

HEAT EXCHANGER, CONDENSOR AND BOILER TUBES

COPPER BASE TUBES

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| <p>3/4" OD x 16 SWG wall Thickness x 16ft Lengths (19.05mm x 1.62mm x 5000mm)</p> <p>Available in most sizes, up to 50mm diameter, to customer requirements.</p> | <p>BS 2871 Part 3 Grade CZ 110 Aluminium Brass</p> | <p>The most widely used copper alloy for heat exchanger tube applications where contact with brackish, or sea waters is involved in the fully annealed condition. This material is practically free from stress, corrosion and cracking. This material is resistant to pitting and impingement, but may be affected by sulphides or suspended solids (in significant amounts). This represents the best choice among the copper alloys for any type of heat exchanger operating with saline water. The material is available in the fully annealed conditions for service temperatures of up to 230°C.</p> |
| | <p>BS 2871 Part 3 Grade CZ 111 Admiralty Brass</p> | <p>Generally used with fresh clean waters, free from suspended solids but it can be used with brackish or saline waters, the fully annealed alloy can withstand stress corrosion cracking. The presence of tin improves resistance to general corrosion in slightly polluted waters widely used for heat exchangers operating in petroleum refineries and petrochemical plants this material available in the fully annealed condition for service temperatures not exceeding 230°C.</p> |

CUPRO NICKEL TUBES

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| <p>3/4" OD x 16 SWG wall Thickness x 16ft Lengths (19.05mm x 1.62mm x 5000mm)</p> <p>Available in most sizes, up to 50mm diameter, to customer requirements.</p> | <p>BS 2871 Part 3 Grade CZ 102 90/10 Copper Nickel</p> | <p>Condenser heat exchanger and evaporator tubes with very good corrosion resistance to clean or moderately polluted marine or estuary waters, even containing condensable gases. This alloy is virtually immune from stress corrosion cracking and hot spot denickelification. It can however be attacked from the shell side, near tubeplate and baffle or support surfaces by percolating ammonia enriched condensates. This material can also be used with appropriate flow velocities in CO with waters containing sulphides or suspended solids. The material has good mechanical properties at room and at relatively elevated temperatures. It is available in the fully annealed, or cold worked tempers, for service temperatures up to 315°C.</p> |
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STAINLESS STEEL

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| <p>Tube available up to 1" (25.4mm) diameter in 16(1.6mm), 18(1.2mm) and 20(0.9mm) SWG in all diameters, and 14(2.00mm) SWG from 1/2" to 1" diameter</p> | <p>ASTM A213/A269 Grade 316/316L</p> | <p>Dual specified, dual grade tube with a Molybdenum content greater than 2.5% is stocked to meet all heat exchanger and instrumentation requirements.</p> |
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CHROME MOLYBDENUM

| COMMON DESCRIPTION | GRADE | ASTM SPECIFICATIONS | GRADE | BS SPECIFICATION | MAXIMUM OPERATING TEMP | MECHANICAL PROPERTIES | | |
|--------------------|-------|--|-------|--|------------------------|---------------------------|-----------------------------|--------------|
| | | | | | | Tensile Strength min. MPa | Yield Point RP 0.2 Min. MPa | Elongation % |
| 5 Cr - 1/2 Mo | T5 | All grades available in the following: A199 A200 A213 | 620 | Grades are available in British Standard BS 3059 Part 2 | 600°C | 415 | 205 | 30 |
| 1 1/4 Cr - 1/2 Mo | T11 | | | | | 415 | 205 | 30 |
| 1 Cr - 1/2 Mo | T12 | | | | | 415 | 205 | 30 |
| 2 1/4 Cr - 1 Mo | T22 | | | | | 415 | 205 | 30 |

TITANIUM

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| <p>ASTM B338 Grade 2</p> | <p>Titanium Grade 2 is the most widely used specification in all product forms. Kilo for kilo, titanium represents the most desirable option for tube heat exchangers, plate heat exchangers and sodium hypochlorite anti-fouling dosing systems. Titanium tube is used extensively in offshore applications in both the North Sea and Canada. Titanium represents an effective solution for all seawater tubing and piping systems. It is immune to general and pitting corrosion and to erosion at velocities up to 30m/sec. Designing the smallest practicable bore and the thinnest wall pipe will keep system cost and weight to a minimum. Over 100 million metres of steam condenser tubing are installed in power plants worldwide without a single failure attributable to corrosion. Titanium normally requires no system protection for corrosion unless there is a possibility of galvanic corrosion of adjacent structures. All enquiries will be handled on a customer requirement basis.</p> |
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