

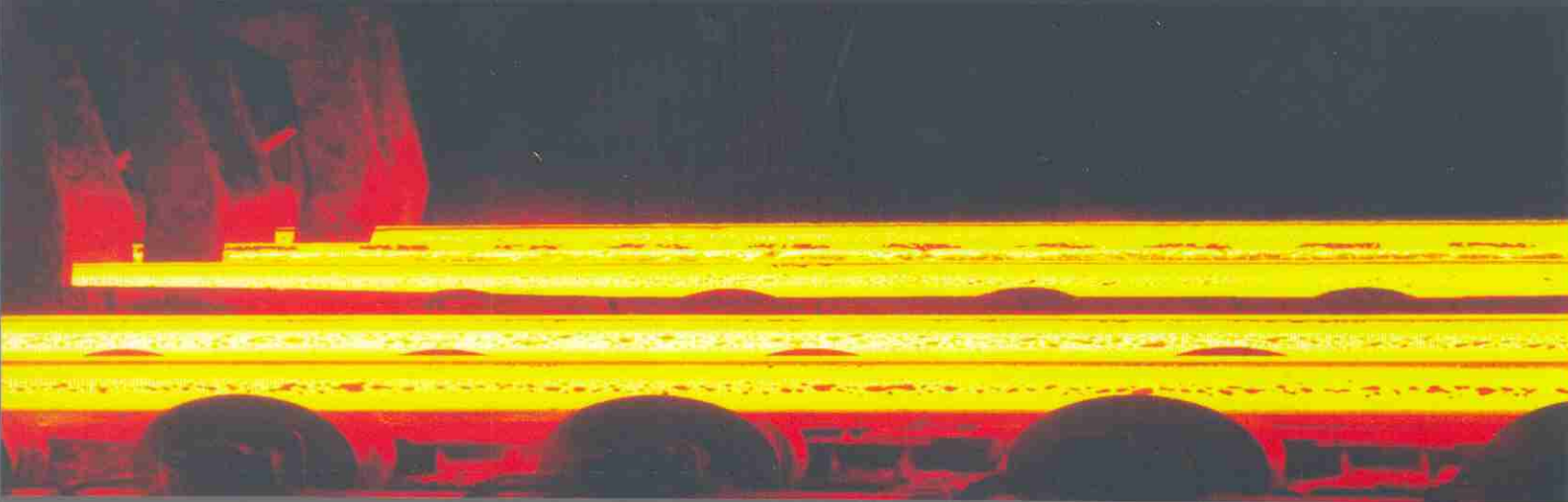
CONTINUOUS CASTING MOULD PLATES

German Technology at Indian Prices

Mipalloy is India's most well known name in the line of high conductivity copper alloys with its products in use in all 5 continents across the globe. The applications of our high conductivity copper alloys include automobile, electrical engineering, electronics, ship building, marine hardware, sheet metal fabrication, nuclear engineering, aeronautics, space engineering & steel making.

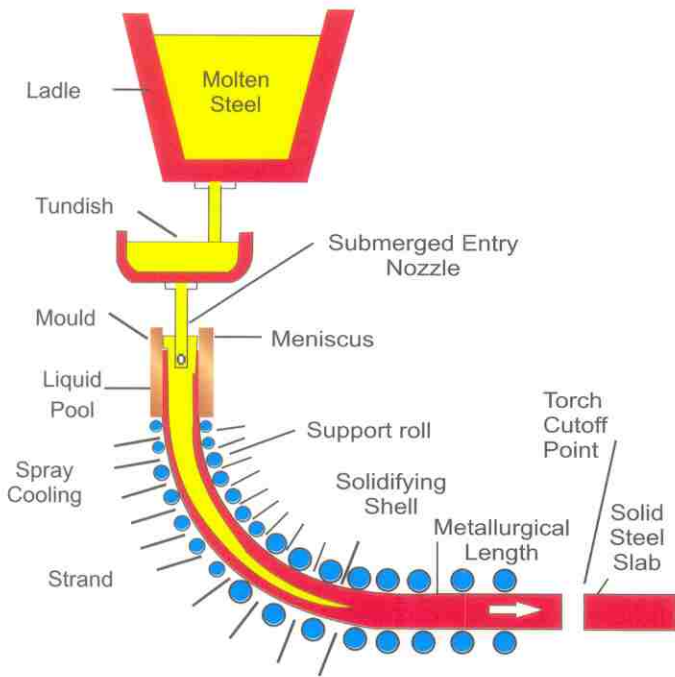
Mipalloy is a Mechanical Engineering Co. having diverse & varied manufacturing processes.

Mipalloy is the only Indian Company manufacturing Continuous Casting Mould Plates in Silver Copper and Chromium Zirconium Copper with a technical tie up with **M/s. Mansfelder Kupfer und Messing GmbH, Germany.**



mipalloy®

Complete Competence In Copper



Mipalloy is dedicated to the manufacture and supply of superior quality copper alloys.

Apart from having majority market share in all its product lines in India, we export our products to USA, Canada, UK, Germany, Australia, Turkey, Mexico, Egypt, Indonesia, Oman, Saudi Arabia, Pakistan, Nepal, Sri Lanka etc.

Since Copper forms the Core of all our activities and as we have considerable experience in handling this precious red metal. Our motto is '**COMPLETE COMPETENCE in COPPER**'

We manufacture continuous casting moulds for steel plants & non ferrous mills. The mould material must rapidly transmit heat from the molten steel to the cooling water. The material has to meet a whole series of requirements critical to the casting process such as good thermal conductivity, sufficient hardness and resistance to wear & mechanical damage. We manufacture Silver Copper & Chromium Zirconium Copper

CONTINUOUS CASTING PROCESS

Continuous Casting Mould Plates with a techno-commercial tie up with M/s Mansfelder Kupfer und Messing GmbH, Germany.

We have been manufacturing Silver Copper & Chromium Zirconium Copper for over two decades & have a thorough knowledge of the field. We have three modern factories in the outskirts of Chennai having state of art manufacturing operations necessary for the products like casting, forging, rolling, heat treatment, special purpose machining, gun drilling, CNC machining, plating etc.

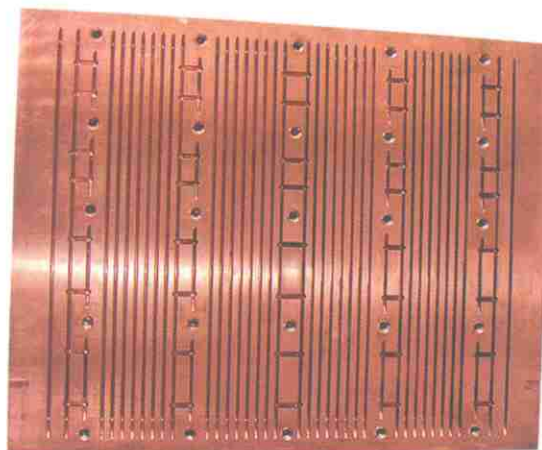
In our melting and casting facilities, copper and copper alloys are produced on state-of-the-art systems. The charge material used is only LME Grade A, Copper Cathode.

Mipalloy has hot and cold rolling systems for forming the materials. In addition, we have facilities for extruding, forging as well as for the heat treatment of our mould materials. Special procedures and process sequences developed by Mipalloy make it possible to produce complex geometries and dimensions, while maintaining the highest levels of quality.

Modern, precise CNC-driven machine tools are available for final machining of the moulds. Construction data for producing the desired work piece geometry are taken via integrated CAD/CAM systems. This makes it possible for us to produce complex surfaces with extremely tight tolerances.

In addition to comprehensive know-how in milling and drilling copper, we possess many years of experience in the field of deep hole drilling. This technique makes it possible to ensure optimum cooling condition, even for complex geometries. Our production facilities are also optimally set up for the finishing of tough and hard anti-wear coatings.

Our metallurgical prowess in the field has led to the development of copper alloys of high integrity most suited for mould plate applications.



Properties Of Mipalloy Mould Materials

Material properties	Units	Mipalloy AC (Ag Cu)	Mipalloy 3ZR (Cr Zr Cu)
UNS No.		C10700	C18150
Chemical Composition		0.08 – 0.12 % Ag. 0.001 – 0.007% P. Balance Cu.	0.5 – 1.5% Cr. 0.05 – 0.25% Zr. Balance Cu.

Physical Properties

Electrical Conductivity(min) at 20°C	% IACS	95	75
Thermal Conductivity(min) at 20°C	W/(m-k)	370	355
Coefficient of Thermal Expansion(min) at 20 - 300°C	10 ⁻⁶ /k	17.7	18
Recrystallisation temperature(min)	°C	350	700
Annealing temperature(min)	°C	-	525
Modulus of elasticity(min) at 20°C	10 ³ MPa	125	128

Mechanical Properties

0.2% Proof Stress(min) at 20°C	MPa	265	320
Tensile Strength(min) at 20°C	MPa	275	415
Elongation(min) at 20°C	%	12	15
Hardness(min) at 20°C	Brinell (HB 2.5/62.5)	85	130

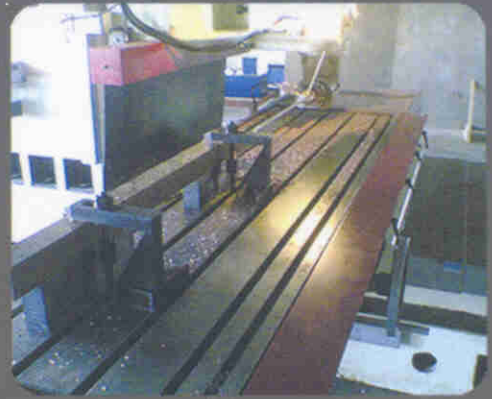
Our longstanding association with the steel industry has emphasized the importance of dimensions & close tolerances & superior surface finish that are requisite for good quality moulds. Keeping with our tradition of supplying only the best quality products in the industry, Mipalloy has invested in cutting edge technology CNC machine tools & computerized Co-Ordinate Measuring Machines(CMM). It is a standard practice of ours to supply all moulds with not only complete metallurgical reports but also detailed dimensional certificate.

Customer productivity is our primary concern. With this controlling objective in our mind Mipalloy continuously invests in modern technology & equipment and practises continual improvement. Hence technical data provided by us is subject to change with our aforementioned controlling objective.

Mipalloy's intimate relationship with users in steel plant has led to a greater understanding of applications of mould plates. Our moulds often exceed the aspirations of the industry due to a deeper understanding of the complex Copper metallurgy and its industrial usage. The total in-house capability gives Mipalloy the start-to-finish control needed to pursue its business philosophy on all levels involved and through all stages of production.



Co-ordinate Measuring Machine



Gun Drilling Machine



Vertical Machining Centre



mipalloy®



No :45,11th Link Street, Nehru Nagar Industrial Estate,
Chennai - 600 041, India. Ph : 91-44-24541068/69/70 Fax : 91-44-24540563, 24540576
email : mipalloy@md3.vsnl.net.in / URL : www.mipalloy.com