

Cast iron

HT200 is grey iron grade 200. It is an inexpensive alloy used where high physical strength and erosion resistance are not required. This material is used for base, bearing housing, cover plate, frame plate, and expeller and expeller ring (as clients' requirements), stuffing box, split packing gland, end cover.

QT500 is a ductile grade of grey iron used where higher physical properties and greater shock resistance are required compared to HT200. QT500 is ductile iron grade 500. It could replace the HT200 under most conditions.

Galvanizing

Zinc plated ductile iron is used for duties where higher physical properties and greater shock resistance are required in comparison to HT200. HT200 and QT500 have a better atmospheric corrosion resistance than that with no galvanizing. This material is used for labyrinth, locking nut.

Please check the cast iron comparasion table and select the material you need in GB standard.

Stainless steel

#45, carbon steel, has good strength, but not anti-corrosive. Usually, it is used for shaft, if there is no special requirement. It is the same with ASTM 1045.

3Cr13 and 4Cr13 is a martensitic stainless steel having a combination of high hardness and good general corrosion resistance. The alloy is machined in the annealed, or as cast condition and is subsequently hardened for service. It is the same with ASTM 420.

Please check the stainless steel comparasion table and select the material you need in GB standard.

Elastomer

Natural rubber ER01 is a black natural rubber, of low to medium hardness. ER01 is used for impellers where superior erosive resistance is required in fine particle slurries. The hardness of ER01 makes it more resistant to both chunking wear and dilation (ie, expansion caused by centrifugal forces) as compared to ER02. ER01 is generally only used for impellers.

Natural rubber ER02 is a black, soft natural rubber. It has superior erosion resistance to all other materials in fine particle slurry applications. The antioxidants and antidegradents used in ER02 have been optimized to improve storage life and reduce degradation during use. The high erosion resistance of ER02 is provided by the combination of its high resilience, high tensile strength and low short hardness.

Hypalon*, Chlorosulfonated Polyethylene is an oxidation and heat resistant elastomer. It has a good balance of chemical resistance to both acids and hydrocarbons. (Hypalon* is a trademark of Dupont company.)

Polyurethane is an erosion resistant material that performs well in elastomer applications where 'tramp' is a problem. This is attributed to the high tear and tensile strength of polyurethane. However, its general erosion resistance is inferior to that of natural rubber (ER01, ER02).

Alloy

KmTBCr27 is named as in China, which has 27% Chrome. Alloy KmTBCr27 is a wear resistant white iron that offers excellent performance under erosive conditions. The alloy can be effectively used in a wide range of slurry types. The high wear resistance of alloy KmTBCr27 is provided by the presence of hard carbides within its microstructure. It is particularly suited to applications where mild corrosion resistance, as well as erosion resistance is required. KmTBCr27 is used commonly for impeller, liners, expeller and expeller ring of the slurry pumps.

KmTBCr28 is a corrosion resistant white iron suitable for low pH corrosion duties, where erosive wear is also a problem. KmTBCr28 has the main elements of Chrome 28%, low Carbon with hardness of 430 in Brinell. The alloy is particularly suitable for Flu Gas Desulphurization (FGD) and other corrosive applications, where the pH is less than 4. The alloy can also be used in other mildly acidic environments. KmTBCr28 has an erosion resistance similar to that of Ni-Hard 1.

KmTBCr35 is a premium erosion/corrosion alloy to be used where excellent erosion and corrosion resistance is required. KmTBCr35 has the main elements of Chrome 35-45%, low Carbon with hardness of 450 in Brinell. The alloy has much improved corrosion resistance compared to alloy KmTBCr28, whilst the erosion resistance is similar to Ni-Hard type alloy irons. The alloy is suitable for phosphoric acid duties, FGD duties, sulphuric acid, and other moderately corrosive applications.