Material Options Available

One of the significant advantages of the **Slurry & Dredging Pumps** lies in the wide range of optional materials available. This characteristic allows for the construction of a pump using the most suitable materials, which are precisely tailored to fulfill the specific duty requirements.

Abrasive & Corrosive Applications — Alloys

Material code	Material grade	Mechanical properties			Special features	Application Examples
		δw/δb (Mpa)	Ak (J/cm)	HRC		
A05	KmTBCr27	≥700	6-10	≥56	The anti-scouring performance is second only to A07, and has certain Corrosion resistance.	For corrosion resistant materials with large impact loads Wear, for pH 5-12 working conditions.
A07	KmTBCr15Mo	≥550	4-8	≥59	The best anti-scouring performance, But the wear resistance is not as good as A04 and A05.	For corrosion resistant materials with large impact loads Wear and tear.
A01	KmTbCr8	≥550	6-8	≥55	The anti-scouring performance is about 0.9 times of A05.	For use in mud and mortar pumps.
A11	KMn	≥400	3-6	39-42	Resistant to mild erosion The hardness is lower, Drilling and tapping.	Suitable for containing trace fine particles, Slight abrasive wear conditions.
A49		≥600		43	Has a certain degree of erosion resistance Performance and Low pH Environment Its corrosion resistance and wear resistance Performance is similar to A03.	Suitable for corrosive environments with low pH values Environment, especially suitable for flue gas, Especially suitable for Flue Gas Desulfurization (FGD), for Ph≥ 4 desulfurization device, usually can For use in low acid environments.
A33				35	Has a certain impact resistance Brush performance and similar to A03 Similar, with certain Corrosion resistance.	Used for delivering PH ≥ 1 slurry, such as transporting phosphorus in phosphate fertilizer plants Gypsum and nitric acid, sulfuric acid, phosphoric acid etc. medium.
A22		1200		45	Good erosion resistance, hardness Higher.	Suitable for pump bodies used in dredging applications.
A23		700		HB 500-600	High hardness, erosion resistance The sex is good.	Suitable for abrasion resistance and high Erosion conditions, such as for making Dredging pump parts, clean and sewage pumps And some parts of slurry pumps.
A25				HB 300-350	Low hardness, abrasion resistance Good weld ability good.	Use mild erosion and abrasive wear Working conditions, such as conveying fine sand of water medium.

Material code	Material grade	Mechanical properties			Special features	Application Examples
		δw/δb (Mpa)	Ak (J/cm)	HRC		
A61			5~6	60~67	Containing 50% chromium carbide. The alloy may provide up to two times the life of Ultrachrome® A05 alloy	Hypereutectic white iron, suitable for high wear duties. Can effectively be used in the alumina industry, mill discharge applications and tailings pumps, offering a significant life advantage over conventional erosion resistant alloys
A14	ULTRACHOME Tough 27% Cr					Alloy A14 is a high chromium white cast iron offering high impact resistance and moderate erosion wear resistance. Alloy A14 is suitable for gravel pump applications where large slurry particles are present. A14 is much tougher than A05 but also exhibits a lower erosion wear resistance.

Abrasive & Corrosive Applications — Elastomer

Material code	Features and Benefits
R55 Nature Rubber	• Standard elastomer offering for erosive applications • Premium natural rubber that offers resistance to shear and tearing from hard particle slurries • Particularly suited for large particle erosive slurry applications such as mill discharge
U38 and 566 Polyurethane	• Erosion resistant polyurethane material with high tear resistance and tensile strength • Utilized in fine particle slurries such as sand or applications requiring tip speeds beyond limits of R55® rubber • Most suited for tailings, flotation, leach duties, and applications where “tramp” is a problem
Linatex Rubber	• Linatex rubber is rated as 37 on the IRHD scale of elastomer hardness. This equates to a rubber that is soft and flexible. • Superior Abrasion Resistance: Linatex rubber demonstrates advanced mechanical properties that provide superior abrasion resistance and unmatched performance in wet conditions compared to other types of rubber. • Lower Total Ownership Costs; Reduced Downtime Compared to other rubber products, Linatex® rubber has Demonstrated superior performance in operating mines and has shown significant lower total ownership costs. Linatex natural rubber lining pays for itself over and over again.

Abrasive & Corrosive Applications — Ceramics

Material code	Features and Benefits
SiCEP SiC Ceramic	• offer exceptional wear resistance due to silicon carbide's extreme hardness, making them ideal for abrasive slurries. • provide superior corrosion resistance, handling acids, alkalis, and harsh chemicals better than other material. • With high mechanical strength and thermal stability, they ensure long service life and reliability in demanding industrial applications.
SiN+Sic Ceramic	• Possessing all the characteristics of SiC ceramics, it is more suitable for handling slurries with large amounts of highly abrasive particles than SiC ceramics.

Material code	Features and Benefits
A05+SiC Ceramic A3+Sic Ceramic QT500-7+SiC Ceramic	• It is wear-resistant and corrosion-resistant, and its service life is 3 to 10 times that of common chromium alloy and stainless steel.