



MOLYBDENUM & TUNGSTEN

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YiHeng



Shaanxi Yi Heng Non-Ferrous Metals Industries Co., Ltd.
<Xi'an Metals & Minerals Import & Export Co., Ltd.>

YiHeng

NON-FERROUS METALS INDUSTRIES

Our motto: The needs of our clients are ours; we will endeavor to meet and exceed our clients' requirements and provide the best possible services.



We are one of leading manufacturers and distributors of Molybdenum and Tungsten products in China. Apart from processing traditional materials, we also develop new products with the help of high technology. Relying on years of experiences, advanced technologies, quality equipments, highly efficient manufacture and standard management, we have established a comprehensive system of research, manufacture and marketing of Molybdenum and Tungsten products, which are widely used in high temperature furnace, radiation shield, glass melting components, crystal growth equipments, power semiconductor heat sinks, thin film in flat-panel displays, thin-film solar cells, thermal spray, lighting, automotive industries, medical equipment etc. Our products, well known for their excellent properties, have been approved by various international authoritative institutions and have been supplied to customers in many countries.

Molybdenum Sintered Plate

Pressing in hydraulic presses with steel dies, or pressing in CIP/HIP. Sintering in vacuum induction sintering furnace.

Materials: Mo(99.95% min.), Mo alloy (ML, TZM, MHC)

The slabs also can be produced by the EB (Electron Beam) melting process.

Material: Mo (99.97% min.)

For further processing to semi-finished products:



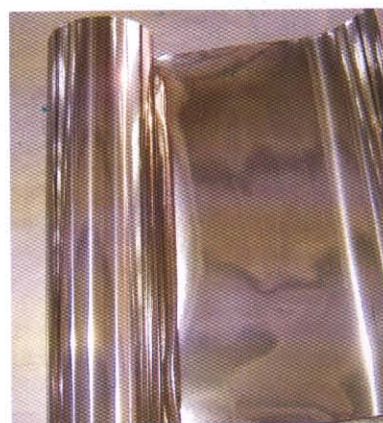
For alloy addition (sintering in muffle furnace):



Tantalum and Niobium Plates / Sheets and Foils / Coils

Plates / sheets are rolled by 400mm, 600mm, 800mm, 1200mm hot and cold rolling mills.

Size: Thickness 0.1-5mm x Width 200-1000mm x Length 2000max



Foils / Coils are rolled by 20-high rolling mills.

Size: Thickness 0.02-0.1mm x Width 3-610mm x Length

Chemistry&Standard: Ta ASTM B708-05 Nb ASTM B393-05

Materials: Pure Ta Ro5200

Ta Alloy: Ta2.5W RO5252 Ta10W RO5255 Ta40Nb RO5240

Pure Nb: RO4210 RO 4200

Nb Alloy: Nb1Zr RO4251 Ro4261

Molybdenum Sintered Bars

Pressing in CIP or HIP. Sintering in vacuum induction sintering furnace.

Materials: Mo(99.95% min.), Mo alloy (ML, TZM, MHC)

The billets also can be produced by the EB(Electron Beam) melting process.

Material: Mo (99.97% min.)

For further processing
to semi-finished products:



For alloy addition
(sintering in muffle furnace):

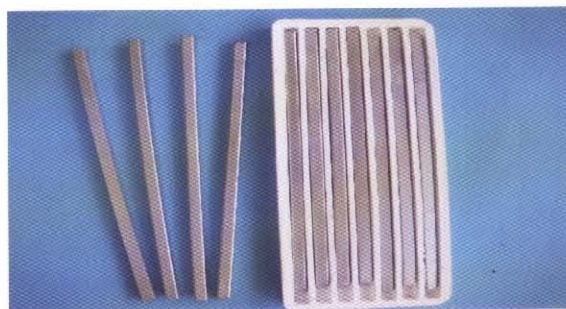


Molybdenum Square Bars

Pressing in hydraulic presses with steel dies, pre-sintering in muffle furnace, then direct resistance sintering.

Material: Mo (99.95min.)

Application: for further melting into high purity ingot, then forged and formed into the desired shape.



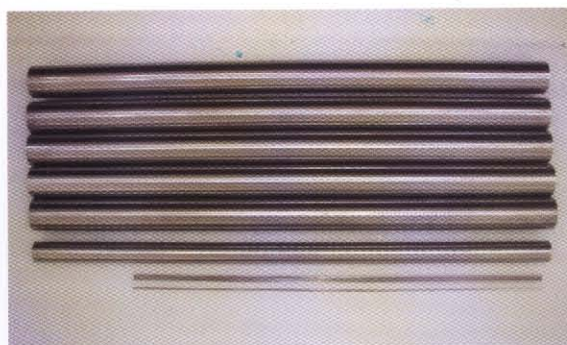
Molybdenum Rods

The sintered bars are worked at temperatures in the range 1200-1500°C (1473 ~ 1773 K) using processes such as extrusion, forging or rolling.

Divided coarse forged rods, smooth forged rods and ground rods.

Material: Mo (99.95% min.), Mo alloy (ML, TZM)

Standard: ASTM B387



Molybdenum Wires

Wires are manufactured from round bars by drawing, annealed and with electropolished or pickled surface.

Material: Mo (99.95% min.), Mo alloy (ML)

Standard: ASTM B387

Application:

For lighting: Φ 0.02- Φ 0.35mm

For MS-WEDM or HS-WEDM: Φ 0.06- Φ 0.35mm

For magnetron: Φ 1.0- Φ 3.0mm

For spraying: Φ 1.0- Φ 4.2mm



Molybdenum Sheets

Divided cold rolled with bright surface and hot rolled with pickled surface.

Material: Mo (99.95% min.), Mo alloy (MLR, TZM, MHC)

Standard: ASTM B386

Sheets made of pure Molybdenum

Thickness 0.1mm-40mm × Width 610mm max × Length

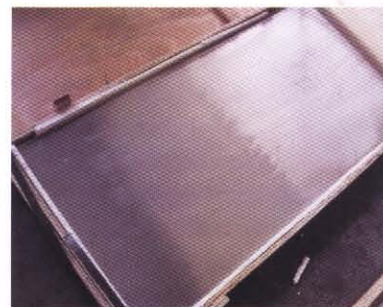
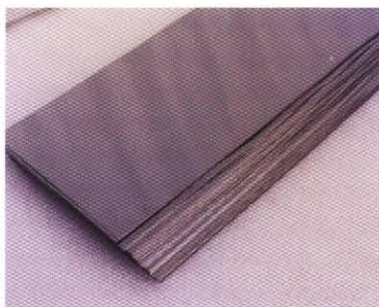
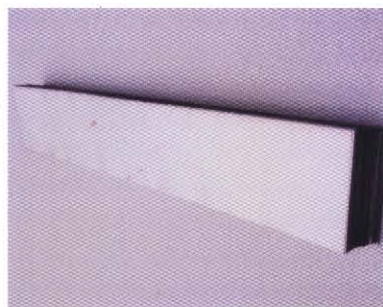
Sheet quality: standard quality, deep drawing quality, furnace quality

Sheets made of Molybdenum - Lanthanum Oxide Recrystallized (MLR)

Thickness 0.1mm-20mm × Width 600mm max × Length 2000mm max

Sheets made of Titanium-Zirconium-Molybdenum (TZM)

Thickness 1.0mm-20mm × Width 500mm max × Length 1000mm max



Molybdenum Foils / Ribbons

Rolled by 20-high cold rolling mill with very low production tolerances and guaranteed flawless surface.

Material: Mo (99.95% min.) Mo alloy (MLR, TZM, MHC)

Standard: ASTM B386

Size: Thickness 0.025 × 0.13mm × Width 310mm max × Length

Molybdenum Fabricated Products

Molybdenum Crucibles (spun-pressed sintered)

Application: for sapphire single crystal growth furnace, quartz & glass smelting container and rare earth smelting container.



Molybdenum Glass Melting Electrodes (GME)

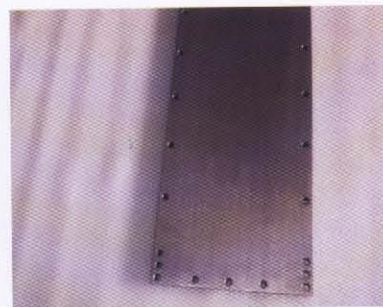
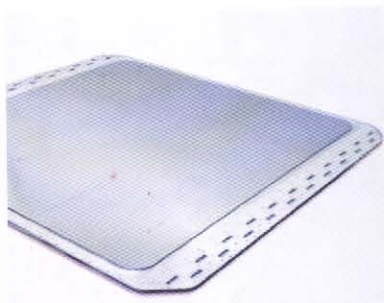
GME manufactured from Powder Metallurgical Processing or EB (Electron Beam) Melting Process.

- ⊙ Standard or tapered threads
- ⊙ Machined or centerless ground surfaces for assurance of concentricity and straightness
- ⊙ High purity (99.95% min.)
- ⊙ Bubble free, low carbon electrodes
- ⊙ GME from 1.25" (31.75 mm) to 4" (101.20 mm) in diameter
- ⊙ Uniform recrystallized grains for creep resistance



Molybdenum Sputtering Targets (Planar & Rotary)

Application: flat panel displays, thin-film solar cells and coatings.



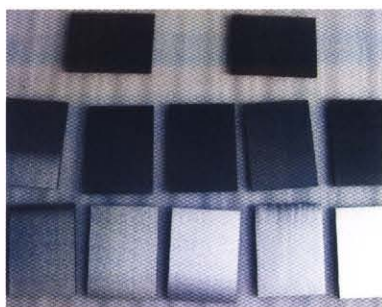
Molybdenum Semiconductor Base Plates

Plates manufactured by Japanese Speed Fam 16B high-precision lapping machine with the excellent flatness.



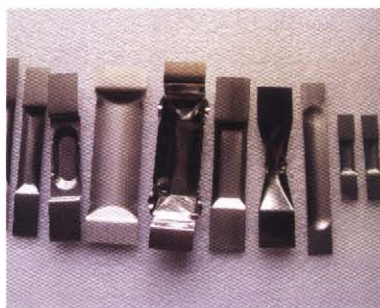
Mo discs

Size: Diameter 3.5mm-150mm × Thickness 0.1mm-6.0mm



Mo squares and rectangles

Size: Thickness 0.1mm-5.0mm × Width 2mm-10mm × Length 2mm-100mm



Molybdenum Evaporation Boats



Molybdenum Tubes

Manufactured by spun-pressed sintered or normal sintered.

Size: OD 4.0mm-10mm × Wall 1.0mm-1.5mm × Length 1000mm



Molybdenum Fasteners



Others



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NON-FERROUS METALS INDUSTRIES

Tungsten Sintered Plate

Manufactured through die pressing and CIP. Sintering in vacuum induction sintering furnace at temperature between 2000-2500°C (2273-2773 K).

Materials: W(99.95% min.)

Application: for further processing to semi-finished products.

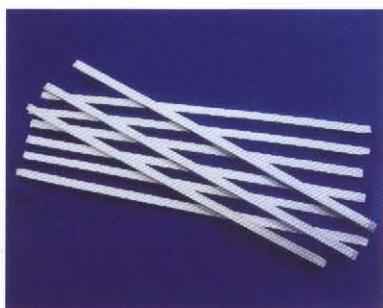


Tungsten Sintered Bars

Manufactured through die pressing and CIP. Sintering in vacuum induction sintering furnace at temperature between 2000-2500°C (2273-2773 K).

Materials: W(99.95% min.), W alloy (WAL)

Application: for further processing to semi-finished products or for alloy addition.



Tungsten Square Bars

Pressing in hydraulic presses with steel dies, pre-sintering in muffle furnace, then direct resistance sintering.

Material: W (99.96 min.), W alloy (WAL)

Application: for forging or rolling to rods and wire drawing.



Tungsten Rods

The sintered bars are worked at temperatures up to 1600°C (1873 K) using processes such as forging, rolling and swaging.

Divided coarse forged rods, smooth forged rods and ground rods.

Material: W (99.95% min.)

Tungsten Wires

Wires are manufactured from round bars by drawing, annealed and with electropolished or pickled surface.

Material: W (99.95% min.), W alloy (WAL)

Size: Φ 0.012- Φ 1.8mm on spool



Tungsten Sheets

Divided cold rolled with bright surface and hot rolled with pickled surface.

Material: W (99.95% min.), W alloy

Size: Thickness 0.2mm min \times Width 350mm max \times Length



Tungsten-Base Heavy Alloy

Material: W-Ni-Fe, W-Ni-Cu

Application: radiation shielding materials, balance weight materials, inertia materials, dynamic balance materials, kinetic energy materials, high temperature moulds etc.



Tungsten Copper Alloy

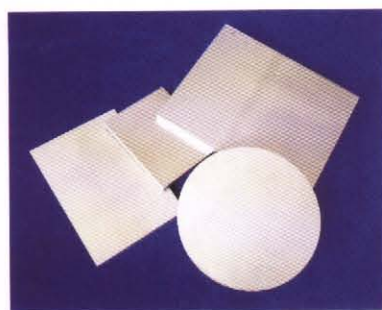
Material: W-Cu

Application: electric touch heads, electrode materials, electronic package materials and special purpose materials for rockets and missiles etc.



Tungsten Rhenium Alloy

Material: W-Re



Tungsten Fabricated Products

Tungsten Crucibles (normal sintered)

Application: for sapphire single crystal growth furnace.

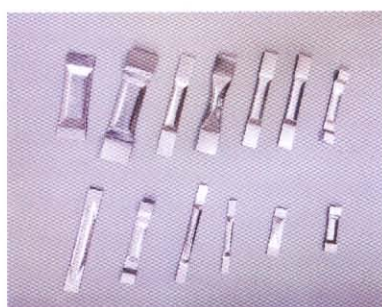


Tungsten Contacts

Material: W discs composited steel rivet by copper discs, W discs composited copper rivet by silver discs.

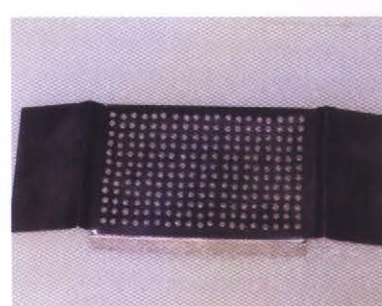
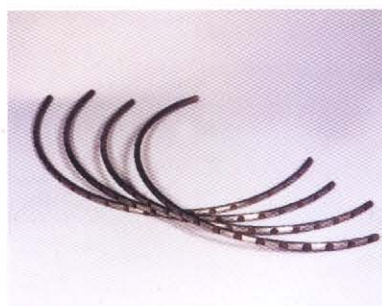
Model: flat, sphere, hole.

Application: auto horn, electric appliance



Tungsten Evaporation Boats

Others



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