



SUPERSLICK UHMW-PE Plastic Pumps Handling Aerated, Corrosive & Abrasive Slurries In Tail Gas Treatment Plants Of Zinc Smelter

Tail Gas Treatment (TGT) Plants

Original MOC specified: CD4MCu

Type of pumps specified: Horizontal pumps with suitable sealing system

Pumps of this metallic casting material are prone to corrosion-erosion in this aerated chemical environment resulting in pre-mature pump failure. Sealing systems are equally prone to frequent failures with expensive spares inventory.

SUPERSLICK UHMWPE Vertical Glandless Pumps working successfully for following applications in Tail Gas Treatment plants of metal refineries (smelters).

VERTICAL PUMPS OF FLOW RATE UPTO 480M³/H, HEADS TO 31M IN OPERATION

Duty Conditions

- Feeding Zinc Calcine Slurry (Zinc Calcine-200gpl) to Scrubber Re-Circulation Tank
- Pumping Scrubber Liquid to Splashes of SO₂ Scrubbers (slurry of Zinc Sulphite, Zinc Sulphate, SiO₂ – 150gpl)
- Pumping Scrubber Liquid to Splashes for cleaning purpose (Zinc Sulphite, Zinc Sulphate – 150gpl)
- Pumping Scrubber Liquid to Splashes for Aeration (Zinc Sulphite, Zinc Sulphate, SiO₂- 150gpl)
- Pumping Bleed liquid to Aerators for final oxidation (120gpl Zinc Sulphate, Sulphite, SiO₂)
- Pumping Scrubber liquid to TGS (Zinc Sulphate, Zinc Sulphite, impurities-120gpl)
- Slurry Density 1350 to 1400 Kg/M³, Temp 45°C - 60°C

1. **Pump Material:** All wetted parts are moulded to shape in UHMW-PE material. It is the toughest thermoplastic having unmatched abrasion resistance (outlasts other plastic materials and several metals like CD4MCu, comparable to Alloy-20, Hastalloy), widest chemical resistance, withstands higher temperature up to 90°C, exceptional impact strength at sub-zero temperature.
2. **Performance:** In a period of 4-6 months since commissioning of these pumps, no corrosion or erosion has been observed on impellers or casings. No sealing problems due to glandless design of these pumps.
3. **Pump Specifications :** Over 40 pumps supplied at 2 sites for following flow-head duties.

- 474M³/H at 27M; 306M³/H at 27M; 186M³/H at 31M; 55M³/H at 12M; 22M³/H at 10M; 15M³/H at 30M; 12M³/H at 27M (all vertical glandless pumps); 32M³/H at 45M (for Weak Acid transfer - Horizontal Pump with Mechanical Seal);
- 258M³/H at 27M; 204M³/H at 27M; 99M³/H at 31M; 91M³/H at 12M; 37M³/H at 10M; 25M³/H at 30M; 12M³/H at 33M; (all vertical Glandless pumps); 32M³/H at 45M (for Weak Acid transfer - Horizontal Pump with Mechanical Seal).

SP SUPERSLICK PUMPS

SUPERSLICK LININGS + SPARES

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