

A Brief Introduction of GLM

GLM-Company, founded in 1976, is a member of China Nonferrous Metals Fabrication Industry Association, a national high-tech enterprise and a key export enterprise with total area of 182,000m².

GLM is an advanced nonferrous-metal processing enterprise engaged in manufacturing copper and copper alloy tube, bar and profile. With development direction of "special, new, different and exquisite" product, GLM has accumulated more than 40 years' experience in manufacturing and research of copper alloys. GLM has the capacity for producing over 40 kinds of copper alloys with thousands of sizes. GLM's products are widely used in different industries, such as machinery, electronics, heat exchanger, shipbuilding, bathroom accessory, petroleum, chemistry, seawater desalination, marine engineering and so on. Therefore, GLM has steady market in USA, Europe, Australia, the Middle East and south-east areas etc.

GLM insists on corporate culture concept of team, perseverance, preciseness, sincerity and innovation. GLM holds strong awareness of competitiveness and creativeness, and modern corporate management. Furthermore, GLM perseveres in service purpose with sincerity, high-efficiency, accuracy and excellence. GLM runs by law and obeys international business practices. GLM always focuses on customer's need and keep aim of satisfying even exceeding their expectation. GLM keeps pursuing high-quality products and excellent service for customers with systematic management methods and continuous improvement.

Copper Alloy Condenser Tube, Heat Exchanger Tube



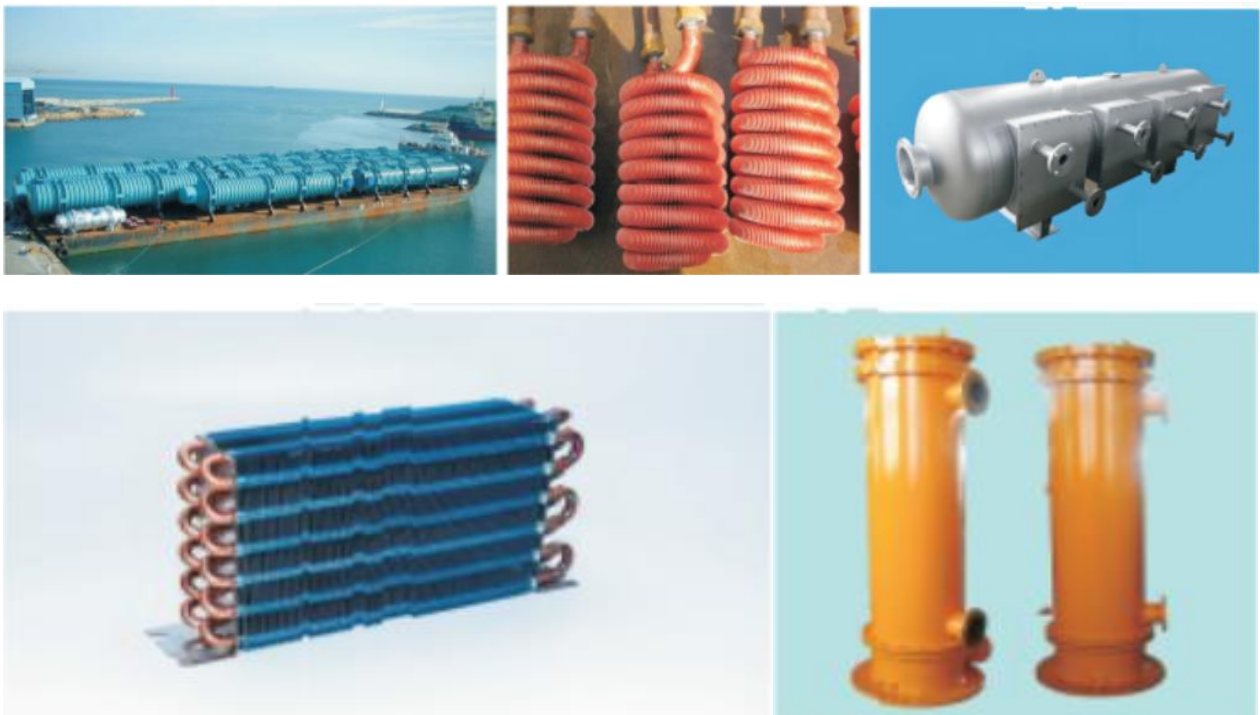
Application

Engine cooler, power plant condenser, marine heat exchanger, compressor cooler, petrochemical refinery cooler, motor cooler, seawater desalination evaporator, air conditioning cooling system and other fields.

Products Characteristics

Good thermal conductivity & electrical conductivity, and good wear resistance, plasticity & cold bending property, easy to welding and machining, strong resistance to corrosion caused by seawater.

Application example

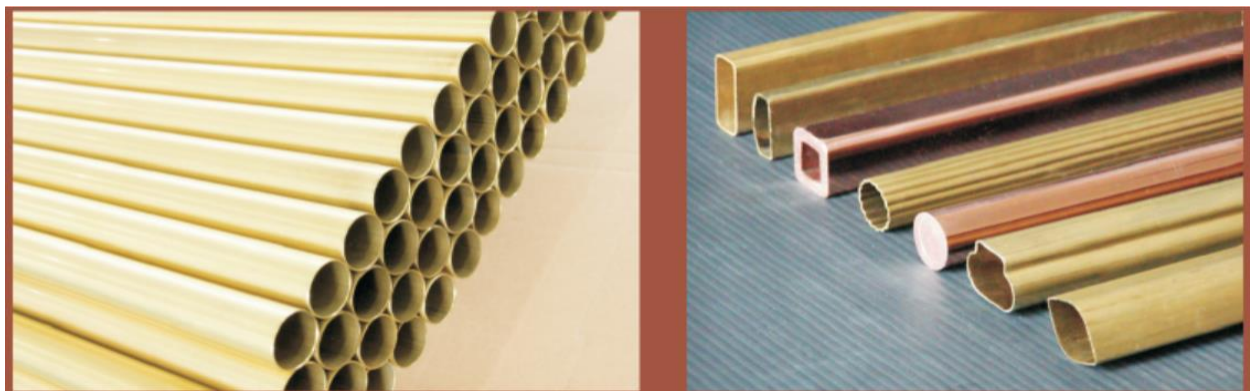


Grade and comparison table

Material	GB	ASTM	BS	DIN	EU	JIS
Copper Nickel		C75200				C7521
	BFe10-1-1	C70600	CN102	CuNi10Fe1Mn	CuNi10Fe1Mn	
		C70610	CN102	CuNi10Fe1Mn	CuNi10Fe1Mn	
		C71500		CuNi30Fe		C7150
	BFe30-1-1		CN107	CuNi30Mn1Fe	CuNi30Mn1Fe	
		C71640	CN106	CuNi30 Fe2Mn2	CuNi30Fe2Mn2	
aluminum brass	HAl77-2	C68700	CZ110	CuZn20Al2	CuZn20Al2As	C6870
Admiralty brass		C41100				
	HSn70-1	C44300	CZ111	CuZn28Sn1	CuZn28Sn1As	C4430
		C44500				
Copper	T2	C11000	C102	E-Cu58	Cu-ETP	C1100
	TP1	C12000		SW-Cu	Cu-DLP	C1201
	TP2	C12200	C106		Cu-DHP	C1220
Aluminum bronze		C61400				
Copper		C10200				

GLM can produce according to the production standards specified by the user, such as national standard GB / T8890, American standard ASME SB-111, American standard ASTM B111, British standard BS2781, European standard EN12451, German standard DIN1785, Japanese standard JIS and other special standards.

Sanitary plumbing copper alloy pipe



Application

Various faucet, towel rack, hanger, sanitary ware supporting frame; pipe joints or elbow, sanitary products connector; hard water, soft water pipe field.

Products Characteristics

Copper alloy products have an obvious effect on killing Escherichia coli, increasing the copper content in water, which is beneficial to health. Brass pipe has long service life (more than 50 years), good strength, toughness, pressure resistance, collision resistance, waterproof; corrosion resistance, bacteria inhibition, permeability resistance, oxidation resistance, good electroplating performance, and energy saving and environmental protection (100% recycling).

Application example

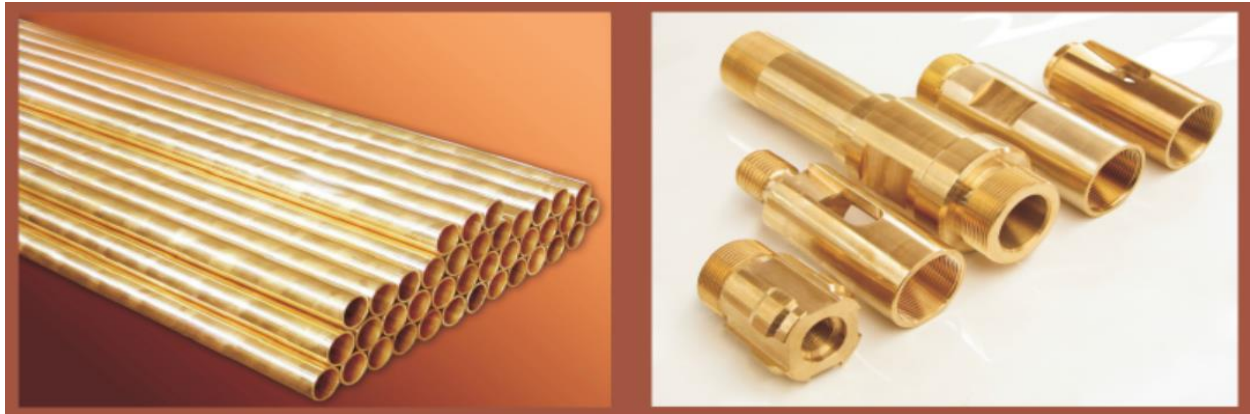


Grade and comparison table

Material	GB	ASTM	BS	DIN	EU	JIS
Brass tube	H70	C26000	CZ106	CuZn30	CuZn30	C2600
	H70A	C26130	CZ126		CuZn30As	
	H68	C26200		CuZn33	CuZn33	
		C26800				C2680
	H65	C27000	CZ107	CuZn36	CuZn36	C2700
		C27200	CZ108	CuZn37	CuZn37	C2720
	H63	C27400				
Leaded brass	H60	C28000	CZ109	CuZn40	CuZn40	C2800
	HPb89-2	C31400				
	HPb63-0.1	C33500		CuZn37Pb0.5	CuZn37Pb0.5	C3350
		C34500				

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Copper alloy tubes for petroleum industry



Application

Oil well pump pipe, Oilfield rod pump, oil transmission pipeline, various engine oil line, gas station tubing, compressor gun and other fields.

Products Characteristics

High hardness, strong density, strong compression resistance, corrosion resistance, and wear resistance.

Application example

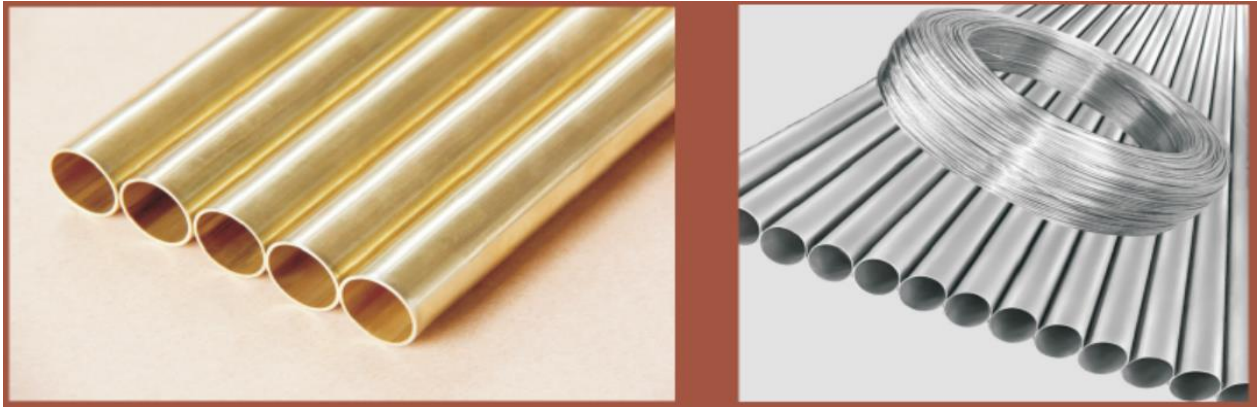


Grade and comparison table

Material	GB	ASTM	BS	DIN	EU	JIS
Tinbrass	HSn62-1	C46200	CZ112			C4620
		C46420				C4642

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Copper alloy piping products and Applications



Application

Shipbuilding, Marine engineering, Marine cage fish farming, construction engineering and other fields.

Products Characteristics

machinability, corrosion resistance, adapt to contact with sea water environment; good mechanical properties, bending, compression strength, excellent electroplate apply for various demand in architectural engineering field, adapt to the various needs in the field of construction engineering.

Application example



Grade and comparison table

Material	GB	ASTM	BS	DIN	EU	JIS
	H96	C21000	CZ125	CuZn5	CuZn5	C2100
	H90	C22000	CZ101	CuZn10	CuZn10	C2200
Brass tube	H85	C23000	CZ102	CuZn15	CuZn15	C2300
	H80	C24000	CZ103	CuZn20	CuZn20	C2400
		C60600	CA101	CuAl5	CuAl5	
Aluminum bronze	QA15	C60800				
	QA17	C61000	CA102	CuAl8	CuAl8	
		C71000	CN104	CuNi20Fe		C7100
Cupronickel	B19	C70600		CuNi10Fe		C7060
		C75400	NS105	CuNi18Zn20	CuNi18Zn20	C7521
	BZn15-20	C75700		CuNi12Zn24	CuNi12Zn24	

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Copper and copper alloy tube



Application

The products are mainly used in the oil circuit of precision instrument, the oil pipeline of various locomotives, electronic products and other fields.

Products Characteristics

The products have the characteristics of long length, good toughness and convenient transportation and so on.

Application example

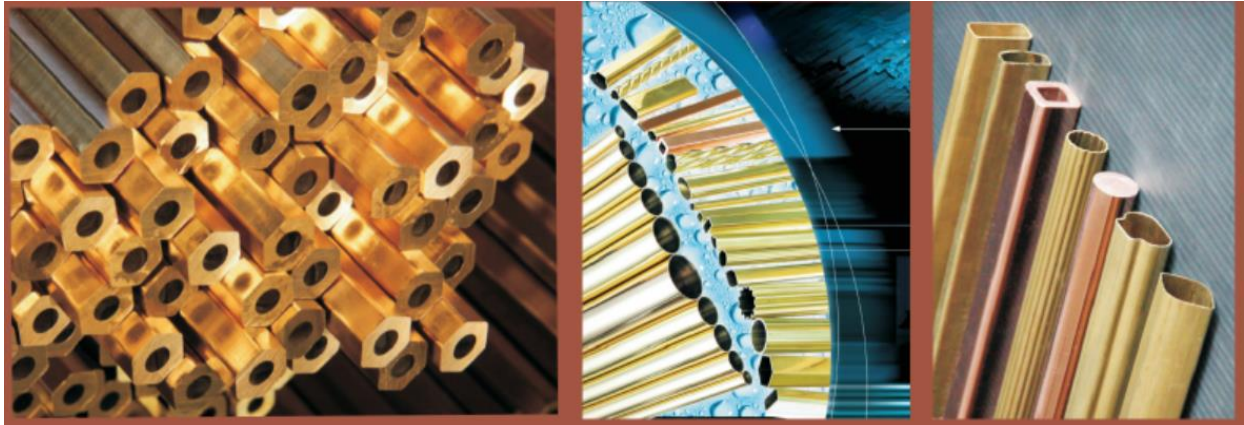


Grade and comparison table

Material	GB	ASTM	BS	DIN	EU	JIS
Brass tube	H70	C26000	CZ106	CuZn30	CuZn30	C2600
	H70A	C26130	CZ126		CuZn30As	
	H68	C26200		CuZn33	CuZn33	
		C26800				C2680
	H65	C27000	CZ107	CuZn36	CuZn36	C2700
		C27200	CZ108	CuZn37	CuZn37	C2720
	H63	C27400				
	H60	C28000	CZ109	CuZn40	CuZn40	C2800
Aluminum brass	HAl77-2	C68700	CZ110	CuZn20Al2	CuZn20Al2As	C6870
Tinbronzetube	Qsn6.5-0.1	C51900		CuSn6		
	Qsn4-0.3	C51100				
	Qsn7-0.2					
	CuSn8					
Copper Nickel	BFe10-1-1	C70600	CN102	CuNi10Fe1Mn	CuNi10Fe1Mn	
		C70610	CN102	CuNi10Fe1Mn	CuNi10Fe1Mn	
	BFe30-1-1	C71500		CuNi30Fe		C7150

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Copper alloy tubes for musical instruments, decoration and electronic plug-in



Application

The products are mainly used in the manufacture of orchestral instruments (saxophone, copper flute, etc.), recreation and sports, handicrafts, pen cases, copper bells, rings, copper chains, copper bracelets, copper gifts, copper crafts; lamps and lanterns, hat tree, mechanical gaskets, bush and watch structures, etc.

Products Characteristics

Products have good mechanical properties, good cutting processing, can withstand cold and hot pressure processing, used in cutting processing and stamping processing of various structural parts. Good surface quality, strong metallic luster, good electroplating performance, strong abrasion resistance, strong corrosion resistance. Various cross-section shapes can be customized according to the user's needs.

Application example





Grade and comparison table

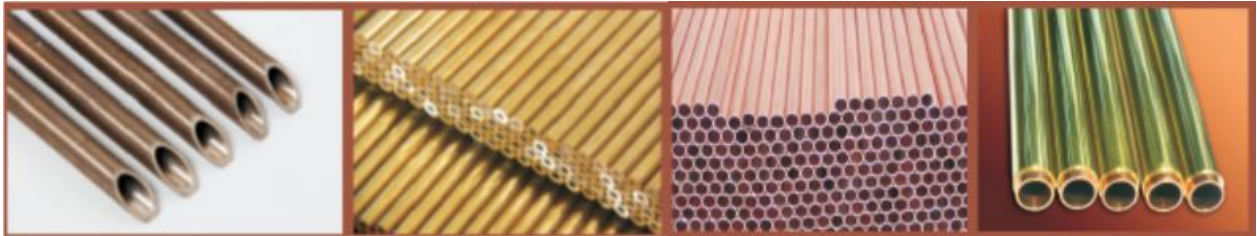
Material	GB	ASTM	BS	DIN	EU	JIS
Leaded brass	HPb66-0.5	C33000				
		C33200				
	HPb62-0.8	C35000	CZ123	CuZn36Pb1.5	CuZn36Pb1.5	C3500
	HPb62-2	C35300	CZ131			C3771
	HPb62-3	C36000				
	HPb60-2	C37700				
	HPb59-1	C37800	CZ122		CuZn39Pb2	C3610
		C38000	CZ121Pb3	CuZn39Pb3	CuZn39Pb3	C3603
	HPb59-3	C38500				C3560
Brass tube	H70	C26000	CZ106	CuZn30	CuZn30	C2600
Copper nickel zinc alloy	BZn15-20	C75400	NS105	CuNi18Zn20	CuNi18Zn20	C7521
Tin bronze		C42500				
Ferrobronze	CuFe2P	C19400		CuFe2P	CuFe2P	C194

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New product development and technological process



GLM can produce more than 40 kinds of copper and copper alloy products, including red copper, brass, cupronickel, bronze, etc. A series of tubes, rods and profiles of copper alloy with special properties and uses can be developed according to the needs of users.



Production process of copper alloy straight pipes



Size range produce copper and copper alloy tube size

OD (mm) (inch)	Wall (mm) (inch)	>0.25~0.81 >0.01~0.02	>0.51~0.81 >0.02~0.032	>0.81~1.067 >0.032~0.042	>1.067~1.65 >0.042~0.065	>1.651~2.11 >0.065~0.083	>2.11~2.54 >0.083~0.10	>2.54~3.81 >0.10~0.15	>3.81~5.08 >0.15~0.20	>5.08~6.35 >0.20~0.25	>6.35~7.62 >0.25~0.3	>7.62~20.32 >0.30~0.8
>3~9.525 >0.12~0.37583/8		√	√	√	√	√						
>9.525~12.7 >0.37583/8~0.58.1/2		√	√	√	√	√	√					
>12.7~19.05 >0.581/2~0.758.3/4			√	√	√	√	√	√				
>19.05~25.4 >0.758.3/4~1.0			√	√	√	√	√	√				
>25.4~31.75 >1.0~1.2581-1/4			√	√	√	√	√	√	√			
>31.75~38.1 >1.2581-1/4~1.581-1/2			√	√	√	√	√	√	√			
>38.1~50.8 >1.58.1-1/2~2.0			√	√	√	√	√	√	√	√		
>50.8~57.15 >2.0~2.2582-1/4				√	√	√	√	√	√	√		
>57.15~63.5 >2.2582-1/4~2.5082-1/2				√	√	√	√	√	√	√	√	√
>63.5~76.2 >2.5082-1/2~3.0				√	√	√	√	√	√	√	√	√
>76.2~82.55 >3.0~3.2583-1/4					√	√	√	√	√	√	√	√
>82.55~88.9 >3.258.3-1/4~3.5						√	√	√	√	√	√	√
>88.9~101.6 >3.508.3-1/2~4.0						√	√	√	√	√	√	√
>101.6~108 >4.00~4.2584-1/4						√	√	√	√	√	√	√
>108~110 >4.2584-1/4~4.33						√	√	√	√	√	√	

The cross-section shape of profiled tube, bar, row, profiles that we can produce.

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										□			

GLM adheres to the product development direction of "special, new, different and fine". GLM can develop various copper alloy pipe and rod products according to user needs, among which the coil weight can be customized, the length of the straight pipe is up to 40 meters, and the shape can be customized.

Part of Management system certification

GLM has passed the ISO9001 quality management system certification, ISO14001 environmental management system certification, ISO45001 occupational health and safety management system certification, TUV factory certification and the CCS factory certification of China Classification Society.

GLM has more than 40 years of copper pipe research and development, production experience, dozens of experts and engineers with rich practical experience, and a number of foreign experts as long-term technical consultants.

With the advanced production and testing equipment introduced from abroad as guarantee, such as the extrusion machine imported from Japan, coil stretching machine imported from the UK, the spectrum analyzer imported from Switzerland and etc., GLM can provide customers a series of copper and copper alloy products with short lead time and high quality.

GLM can skillfully use national production standards to produce various types of copper and copper alloy products, such as ASTM, BS, EN, JIS and GB, etc.