the United States includes Corporate costs. In addition, for 2021, it includes a charge of $6,661 representing the estimated increase in the costs of asbestos-related litigation through 2052, the estimated final date by which the Corporation expects to have settled all asbestos-related claims, net of estimated insurance recoveries, and, for 2020, a charge of $283 for the potential insolvency of an asbestos-related insurance carrier.

QUARTERLY INFORMATION – UNAUDITED

Not applicable.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors
Ampco-Pittsburgh Corporation
Carnegie, Pennsylvania

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Ampco-Pittsburgh Corporation and subsidiaries (the "Corporation") as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income, shareholders' equity, and cash flows for each of the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Corporation at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Corporation's management. Our responsibility is to express an opinion on the Corporation's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Corporation in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Corporation is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Asbestos Liabilities and Related Insurance Receivables

As described in Note 1 and 19 to the Corporation's consolidated financial statements, the Corporation has accrued asbestos liabilities of $180.3 million ($23.0 million current and $157.3 million long term) and recorded asbestos-related insurance receivables of $121.3 million ($16.0 million current and $105.3 million noncurrent) as of December 31, 2021. These liabilities and insurance receivables relate to claims that have been asserted alleging personal injury from exposure to asbestos-containing components historically used in certain products manufactured by predecessors of the Corporation's Air & Liquid Systems Corporation. The Corporation utilizes third-party experts to assist in developing (i) an estimate of the asbestos liability for the probable pending and future claims over the period that the Corporation believes it can reasonably estimate such claims and (ii) an estimate of the insurance receivable for the insurance proceeds expected to be received under existing policies associated with the asbestos liabilities.

We identified the valuation of asbestos liabilities and insurance receivables as a critical audit matter. The principal considerations for our determination are: (i) the subjectivity of estimating projected claims including the period for which the Corporation can reasonably estimate the asbestos liabilities, (ii) the estimation process for projected settlement values of reported and unreported claims including

the number of claims expected to be filed and adjudicated, the disease type, and the settlement and defense costs to estimate the asbestos liabilities, and (iii) the complexity of determining the associated insurance receivables including the estimated settlement costs for the asbestos liabilities and the associated defense costs, the continued financial solvency of the insurers, and legal interpretation of rights for recovery under the insurance policies and the related settlement agreements. Auditing these elements involved especially challenging auditor judgment due to the nature and extent of audit effort required to address these matters, including the extent of specialized skill or knowledge needed.

The primary procedures we performed to address this critical audit matter included:

- Assessing the qualifications, experience, and objectivity of the Corporation's third-party experts;
- Testing the underlying historical data that served as a basis for the valuation of the asbestos liabilities for completeness and accuracy through the examination of relevant source documents;
- Testing the insurance policies for existence and coverage amounts including independent confirmation of a selection of policies and the related settlement agreements directly with insurance carriers;
- Evaluating the ongoing financial solvency of insurance providers utilizing publicly available financial information; and
- Utilizing personnel with specialized knowledge and skill in actuarial science to assist in: (i) evaluating the valuation methodology utilized by the Corporation to estimate the asbestos liabilities, (ii) testing the computation of the asbestos liability estimate performed by the Corporation's third-party experts, (iii) evaluating the period utilized by the Corporation to project probable pending and future claims, and (iv) evaluating the reasonableness of certain assumptions utilized to develop the estimates for the asbestos liabilities and insurance receivables such as the estimated settlement or indemnity costs for the asbestos liabilities and the associated defense costs.

/s/ BDO USA, LLP

We have served as the Corporation's auditor since 2020.

Pittsburgh, Pennsylvania
March 16, 2022

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

The Corporation did not experience any changes in, or disagreements with its accountants on, accounting and financial disclosure during the period covered.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures. An evaluation of the effectiveness of the Corporation's disclosure controls and procedures as of the end of the period covered by this report was carried out under the supervision, and with the participation, of management, including the principal executive officer and principal financial officer. Disclosure controls and procedures are defined under Securities and Exchange Commission ("SEC") rules as controls and other procedures that are designed to ensure that information required to be disclosed by a company in the reports that it files under the Exchange Act is recorded, processed, summarized and reported within required time periods. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. Based on that evaluation, the Corporation's management, including the principal executive officer and principal financial officer, has concluded that the Corporation's disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2021.

Management's Annual Report on Internal Control Over Financial Reporting. The Corporation's management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a – 15(f) under the Securities Exchange Act). Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Effective internal control over financial reporting can only provide reasonable assurance that the objectives of the control process are met. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore it is possible to design into the process safeguards to reduce, though not eliminate, this risk. Further, the design of internal control over financial reporting includes the consideration of the benefits of each control relative to the cost of the control.

Management assessed the effectiveness of internal control over financial reporting as of December 31, 2021. In making this assessment, management used the criteria set forth in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on those criteria and management's assessment, management, including the principal executive officer and principal financial officer, concluded that the Corporation's internal control over financial reporting was effective as of December 31, 2021.

Changes in Internal Control Over Financial Reporting. There were no changes in the Corporation's internal control over financial reporting during the quarter ended December 31, 2021, that have materially affected, or are reasonably likely to materially affect, its internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

– PART III –

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information about the Corporation's directors required by Item 401 of Regulation S-K and not otherwise set forth below is contained under the caption "Proposal 1: Election of Directors" in the Corporation's definitive Proxy Statement for the 2022 Annual Meeting of Shareholders (the "Proxy Statement") which the Company anticipates filing with the Securities and Exchange Commission, pursuant to Regulation 14A, not later than 120 days after the end of the Corporation's fiscal year, and is incorporated by reference. The information required by Item 401 of Regulation S-K regarding executive officers is set forth in Part I, Item 1 of this report under "Executive Officers."

The information required by Item 405 of Regulation S-K is contained under the caption "Security Ownership of Certain Beneficial Owners and Management—Delinquent Section 16(a) Reports" of the Proxy Statement and is incorporated by reference.

The Corporation and its subsidiaries have adopted a Code of Business Conduct and Ethics that applies to all of their officers, directors and employees, as well as an additional Code of Ethics that applies to the Corporation's Chief Executive Officer and Chief Financial Officer, which are available on the Corporation's website at www.ampcopittsburgh.com.

The information required by Items 407(c)(3), (d)(4) and (d)(5) of Regulation S-K is contained under the captions "Corporate Governance – Director Nominating Procedures" and "Board Committees; Director Compensation – Audit Committee" of the Proxy Statement and is incorporated by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required for Item 11 is contained under the captions "Director Compensation," "Compensation Discussion and Analysis ("CDA")," "Summary Compensation Table," "Outstanding Equity Awards at Fiscal Year-End," "Retirement Benefits," "Potential Payments upon Termination, Resignation or Change in Control," and "Report of The Compensation Committee" of the Proxy Statement and is incorporated by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by Item 201(d) of Regulation S-K is contained under the caption "Equity Compensation Plan Information" of the Proxy Statement and is incorporated by reference.

The information required by Item 403 of Regulation S-K is contained under the caption "Security Ownership of Certain Beneficial Owners and Management" of the Proxy Statement and is incorporated by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 404 of Regulation S-K is contained under the caption "Certain Relationships and Related Transactions" in the Proxy Statement and is incorporated by reference.

The information required by Item 407(a) of Regulation S-K is contained under the caption "Corporate Governance – Board Independence" of the Proxy Statement and is incorporated by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required for Item 14 is contained under the caption "Report of the Audit Committee" of the Proxy Statement and is incorporated herein.

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ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

THE FOLLOWING DOCUMENTS ARE FILED AS PART OF THIS REPORT:

1. Financial Statements

– Consolidated Balance Sheets
– Consolidated Statements of Operations
– Consolidated Statements of Comprehensive Income
– Consolidated Statements of Shareholders' Equity
– Consolidated Statements of Cash Flows
– Notes to Consolidated Financial Statements
– Report of Independent Registered Public Accounting Firm (BDO USA, LLP; Pittsburgh, Pennsylvania, United States; PCAOB ID #243)

2. Financial Statement Schedules

The financial statement schedules are not applicable to the Corporation since the Corporation meets the definition of a Smaller Reporting Company, as defined by the Securities and Exchange Commission per Rule 12b-2 of the Exchange Act.

	Page Number
Index to Ampco-Pittsburgh Corporation Financial Data	72

3. Exhibits

Exhibit No.

2.1 Share Sale and Purchase Agreement, dated December 2, 2015, by and among Ampco-Pittsburgh Corporation, Ampco UES Sub, Inc., Altor Fund II GP Limited, and Åkers Holding AB, incorporated by reference to Current Report on Form 8-K filed on December 8, 2015.

2.2 Addendum to Share Sale and Purchase Agreement, dated March 1, 2016, by and among Ampco-Pittsburgh Corporation, Ampco UES Sub, Inc., Altor Fund II GP Limited, and Åkers Holding AB, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

2.3 Second Addendum to Share Sale and Purchase Agreement, dated March 3, 2016, by and among Ampco-Pittsburgh Corporation, Ampco UES Sub, Inc., Altor Fund II GP Limited, and Åkers Holding AB, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.

2.4 Purchase Agreement, dated November 1, 2016, by and among Ampco UES Sub, Inc., ASW Steel Inc., CK Pearl Fund, Ltd., CK Pearl Fund LP, and White Oak Strategic Master Fund, L.P., incorporated by reference to Current Report on Form 8-K filed on November 4, 2016.

2.5 Purchase Agreement, dated September 30, 2019, by and among Ampco UES Sub, Inc., ASW Steel Inc., Valbruna Canada Ltd. and Ampco-Pittsburgh Corporation, incorporated by reference to Current Report on Form 8-K filed on October 3, 2019.

3.1 Restated Articles of Incorporation, effective as of August 11, 2017, incorporated by reference to Quarterly Report on Form 10-Q filed on November 9, 2017.

3.2 Amended and Restated By-laws, effective as of December 17, 2015, incorporated by reference to Current Report on Form 8-K filed on December 23, 2015.

3.3 Amendment of Amended and Restated Articles of Incorporation, effective as of May 9, 2019, incorporated by reference to Quarterly Report on Form 10-Q filed on May 10, 2019.

4.1 Form of Common Stock Certificate, incorporated by reference to Registration Statement on Form S-3 filed on January 19, 2018.

4.2 Form of Series A Warrant Certificate, incorporated by reference to Amendment No. 1 to Registration Statement on Form S-1 filed on July 21, 2020.

4.3 Warrant Agreement between Ampco-Pittsburgh Corporation and Broadridge Corporate Issuer Solutions, Inc. with respect to Series A Warrants, incorporated by reference to Quarterly Report on Form 10-Q filed on November 16, 2020.

4.4 Description of Securities, incorporated by reference to Annual Report on Form 10-K filed on March 26, 2021.

10.1*	Ampco-Pittsburgh Corporation 2016 Omnibus Incentive Plan, incorporated by supplement to the Definitive Proxy Statement for the 2016 Annual Meeting of Shareholders filed on March 23, 2016.
10.2*	Amended and Restated Change in Control Agreement by and between Ampco-Pittsburgh Corporation and Rose Hoover, dated November 4, 2015, incorporated by reference to Quarterly Report on Form 10-Q filed on November 6, 2015.
10.3*	Amended and Restated Change in Control Agreement by and between Ampco-Pittsburgh Corporation and Dee Ann Johnson, dated November 4, 2015, incorporated by reference to Quarterly Report on Form 10-Q filed on November 6, 2015.
10.4*	Amended and Restated Change in Control Agreement by and among Ampco-Pittsburgh Corporation, Air & Liquid Systems Corporation, and Terrence W. Kenny, dated November 4, 2015, incorporated by reference to Quarterly Report on Form 10-Q filed on November 6, 2015.
10.5*	Change in Control Agreement by and between Ampco-Pittsburgh Corporation and Michael G. McAuley, dated April 25, 2016, incorporated by reference to Current Report on Form 8-K filed on April 25, 2016.
10.6*	Amendment No. 1 to Amended and Restated Union Electric Steel Corporation Retirement Restoration Plan for Robert G. Carothers, effective as of July 1, 2015, incorporated by reference to Quarterly Report on Form 10-Q filed on August 10, 2015.
10.7*	Retirement and Consulting Agreement, effective as of May 1, 2016, by and between Union Electric Steel Corporation and Robert G. Carothers, incorporated by reference to Current Report on Form 8-K filed on May 3, 2016.
10.8	First Amended and Restated Security Agreement, dated June 29, 2021, by and among Air & Liquid Systems Corporation, Union Electric Steel Corporation, Alloys Unlimited and Processing, LLC, Akers National Roll Company, Union Electric Steel UK Limited, Åkers AB and Åkers Sweden AB, certain lenders, the guarantors party thereto, including the Corporation, PNC Bank, National Association, as agent for the lenders, and the other lenders party thereto, incorporated by reference to Current Report on Form 8-K filed on July 1, 2021.
10.9	Amendment No. 1 to First Amended and Restated Revolving Credit and Security Agreement, dated December 17, 2021, by and among Air & Liquid Systems Corporation, Union Electric Steel Corporation, Alloys Unlimited and Processing, LLC, Akers National Roll Company, Union Electric Steel UK Limited, Åkers AB and Åkers Sweden AB, certain lenders, the guarantors party thereto, including the Corporation, PNC Bank, National Association, as agent for the lenders, and the other lenders party thereto.
10.10	Shareholder Support Agreement, dated March 3, 2016, by and between Ampco-Pittsburgh Corporation and Altor Fund II GP Limited, incorporated by reference to Current Report on Form 8-K filed on March 7, 2016.
10.11	Amendment No. 1 to Shareholder Support Agreement, dated August 10, 2021, by and between Ampco-Pittsburgh Corporation and Altor Fund II GP Limited, incorporated by reference to Current Report on Form 8-K filed on August 13, 2021.
10.12*	Form of Notice of Grant of Restricted Stock Unit Award (Time-Vesting), incorporated by reference to Annual Report on Form 10-K filed on March 16, 2017.
10.13*	Form of Notice of Grant of Restricted Stock Unit Award (Performance-Vesting), incorporated by reference to Annual Report on Form 10-K filed on March 16, 2017.
10.14*	Amendment No. 1 to Retirement and Consulting Agreement, effective as of June 1, 2017, by and between Union Electric Steel Corporation and Robert G. Carothers, incorporated by reference to Quarterly Report on Form 10-Q filed on August 9, 2017.
10.15*	Change in Control Agreement by and between Ampco-Pittsburgh Corporation and J. Brett McBrayer, dated July 1, 2018, incorporated by reference to Amendment No. 1 to Quarterly Report on Form 10-Q/A filed on August 17, 2018.
10.16*	Offer Letter by and between Ampco-Pittsburgh Corporation and J. Brett McBrayer, dated June 16, 2018, incorporated by reference to Amendment No. 1 to Quarterly Report on Form 10-Q/A filed on August 17, 2018.
10.17*	Amendment No. 1 to Offer Letter, dated August 10, 2021, by and between Ampco-Pittsburgh Corporation and J. Brett McBrayer, incorporated by reference to Current Report on Form 8-K filed on August 13, 2021.
10.18*	Ampco-Pittsburgh Corporation Executive Severance Plan, effective as of June 21, 2018, incorporated by reference to Current Report on Form 8-K filed on June 27, 2018.
10.19	Master Lease Agreement by and between Union Electric Steel Corporation and Store Capital Acquisitions, LLC, dated September 28, 2018, incorporated by reference to Quarterly Report on Form 10-Q filed on November 9, 2018.
10.20	Unconditional Guaranty of Payment and Performance by and between Ampco-Pittsburgh Corporation and Store Capital Acquisitions, LLC, dated September 28, 2018, incorporated by reference to Quarterly Report on Form 10-Q filed on November 9, 2018.
10.21*	Amendment No. 2 to Retirement and Consulting Agreement, effective as of January 1, 2019, by and between Union Electric Steel Corporation and Robert G. Carothers, incorporated by reference to Annual Report on Form 10-K filed on March 18, 2019.

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10.22*	Change in Control Agreement by and among Ampco-Pittsburgh Corporation, Union Electric Steel Corporation and Samuel C. Lyon, dated March 6, 2019, incorporated by reference to Annual Report on Form 10-K filed on March 18, 2019.
10.23*	Amendment to Change in Control Agreement by and between Ampco-Pittsburgh Corporation and J. Brett McBrayer, dated December 20, 2019, incorporated by reference to Annual Report on Form 10-K filed on March 16, 2020.
10.24*	Retirement and Consulting Agreement effective December 31, 2021 with Rose A. Hoover, incorporated by reference to Current Report on Form 8-K filed on October 22, 2021.
10.25*	Retirement Agreement, effective December 31, 2021, by and among Air & Liquid Systems Corporation, Ampco-Pittsburgh Corporation and Terrence W. Kenny.
10.26*	Change in Control Agreement by and among Ampco-Pittsburgh Corporation, Air & Liquid Systems Corporation and David Anderson, dated January 1, 2022.
23.1	Consent of BDO USA, LLP
23.2	Consent of GNARUS Advisors LLC
31.1	Certification of Principal Executive Officer pursuant to Section 302 of The Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer pursuant to Section 302 of The Sarbanes-Oxley Act of 2002.
32.1	Certification of Principal Executive Officer pursuant to Section 906 of The Sarbanes-Oxley Act of 2002.
32.2	Certification of Principal Financial Officer pursuant to Section 906 of The Sarbanes-Oxley Act of 2002.
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

**Designates management contract or compensatory plan or arrangement.*

ITEM 16. FORM 10-K SUMMARY

Not applicable.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

March 16, 2022

AMPCO-PITTSBURGH CORPORATION

By: */s/ J. Brett McBrayer*

Name: **J. Brett McBrayer**
Title: Chief Executive Officer

Each person whose individual signature follows hereby authorizes and appoints J. Brett McBrayer and Michael G. McAuley, and each of them, with full power of substitution and re-substitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated, and to file any and all amendments to this annual report on Form 10-K and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in their capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ J. Brett McBrayer J. Brett McBrayer	Director and Chief Executive Officer (Principal Executive Officer)	March 16, 2022
/s/ Michael G. McAuley Michael G. McAuley	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	March 16, 2022
/s/ James J. Abel James J. Abel	Director	March 16, 2022
/s/ Frederick D. DiSanto Frederick D. DiSanto	Director	March 16, 2022
/s/ Terry L. Dunlap Terry L. Dunlap	Director	March 16, 2022
/s/ Elizabeth A. Fessenden Elizabeth A. Fessenden	Director	March 16, 2022
/s/ Michael I. German Michael I. German	Director	March 16, 2022
/s/ William K. Lieberman William K. Lieberman	Director	March 16, 2022
/s/ Darrell L. McNair Darrell L. McNair	Director	March 16, 2022
/s/ Laurence E. Paul Laurence E. Paul	Director	March 16, 2022
/s/ Stephen E. Paul Stephen E. Paul	Director	March 16, 2022
/s/ Carl H. Pforzheimer, III Carl H. Pforzheimer, III	Director	March 16, 2022

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INDEX TO AMPCO-PITTSBURGH CORPORATION FINANCIAL DATA

	Page Number
Index to Ampco-Pittsburgh Corporation Financial Data	72

Exhibit 4.4

AMPCO-PITTSBURGH CORPORATION
DESCRIPTION OF SECURITIES

The following summary of certain provisions of the securities of Ampco-Pittsburgh Corporation ("we," "our" or the "Corporation") does not purport to be complete. You should refer to our Restated Articles of Incorporation, as amended, Amended and Restated By-laws, the Warrant Agreement, dated as of September 22, 2020, by and between the Corporation and Broadridge Corporate Issuer Solutions, Inc., as warrant agent (the "Warrant Agreement") and each of the other documents referenced herein, which are attached as exhibits to the Annual Report on Form 10-K to which this Description of Securities is part. The summary below is also qualified by reference to the provisions of the Pennsylvania Business Corporation Law of 1988, as amended (the "PBCL"), as applicable.

General

Our authorized capital stock consists of 40,000,000 shares of common stock, par value $1.00 per share, and 3,000,000 shares of preference stock, without par value, the rights and preferences of which may be established from time to time by our board of directors.

Common Stock

Each share of common stock is entitled to one vote on all matters requiring a vote of shareholders and, subject to the rights of the holders of any outstanding shares of preference stock, each shareholder is entitled to receive any dividends, in cash, stock, or otherwise, as our board of directors may declare. Pennsylvania law prohibits the payment of dividends or the repurchase of our shares if we are insolvent or unable to pay our debts as they become due in the usual course of business, or if we would become so as a result of the dividend or repurchase. In the event of our liquidation, dissolution or winding up, either voluntarily or involuntarily, subject to the rights of the holders of any outstanding shares of preference stock, holders of common stock are entitled to share pro-rata in all of our remaining assets available for distribution after providing for claims of creditors as required by the PBCL.

Holders of common stock have no preemptive or conversion rights or other subscription rights, and there are no redemption or sinking fund provisions applicable to the common stock. The outstanding shares of common stock are fully paid and non-assessable. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preference stock that we may designate and issue in the future.

Under the PBCL, cumulative voting applies to the election of directors by holders of common stock (and holders of any series of preference stock that is entitled to vote in the election of directors).

Preference Stock

Under Pennsylvania law and our Restated Articles of Incorporation, our board of directors, without further action by the shareholders, is authorized to designate and issue preference stock in one or more series and to fix as to any series the annual dividend or dividend rate, the relative priority as to dividends, redemption prices, preferences on dissolution, the terms of any sinking fund, voting rights, conversion rights, if any, and any other preferences or special rights and qualifications. The board has authorized 150,000 shares of Series A Preference Stock in 1998. None of those Series A shares has been issued.

If we create one or more series of preference stock, it or they may rank senior to the common stock with respect to the payment of dividends or amounts upon liquidation, dissolution or winding up, or both. The authorized Series A preference stock contains such provisions. In addition, shares of preference stock may have class or series voting rights or rights to vote with the common stock, and may have more than one vote per share. Issuances of preference stock, while providing us with flexibility in connection with general corporate purposes, may, among other things, have an adverse effect on the rights of holders of common stock. We have no present plans to issue any preference stock, including any of the authorized Series A Preference Stock.

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Series A Warrants

We have issued warrants to purchase common stock, which are designated as Series A warrants. These Series A warrants are separately transferable through their expiration on August 1, 2025. The Series A warrants are listed for trading on NYSE American. The common stock underlying the Series A warrants, upon issuance, is listed for trading on the NYSE under the symbol "AP."

Exercisability. Each Series A Warrant is exercisable at any time and from time to time after the date of issuance and will expire on August 1, 2025. The Series A warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us the warrant certificate or warrant, as applicable a duly executed exercise notice and payment in full for the number of shares of common stock purchased upon such exercise, except in the case of a cashless exercise as discussed below.

Cashless Exercise. If at the time of exercise of the Series A warrants there is no effective registration statement registering, or the prospectus contained therein is not available for issuance of, the shares issuable upon exercise of the warrant, the holder may exercise the warrant on a cashless basis. When exercised on a cashless basis, a portion of the warrant is cancelled in payment of the purchase price payable in respect of the number of shares of common stock purchasable upon such exercise.

Exercise Price. Each Series A warrant represents the right to purchase 0.4464 shares of common stock at an exercise price of $2.5668 per share (or $5.75 per whole share of common stock under the Series A warrants). In addition, the exercise price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations, reclassifications or certain similar transactions.

Transferability. Subject to applicable laws and restrictions, a holder may transfer a warrant upon surrender of the warrant to us with a completed and signed assignment in the form attached to the warrant. The transferring holder will be responsible for any tax that liability that may arise as a result of the transfer.

Rights as Shareholder. The holder of a Series A warrant, solely in such holder's capacity as a holder of a Series A warrant, will not be entitled to vote or to any of the other rights of our shareholders.

Amendments and Waivers. The provisions of each Series A warrant may be modified or amended or the provisions thereof waived with the written consent of us and the holders of a majority of the outstanding Series A warrants.

The Series A warrants are subject to the terms of the Warrant Agreement.

Anti-Takeover Provisions

Certain provisions of our charter and by-laws could have an anti-takeover effect. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by it. They may also discourage an unsolicited takeover of our company if the board determines that the takeover is not in our best interests. These provisions could have the effect of discouraging certain attempts to acquire our company or remove incumbent management even if some or a majority of shareholders deemed such an attempt to be in their best interests.

These provisions in our charter include: (a) the classification of the board of directors into three classes; (b) a provision fixing the size of the board of directors to no more than 15 members and no fewer than five; and (c) the authority to issue additional shares of common stock or preference stock without shareholder approval.

Our charter also includes a provision requiring the affirmative vote of the holders of 75% of the voting power of the then outstanding capital stock of our company to (a) remove the entire board of directors, a class of the board of directors, or any individual member of the board of directors; provided, however that no individual director can be removed without cause (unless the entire board of directors or any class of directors is removed) in case the votes cast against such removal would be sufficient, if voted cumulatively for such director to elect him or her to the class

of directors of which he or she is a member, or (b) approve amendments to our charter, unless such amendment, repeal or provision has been approved by at least a two-thirds vote of the whole board of directors, in which event the affirmative vote of the holders of not less than a majority of the voting power of the then outstanding shares of capital stock of our company entitled to vote in an annual election of directors, voting together as a single class, will be required.

The by-laws provide that any shareholder who desires to present a nomination of person(s) for election to the board of directors or a proposal of other business at a shareholders' meeting, or a proponent, must first provide timely written notice to our secretary. The by-laws set forth the deadlines for submitting such advance notice. the advance notice must set forth in reasonable detail (a) as to each person the shareholder proposes to nominate for election to the board, information concerning the proposed nominee, including such nominee's consent to serve as a director if elected and other specific information called for by the by-laws, or (b) as to any other business that the shareholder proposes to bring before the meeting, a description of the substance of the proposal. The advance notice must include all such information regarding the proponent and/or nominee(s) which would have been required to be included in a proxy statement filed pursuant to the proxy rules of the SEC. The advance notice must also include a representation from the proponent that such person is a shareholder of record of our company, is entitled to vote at the shareholders' meeting, and intends to appear in person or by proxy at the meeting to present the nomination or other proposal specified in the notice, and a description of any agreements, arrangements, or understandings between the proponent and any other person or persons (naming such persons) pursuant to which the proposal is to be made by the proponent.

PBCL Anti-Takeover Provisions

The PBCL contains a number of statutory "anti-takeover" provisions, including Subchapters E, F, G and H of Chapter 25 and Sections 2513, 2521, 2524, 2538, and 2539 of the PBCL, which apply automatically to different categories of Pennsylvania registered corporations (usually a public company) unless the corporation elects to opt-out of those provisions. We are a Pennsylvania registered corporation of the type subject to the broadest number of those provisions, and as a result, except for the provisions from which we have opted out (as noted below), we are subject to the anti-takeover provisions described below. Descriptions of the anti-takeover provisions are qualified in their entirety by reference to the PBCL.

Subchapter F (relating to business combinations) generally delays for five years and imposes conditions upon "business combinations" between an "interested shareholder" and our company. The term "business combination" is defined broadly to include various transactions between a corporation and an interested shareholder including mergers, sales or leases of specified amounts of assets, liquidations, reclassifications and issuances of specified amounts of additional shares of stock of the corporation. An "interested shareholder" is defined generally as the beneficial owner of at least 20% of a corporation's voting shares.

Section 2513 of the PBCL authorizes the use of shareholder rights plans, or poison pills, that preclude or limit the exercise of such rights by persons making an offer to acquire a corporation's shares.

Section 2521 of the PBCL provides that shareholders are not entitled by statute to call special meetings of the shareholders and our by-laws do not give shareholders any right to call special meetings.

Section 2524 provides that shareholders cannot act by partial written consent unless permitted in the articles of incorporation.

Section 2538 of the PBCL generally establishes certain shareholder approval requirements with respect to specified transactions with "interested shareholders."

Section 2539 of the PBCL prohibits a "short-form" merger of a registered corporation (which ordinarily could be done by an 80%-or-more shareholder vote of a target corporation, without further action by the target corporation's board or other shareholders) unless the board of directors of the target corporation approves the merger.

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We have elected to opt out of Subchapters E, G, and H of Chapter 25 of the PBCL. Subchapter E (relating to control transactions) would have generally provided that if any person or group acquires 20% or more of the voting power of our company, the remaining holders of voting shares may demand from such person or group the fair value of their voting shares, including a proportionate amount of any control premium. Subchapter G would have required a shareholder vote to accord voting rights to control shares acquired by a 20% shareholder in a control-share acquisition. Subchapter H would have required a person or group to disgorge to us any profits received from a sale of our equity securities within 18 months after the person or group acquired, offered to acquire or publicly disclosed an intention to acquire 20% of our voting power or publicly disclosed an intention to acquire control of us.

Under the PBCL, directors owe a fiduciary duty to our company. In discharging that duty, directors may, in considering our best interests, consider, to the extent they deem appropriate, the effects of any action upon any or all groups affected, including shareholders, employees, customers, suppliers, and creditors and upon communities in which officers or other establishments of our company are located. The board of directors need not consider the interests of any particular group affected by an action as a dominant or controlling interest. Under the PBCL, the fiduciary duty of directors does not require the board of directors to redeem or modify or render inapplicable any shareholder rights plan, to render inapplicable or make any determinations under Subchapter F or any other provision of the PBCL relating to or affecting acquisitions or proposed acquisitions of control of our company, or otherwise act solely because of the effect that such action might have upon a potential or proposed acquisition of our company or the amount that might be offered or paid to shareholders in such an acquisition.

EXHIBIT 21

Subsidiaries

Name	Ownership	Jurisdiction of Incorporation
Air & Liquid Systems Corporation*	100% owned by Ampco-Pittsburgh Corporation	Pennsylvania
Ampco-Pittsburgh Securities V Investment Corporation*	100% owned by Ampco-Pittsburgh Securities V L.L.C.	Delaware
Ampco-Pittsburgh Securities V L.L.C.*	100% owned by Ampco-Pittsburgh Corporation	Delaware
Union Electric Steel Corporation*	100% owned by Ampco-Pittsburgh Securities V L.L.C.	Pennsylvania
Ampco UES Sub, Inc.*	100% owned by Union Electric Steel Corporation	Delaware
The Davy Roll Company Limited*	100% owned by FCEP Europe B.V.	England
Union Electric Steel UK Limited*	100% owned by The Davy Roll Company Limited	England
Åkers AB*	100% owned by FCEP Europe B.V.	Sweden
Åkers Sweden AB*	100% owned by FCEP Europe B.V.	Sweden
Rolls Technology Inc.*	100% owned by Ampco UES Sub, Inc.	Delaware
Åkers Valji Ravne d.o.o.*	100% owned by FCEP Europe B.V.	Slovenia
Shanxi Åkers TISCO Roll Co. Ltd.*	100% owned by Åkers AB	China
Alloys Unlimited and Processing, LLC*	100% owned by Union Electric Steel Corporation	Pennsylvania

The financial statements of subsidiaries marked with an (*) have been consolidated with those of the Corporation. Names of other subsidiaries have been omitted because, considered in the aggregate as a single subsidiary, they would not constitute a significant subsidiary.

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EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Ampco-Pittsburgh Corporation
Carnegie, Pennsylvania

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-222626), Form S-8 (No. 333-174269, No. 333-211242 and No. 333-256094), and Form S-1 (No. 333-239446) of Ampco-Pittsburgh Corporation of our report dated March 16, 2022, relating to the consolidated financial statements, which appears in this Annual Report on Form 10-K.

/s/ BDO USA, LLP

Pittsburgh, Pennsylvania
March 16, 2022

EXHIBIT 23.2

CONSENT OF GNARUS ADVISORS LLC

GNARUS Advisors LLC ("GNARUS") consents to being named in Ampco-Pittsburgh Corporation's Annual Report ("Form 10-K") for the year ended December 31, 2021, in the form and context in which GNARUS is named and to the incorporation by reference of the Form 10-K in Registration Statement No. 333-222626 on Form S-3, Registration Statements Nos. 333-174269, 333-211242 and 333-256094 on Form S-8, and Registration Statement No. 333-239446 on Form S-1.

/s/ GNARUS Advisors LLC

GNARUS Advisors LLC
March 16, 2022

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EXHIBIT 31.1

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, J. Brett McBrayer, certify that:

1. I have reviewed this annual report on Form 10-K of Ampco-Pittsburgh Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a – 15(e) and 15d – 15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a – 15(f) and 15d – 15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

March 16, 2022

By: */s/ J. Brett McBrayer*
Director and Chief Executive Officer
J. Brett McBrayer

EXHIBIT 31.2

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Michael G. McAuley, certify that:

1. I have reviewed this annual report on Form 10-K of Ampco-Pittsburgh Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a – 15(e) and 15d – 15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a – 15(f) and 15d – 15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

March 16, 2022

By: */s/ Michael G. McAuley*
Senior Vice President, Chief Financial Officer and Treasurer
Michael G. McAuley

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EXHIBIT 32.1

Certification Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of Ampco-Pittsburgh Corporation (the "Company") on Form 10-K for the period ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, in the capacity and on the date indicated below, hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

March 16, 2022

By: */s/ J. Brett McBrayer*
Director and Chief Executive Officer
J. Brett McBrayer

EXHIBIT 32.2

Certification Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of Ampco-Pittsburgh Corporation (the "Company") on Form 10-K for the period ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, in the capacity and on the date indicated below, hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

March 16, 2022

By: */s/ Michael G. McAuley*
Senior Vice President, Chief Financial Officer and Treasurer
Michael G. McAuley