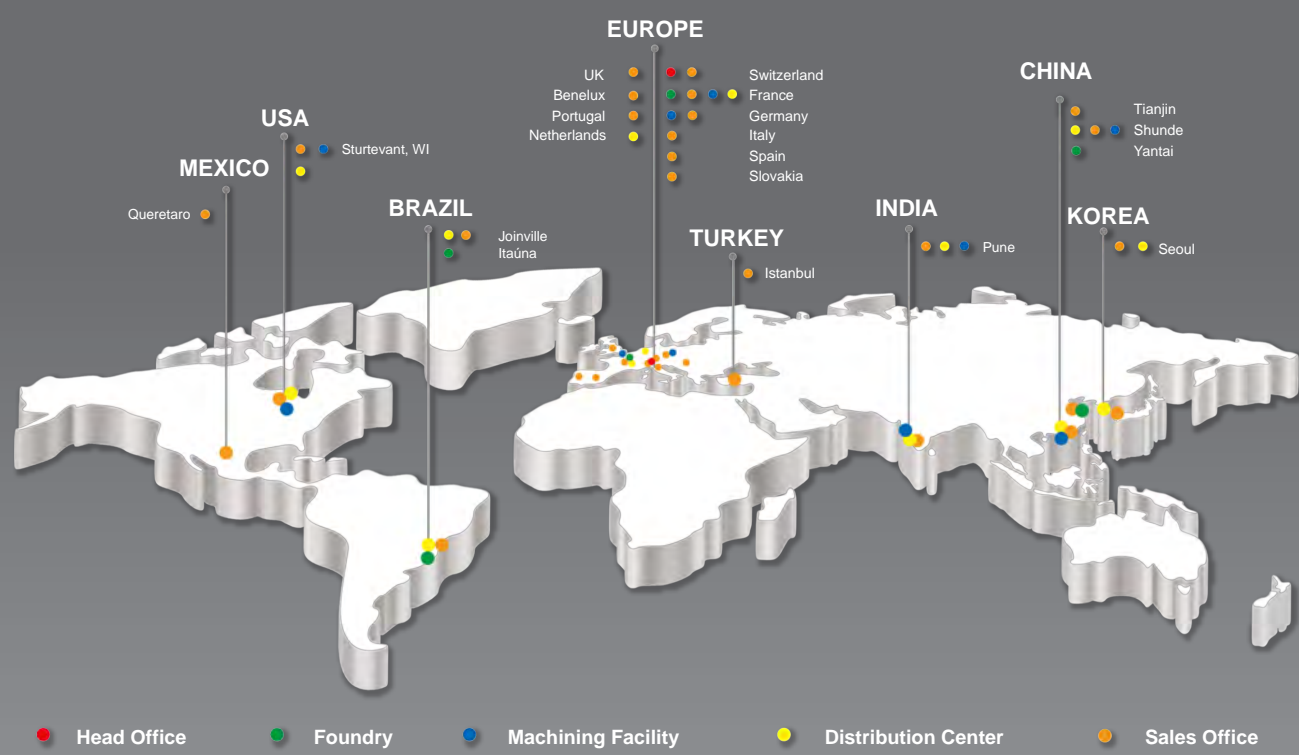


MATERIAL SELECTION GUIDE



AMPCO METAL is proud to participate into saving natural resources by using mostly recycled metal!



www.ampcometal.com

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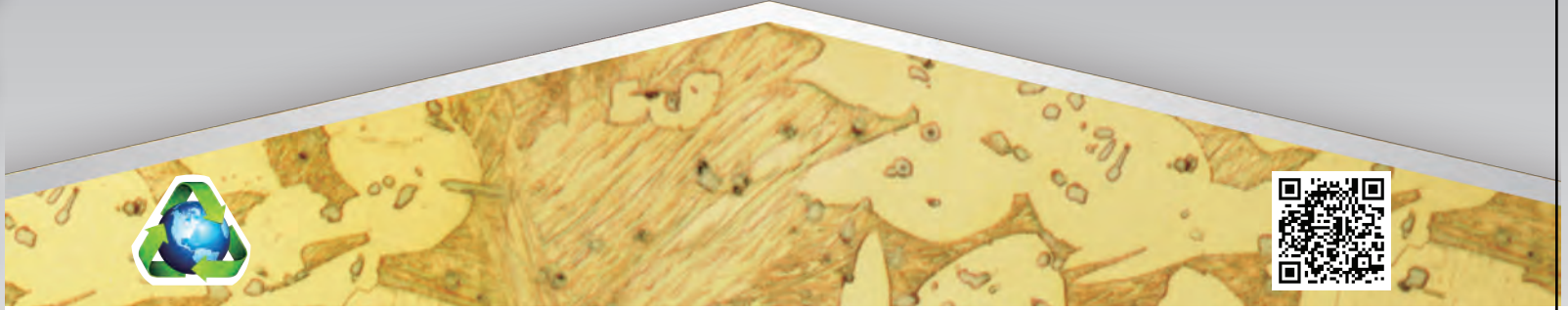
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AMPCO METAL EXCELLENCE IN ENGINEERED ALLOYS

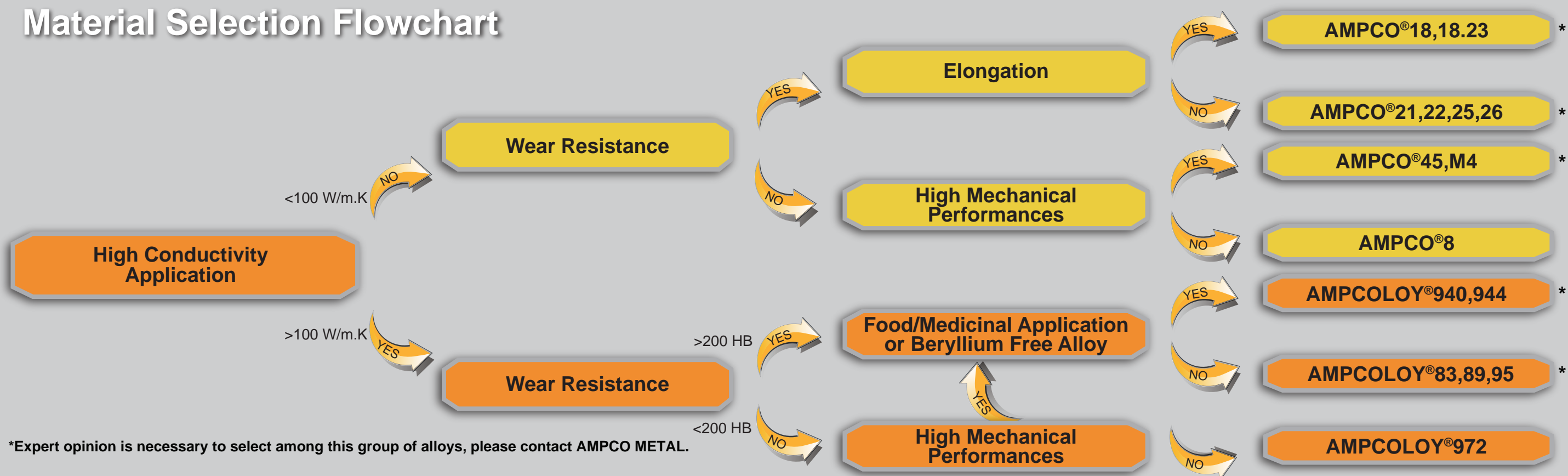
AMPCO	AMPCO Reference	Nearest International Standards					Nominal Chemical Composition (Remainder Cu)						Mechanical & Physical Properties						Usage Guideline					
		ISO	EN	DIN	ASTM	AMS	Sn	Zn	Pb	Al	Fe	Ni	Mn	D Kg/dm ³	Rm MPa	R _{p0.2} MPa	A ₅ %	HBW 10/3000	Thermal Conductivity W/m.K	Linear Expansion Coefficient	Coefficient of Friction Unlubricated	Need for Lubricated	Average Speed m/s	Average Load MPa
AMPCO [®] BRONZE	AMPCO [®] 8	AMPCO METAL Specification					0,25			6,5	2,5			7,95	552	283	40	153	54	16	0,17	Moderate	1,5	85
	AMPCO [®] 18								10,5	3,5			7,45	724	365	14	192	63	16	0,18	Moderate	1,5	100	
	AMPCO [®] 18.23								10,5	3,5			7,45	758	386	16	207	59	16	0,18		1,5	100	
	AMPCO [®] 21								13,1	4,4		2	7,21	758	420	1	286	46	16	0,21		0,7	115	
	AMPCO [®] 22								14,1	4,7		2	7,06	724	427	0,5	332	42	16	0,25	Moderate	0,6	120	
	AMPCO [®] 25						Proprietary						6,93	R _{nc} 1580	R _{nc0.1} 710	0,2	364	33	16	0,30	Moderate	0,5	125	
	AMPCO [®] 26						Proprietary						6,93	R _{nc} 1601	R _{nc0.1} 720	0	420	33	16	0,32	Moderate	0,4	130	
	AMPCO [®] 45						4640 4880			10	2,5	5	1,5	7,53	814	517	15	228	46	16,2	0,23	High	1,5	90
	AMPCO [®] M4						4590 4881			10,5	4,8	5	1,5	7,45	1000	793	8	260/300	42	16	0,23	High	1	330

AMPCOLOY	AMPCOLOY Reference	Nearest International Standards					Nominal Chemical Composition (Remainder Cu)						Mechanical & Physical Properties						Usage Guideline				
		Cr	Be	Zr	Si	Co	Ni	Mn	D Kg/dm ³	Rm MPa	R _{p0.2} MPa	A ₅ %	HBW 10/3000	Thermal Conductivity W/m.K			Elec.C %IACS	RWMA Class					
					20°C	100°C	200°C																
AMPCOLOY [®] ALLOYS	AMPCOLOY [®] 83	CuBe2	CW 101C	2.1247	C17200		2			0,5			8,26	1310	827	5	360	106	130	145	20%	4	
	AMPCOLOY [®] 944	AMPCO METAL Specification Alloys without Beryllium					1			2		7		8,7	938	730	5	294	156	170	190	30%	4
	AMPCOLOY [®] 940	AMPCO METAL Specification Alloys without Beryllium					0,4			0,7		2,5		8,71	689	517	13	210	208	226	243	48%	3
	AMPCOLOY [®] 89	CuNiBe	CW 110C	2.0850	~C17510		0,5			Co + Ni 2			8,75	740	680	12	230	300	320	340	69%	3	
	AMPCOLOY [®] 95	CuCoNiBe	CW 103C	~2.1285	~C17510		0,5			Co + Ni 2			8,75	830	550	10	240	217	235	254	52%	3	
	AMPCOLOY [®] 972	CuCrZr	CW 106C	2.1293	C18150		1		0,10				8,87	520	466	18	151	333	350	367	82%	2	

Please ask us about your other copper alloy requirements.

The above are nominal values. If specific minimum figures are required, please contact your local AMPCO METAL representative.

Material Selection Flowchart





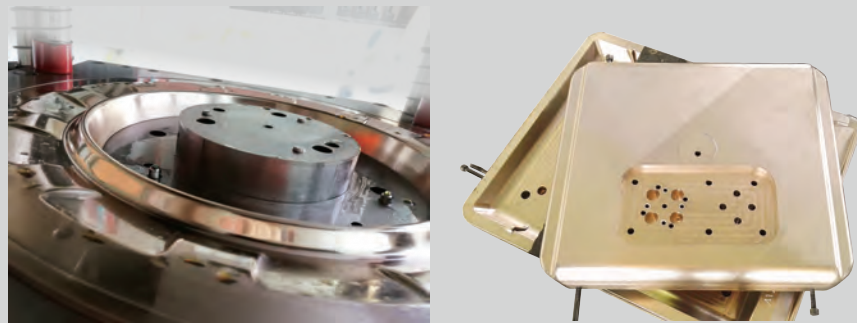
Wear & Corrosion Resistant Bronzes

SPECIFY AMPCO®

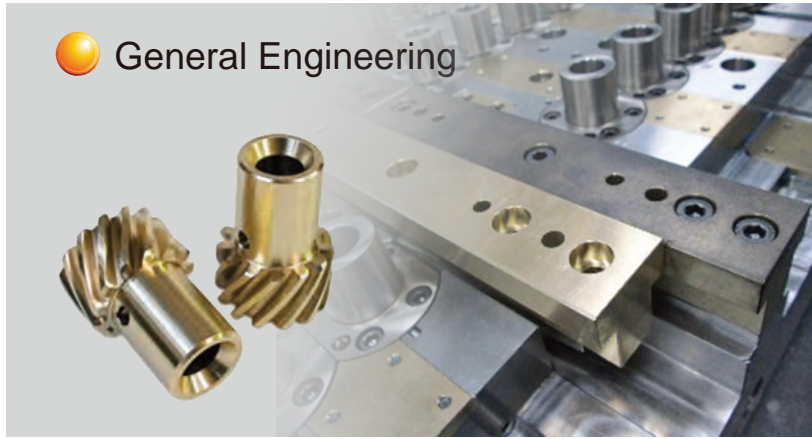


High Conductivity Alloys

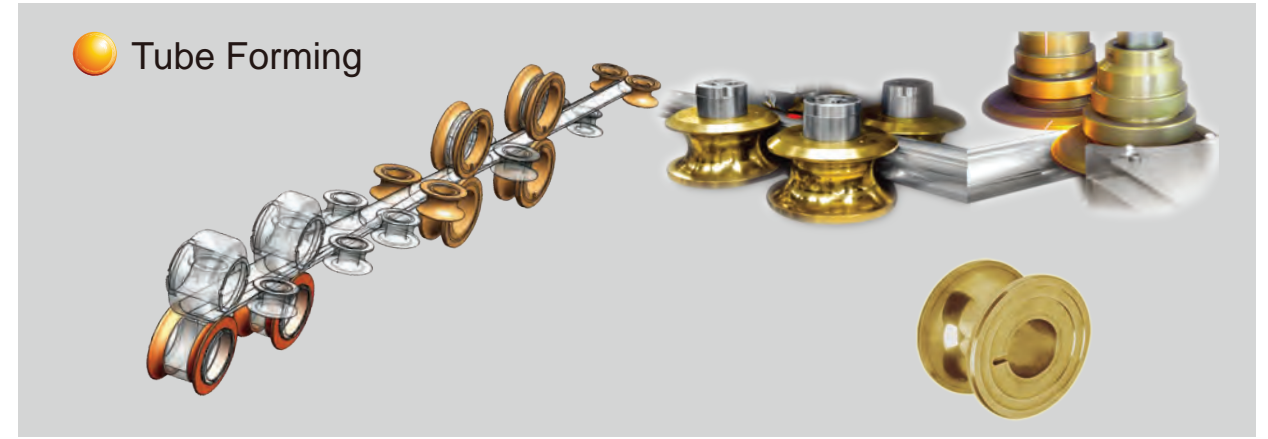
● Deep Drawing



● General Engineering



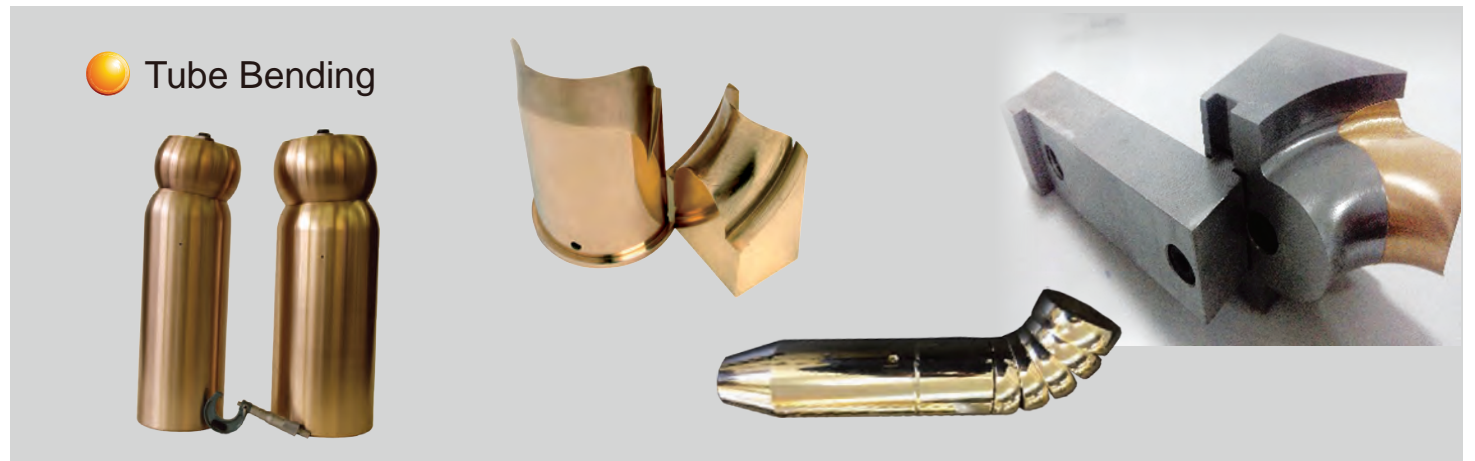
● Tube Forming



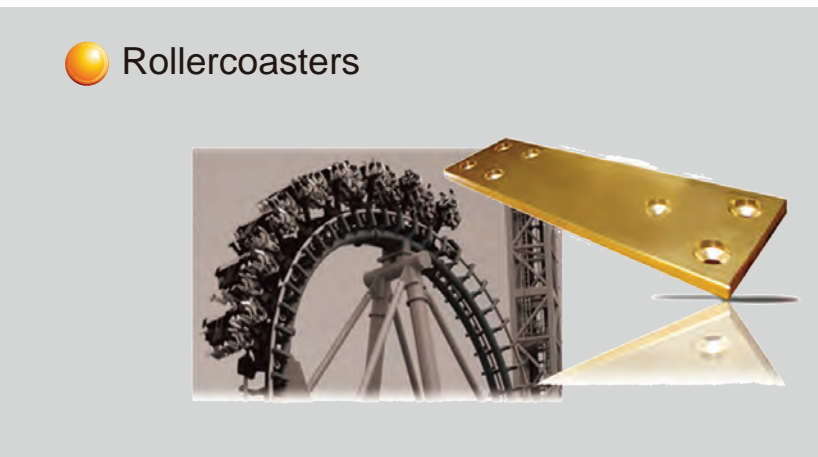
● Plastic Industry



● Tube Bending



● Rollercoasters



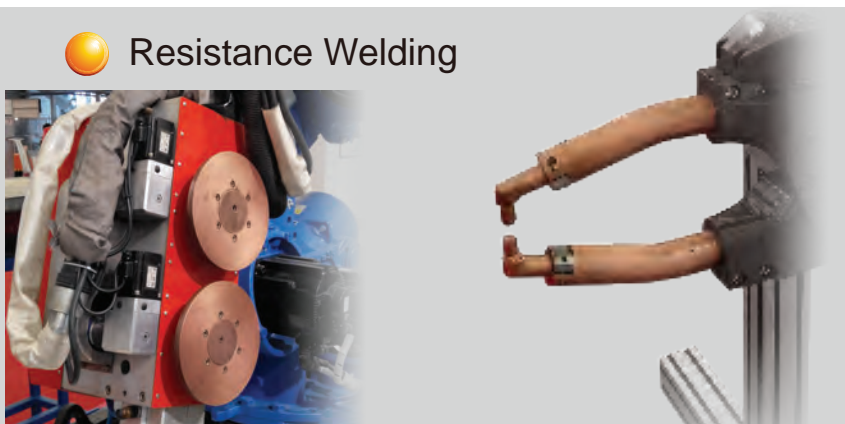
● Steel Mill



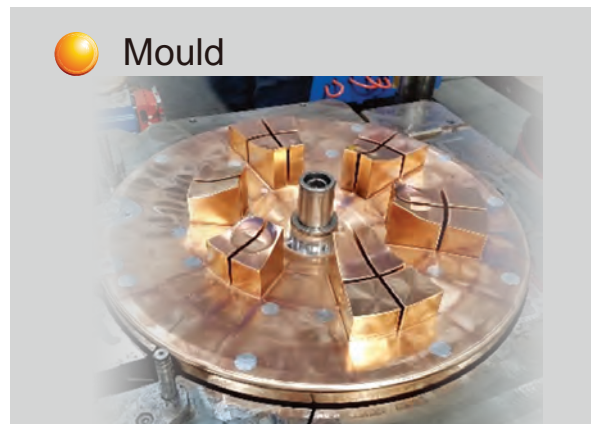
● Aerospace & Offshore



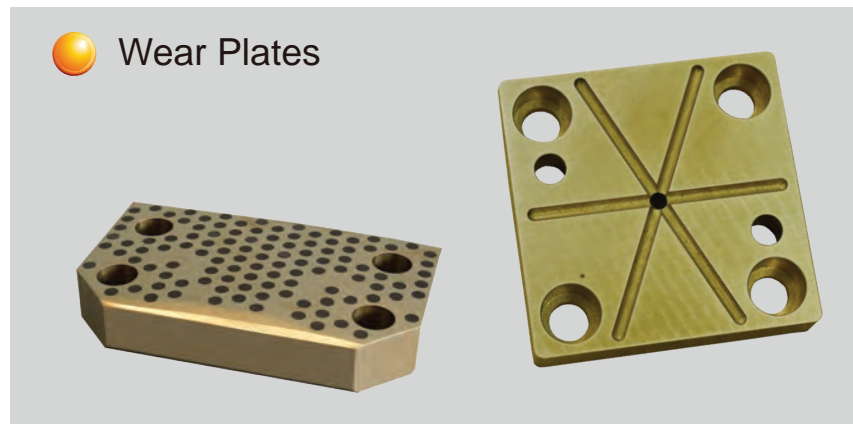
● Resistance Welding



● Mould

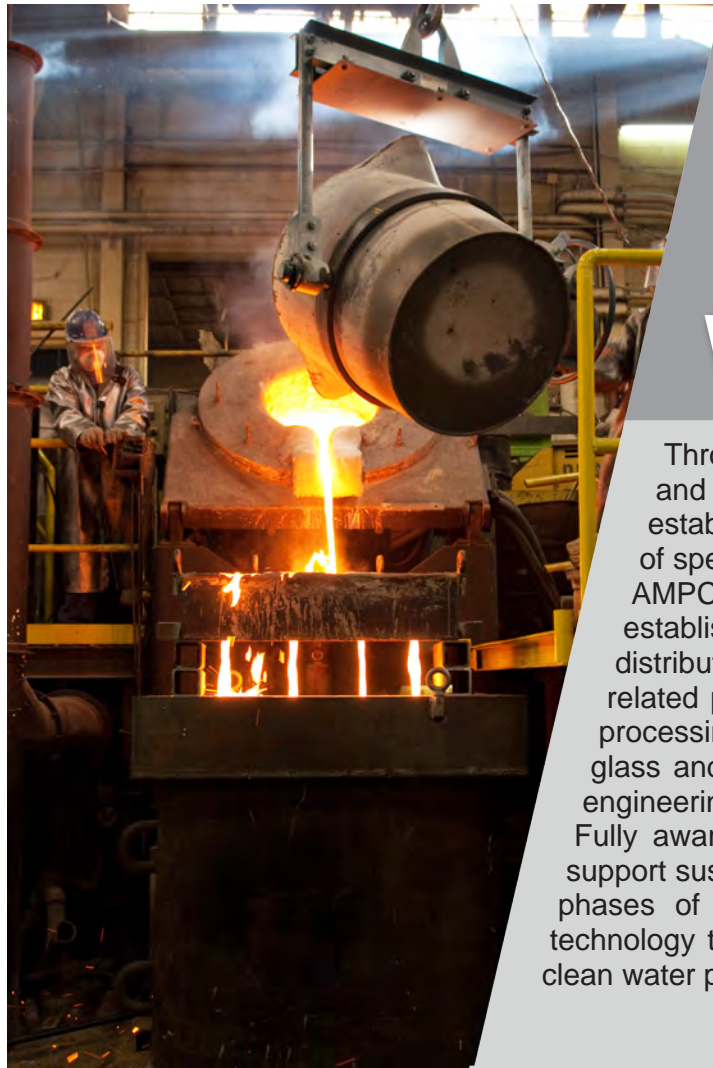


● Wear Plates



● Soap Mould



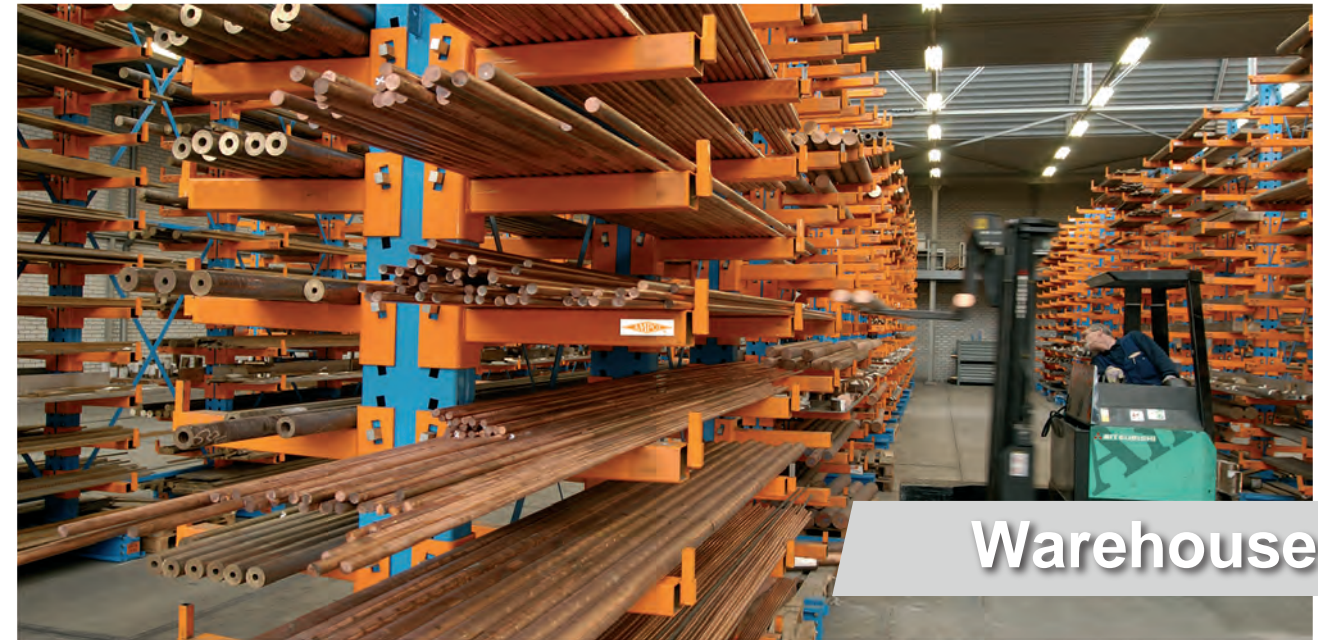


Who We Are....

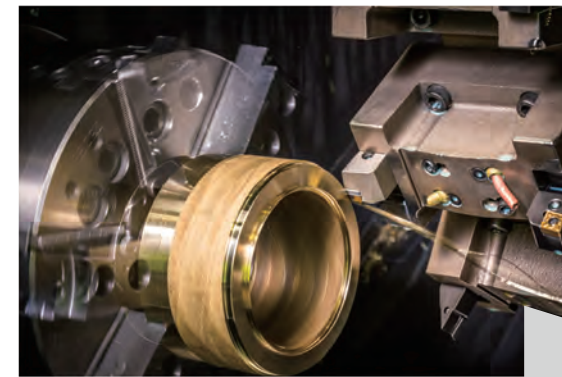
Through excellent quality control and a spirit of innovation and customer service, AMPCO METAL remains the established world leader in the production and distribution of speciality copper-based alloys.

AMPCO METAL – the first name in premium copper alloys established in 1914 – is an integrated manufacturer and distributor of specialty bronzes, copper-based alloys and related products serving a variety of sectors including: metal processing, aerospace, automotive, oil and offshore drilling, glass and plastic mold-making and a wide range of industrial engineering applications.

Fully aware of its impact on the environment and wanting to support sustainable development, AMPCO METAL recycles at all phases of the alloys casting process and utilizes advanced technology throughout its plants to rigidly maintain clean air and clean water programs.



Warehouse



Machine Shop

microcast® PROCESS key to Superiority



- Superior wear characteristics
- Greater resistance to corrosion
- Higher mechanical properties
- A consistent, reliable product



Through a combination of consistent metallurgical control and melting know-how, our proprietary AMPCO® specification is produced with unique microstructure, largely attributable to the phases in the alloys. The phase alpha, beta and the intermetallic compound). The distinctiveness of that intermetallic compound in AMPCO® alloys is readily recognized and has come to be known as AMPCO-PHASE®. Totally distinct from the large and segregated compound in generic bronzes which tends to contribute to weak alloy properties.