
Continuous Casting

Continuous casting is a process that converts liquid metal into solid shapes. It is usual that the casting machine comprises a retaining vessel to which is connected a water-cooled aperture containing a graphite die. The process offers continuous production of a wide variety of shapes including rounds, tubes and rectangular blocks. There are two main processes which are distinguished by the casting orientation i.e. horizontal and vertical. Metals that are continuously cast include Cast Iron, Copper (and its alloys), Aluminium alloys, Zinc and also Precious metals.

A vital part of the continuous casting machine is the cooling device, which consists of a water-cooled jacket and a mould (die) which is made from graphite. Graphite combines a number of favourable properties which makes it ideal for use as a lining in the cooler:

1. Non wetted by most metals
2. Strength increases with temperature
3. High thermal conductivity ensures good heat extraction
4. Easy to machine complex shapes
5. High resistance to thermal shock

Tokai Carbon has a number of grades suitable for continuous casting non ferrous and ferrous metals.

In addition to graphite used for the die there are also materials available to be used as furnace linings and resistance heaters.

