In non-stop use. Molybdenum rotary tubes.

Rotary kilns are used, for example, for the incineration of hazardous waste and in calcination processes. The rotary tube inside the furnace must withstand temperatures of up to 1 400 °C (2552 °F). In non-stop use. Because they are continuously being filled with material, rotary kilns usually work for 24 hours a day - for weeks on end.

Repairs to furnaces cost our customers time and money. To make sure that the service life of a rotary kiln is as long as possible, it is important that the kiln components operate without problems. This is where our high-performance metals prove their value. We supply rotary tubes made from molybdenum and molybdenum alloys. These multi-layered, riveted components can easily withstand high temperatures.
When other materials give up, it's time for molybdenum and tungsten to take over. These two materials are both refractory metals and are ideally suited for use at high temperatures. With their special properties, molybdenum and tungsten are the perfect choice for components in the furnace construction industry.

- High melting points permitting operating temperatures of up to 2800 °C (5072 °F)
- Outstanding creep resistance
- High level of dimensional stability
- Extremely pure
- Excellent corrosion resistance
- Low coefficient of expansion

Whenever materials have to meet special challenges, we add titanium and zirconium to strengthen the microstructure of pure molybdenum. Mo-Ti solid solution and Ti-Zr carbides ensure that optimum strengths are achieved at temperatures up to 1400 °C (2552 °F).

What can TZM do better than pure molybdenum?

- Better creep resistance
- Higher recrystallization temperature
- Greater thermal stability
Our guarantee against oxidation.

Let us be completely honest. Do you know the Achilles heel of our molybdenum? Oxygen. Because the material oxidizes at temperatures over 400 °C.

Put Sibor® to the test - 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 SiO$_2$ seal against the air.

Sibor®-coated molybdenum rotary tubes can be heated and cooled rapidly without causing the coating to separate. The 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
Tailor-made rotary tubes. Plansee Engineering.

After more than 90 years, there's something we can be quite sure of: The best way of handling our refractory materials. With our knowledge of processing these materials, the design possibilities are practically unlimited. Just contact us. Because we have more than ten engineers specializing entirely in thermal processes.

Our team of developers will adapt your rotary tube optimally to meet the requirements of your process. Thanks to our FEM simulations, we can say as early as the design phase how our components will behave in your high-temperature process. Would you like to put us to the test? We would also be very happy to supply you with rotary tubes in trial dimensions.

We're here.

It makes no difference whether you need an entire hot zone or simply a spare part for your existing furnace. With Plansee, you are in good hands. We are happy to install your products for you at your premises. And, of course, we are there to lend a hand when it comes to inspecting, maintaining and optimizing existing furnaces.

A single source for all your needs.

We handle every stage in the manufacture of our products in-house. From the raw materials through to the finished product: including the development of new materials. In this way, we can guarantee that you benefit from the very best quality.
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/