Molybdenum glass tank reinforcements.

In the glass melt tank, the refractory bricks are exposed unprotected to the aggressive glass melt. The result: Corrosion which can significantly reduce the service life of the glass melt tank. Platinum and molybdenum are the only metals that are able to withstand the high temperatures and chemical corrosion caused by the glass melt. Platinum is very expensive - molybdenum is the economical, high-performance alternative.

Plansee has developed a molybdenum protective shield for areas of the glass tank where corrosion is a particularly critical factor (dog house, wall, bubbler and throat). Molybdenum tank components help protect the bricks against corrosion. This is because when exposed to many types of glass, molybdenum offers significantly better corrosion resistance than refractory bricks. By using molybdenum sheet tank reinforcements, you can preserve the original geometry of the bricks. For uniform glass quality and an extended tank service life.
Our task force to protect your glass melt tank:

- Sibor®-coated molybdenum tank claddings to protect the AZS bricks
- Molybdenum profiles for implementation in AZS bricks (based on a patent owned by REFEL)
- Sintered pipes (with and without Sibor® coating)
- Reinforcements applied to throat channel, wall, bubbler and dog house

We can adapt the design of our tank reinforcements to meet the needs of your furnace. To make sure that everything fits perfectly, we work to very low tolerances. You can rely on our experienced furnace designers.
Let us be completely honest. Do you know the Achilles heel of our molybdenum? Oxygen. Because the material oxidizes at temperatures over 400 °C (752 °F). But not with Sibor® - our oxidation protection for molybdenum. Sibor® protects molybdenum against oxidation at temperatures up to 1 700 °C (3 092 °F). The very hard, dense coating creates a diffusion barrier along the base material and forms an SiO₂ seal against the air. Sibor®-coated molybdenum glass tank reinforcements are therefore protected against oxidation during the firing up phase. Sibor® is also able to withstand rapid heating. Our oxidation protection is guaranteed to remain effective for the following periods:

- 5 000 h at 1 250 °C / 2 282 °F
- 500 h at 1 450 °C / 2 642 °F
- 50 h at 1 600 °C / 2 912 °F
Strength through quality.

When it comes to quality, we like to be in complete control. We produce our tank reinforcements ourselves – from the metal powder right through to the finished product. As the input material, we use only the purest molybdenum oxide - in this way, we can guarantee that our tank reinforcements are free from any impurities. Our molybdenum is guaranteed to be 99.97 % pure. Discoloration or bubble formation? Out of the question.

What else can we do for you?

Get to know the other champions for your glass melting tank: Molybdenum tank reinforcements for protection against corrosion, stirrers and gobbers, our products for quartz glass production and spinning nozzles for the manufacture of glass and ceramic wool and glass fibers.

Why wait? Our ribbons, sheets, rods and wires manufactured from refractory metals are available for order online right now. Take a look: www.plansee.com/shop/