

Type	Material code	Material Description	Mechanism Performance			Special performance	Application
			δ_w/δ_b (MPa)	ak (J/cm ²)	HRC		
Abrasion resistant white iron	A05	KmTBCr26	≥ 700	6-10	≥ 56	Anti-erosion performance < A07 with certain corrosion resistance	For higher wear condition 5-12 of PH
	A07	KmTBCr15Mo	≥ 550	4-8	≥ 59	Best anti-erosion performance, corrosion resistance < A04, A05	For higher wear condition
	A01	KmTBCr8	≥ 550	6-8	≥ 55	Anti-erosion performance $\approx 90\%$ of A05	For mud pump
	A11	KmTBCrMnMo	≥ 400	3-6	38-42	Low-grade anti-erosion performance, low hardness, drilling tapping	For microscale fine particle & low-grade abrasion working conditions
Anti-wear & anti-corrosive iron	A49		≥ 600		43-49	Anti-erosion performance, corrosion stability, in low pH environment, abrasion resistance $\approx A03$	For low-grade PH corrosive environment, especially suitable for FGD (PH ≥ 4). Usually used for low acid environment
	A33				35	Anti-erosion performance $\approx A03$ corrosion resistance	To transport oxidability slurry of PH value ≥ 1 , such as phosphogypsum, HN03, H2SO4, H3PO4, etc.
	A22		1200		45	Excellent erosion resistance, higher hardness	For dredging pump casing
Anti-wear cast steel	A23		700		HB 500-600	Higher hardness and anti-erode	To transport higher anti-wear & anti-corrosive working condition, such as parts of dredging pump, clean water pump, sewage pump, certain parts of slurry pump
	A25				HB 300-350	Low hardness, higher abrasion resistance, good weldable performance	For light erode and wear condition such as transporting aqueous medium of small gravel

Type	Item Description	R26	R55
Natural rubber	Hardness	41 \pm 4	52 \pm 3
	300% stretching strength N/Cm ²	≥ 190	≥ 400
	Breaking strength N/Cm ²	≥ 2000	≥ 2200
	Elongate break %	≥ 500	≥ 500
	Pull apart permanent deformation%	≥ 30	≥ 25
	Pull strength: $\mu\text{g}/\text{Cm}^2$	≥ 40	≥ 40

■ PUMP SPARES

We supply interchangeable slurry pump spares with other companies. Depending on different application, we have different material, such as high chrome, dual-phase steel, rubber, polyurethane, ceramic etc.



Impeller



Volute Liner



Throatbush



Cover Plate Liner



Frame Plate Liner



Rubber Impeller



Shaft Sleeve



Mechanical Seal



Flange

■ Polyurethane Wet Parts

■ Compared with high Chrome casting parts

- 1)The working life of polyurethane spares is 3 times of high chrome.
- 2)Polyurethane reduce the impeller weight a lot and its passage surface is much smoother thus the dynamic consumption could be reduced when operating. It could save 20% power consumption and increase 5~10% efficiency. Meanwhile, it prolong the life of the rotor and low down the maintenance cost and downtime loss
- 3)The polyurethane is helpful to reduce the vibration and noise.

■ Compared with natural rubber

- 1)Polyurethane's hardness range is wide which is from 20~95 (Shore A Hardness) and still keep good performance on elastic and elongation.
- 2)Polyurethane's tear strength is 2 times of natural rubber
- 3)Polyurethane's wear resistant is 3~5 times of natural rubber.



■ The Advantage of Ceramic Slurry Pump Wet Parts

The ceramic we adopt to produce pump wet parts is a kind of high performance structural ceramic which is made of Sic combined with Si3N4. It is inorganic non-metallic materials with high strength, wear resistance, corrosion resistance, cavitation resistance, high temperature resistance and other superior performance. However, this material has some weakness like difficult to be molded and brittle etc. But our company use unique producing process to solve these problems. We adopt advanced Silicon nitride connected with silicon carbide molding technology but not traditional grouting or pressing method. The wear-resistant property of our Si3N4-SiC is 2 or 3 times of high chrome, Cavitation erosion resistance is metal' s several times. Its Mohs hardness is 8.9 which is only lower diamond and cubic boron nitride. Raw material: the main composition is Si3N4-SiC, others are high strength additive.

■ Advantage:

- 1.Wear resistance, corrosion resistance, cavitation-resistant, high temperature resistance etc properties are much better than metal.
- 2.Hardness: Only lower than diamond and cubic boron nitride.
- 3.Chemical corrosion resistance: Except hydrofluoric acid (HF), it can resist all other strong and weak acid, especially sulfuric acid (H2SO4), and most of the molten salt, common halogen and alkali at room temperature.
- 4.Weight: Its weight is only one third of chromium molybdenum steel. It is easy to assemble-disassemble,impeller start,and the shaft is not easy to be broken, and less motor loss.

