

Special Steel Products



Superhigh pressure pipes

Super-high-pressure steel pipes are key parts in petrochemical industry, such as in pipe reactor, pipes heat exchanger and pipelines of high-pressure polyethylene production unit. The materials used for the manufacture of these pipes are steels G4335V, AISI4340 and AISI4333M. The working pressure of a super-high-pressure steel pipe is 100~350 Mpa; and working temperature 200~350°C. At present, RHEINCO is capable for producing a variety of super-high-pressure steel pipes of more than 40mm in I.D. and 10000mm in length, among which the pipes of 40.3mm in I.D. , 103.0mm in O.D. and 8100mm in length were given the title of “National Class New Product” in 1996. These super-high-pressure steel pipes are made of ESR steel forging, followed by quenching & tempering and finish machining. Their quality comes up to the advanced level of similar products in world market. Their successful development allows us to have possibilities to utilize them as ideal products to take the place of those ones we had to import from abroad.



Centrifugal spheroidal graphit

Centrifugal spheroidal graphite cast tube moulds

Casting tube mould is a large thermal tooling for producing spheroidal-graphite cast iron in centrifugal casting tube machine. The working condition of mould is very bad, the outer surface is covered by cooling water and inner surface contacting with high temperature iron melt (up to 1350-1400°C). During the operating period, the moulds carry alternating thermal stress in a long term, and it rotates in a certain speed inside the centrifugal casting tube machine, and at the same time carries the external force like tension and torsion. The mould is made of a solid stock, its deep hole being drilled for entire length by application of an advanced technology. The moulds are comparable with those as produced in USA and Germany as to all operating properties and they are the ideal tooling to take the place of ones imported from abroad.



Axles

At the request of customers, all kinds of forgings and deep-processed products can be produced, especially for producing the axles forgings higher than the national standard, like crankshaft for locomotive, turbine shaft, traction electric machine axles. The blank of crankshaft for locomotive (($\phi 355 \sim \phi 315$) \times (8800 \sim 6000)mm) is in the leading position in the home and abroad.



High pressure crystal growers

These artificial crystal growers are of the national 3rd kind of super-high pressure vessels applicable for artificially growing quartz crystal by hydrothermal method. The material of which the growers are made is high-grade quality alloy steel refined through vacuum degassing and powder injection. A grower is consisted of 3 sectors, each sector being a forged thick-wall cylinder, assembled into a solid by means of hoops. A self-tightening seal construction is introduced in both the upper and lower parts, thus providing a reliable tightness and convenience of assembling and disassembling as well. The growers can be operated continuously under the alkaline solution with working pressure within 220Mpa and working temperature at the range of 0-425°C. The products of GYF ϕ 180-GYF ϕ 330 have been the series products and win good reputation from customers since the mid of the 1980s.