

ENHANCED THE CONSISTENCY IN TRANSFERRING SLUDGE WITH SOLID PERCENTAGE FROM 11% TO 19%



ROTO'S COMMITMENT TOWARDS EXCELLENCE

Roto's efficient industrial pumps are familiar with handling difficult applications in different industries with ease. We have a legacy of effectively handling complex and unusual industrial pumping applications. Owing to the exceptional performance of our pumps, we have managed to successfully transfer over 5000 fluids across 46 countries.

THE PROBLEM

A petrochemical plant was unable to transfer centrifuged effluent treatment plant sludge from a bottom cake hopper to the incinerator in an efficient manner. The pump that was used in the process was a standard Progressive Cavity Wide Throat Pump.

The transferred sludge was over 11% consistent. During the operations, the flow rate of the pump dropped significantly owing to the bridge formation in the augur of the pump. This led to the dry running of the pump resulting in frequent stator failures.

All these factors collectively affected the operation of the centrifuge and the resultant downstream operations.

THE AMAZING RESULTS

Our customers were satisfied beyond their expectations with the results of the trial.

Now, since the quality and rate of the sludge generation from the centrifuge had greatly improved, the process also required an improved pumping capacity. The specification for the maximum operating pressure had now also been raised from 12 kg/cm²g to 20 kg/cm²g during the latter part of the trial process. Therefore, the frequency of the pump was manipulated to raise its speed in order to attain the required rate of flow and pressure.

The customers were so happy with these results that they invited Roto Pumps to collaborate with them on the new specifications for their existing and expansion projects.

On the basis of this arrangement, four-stage pumps were finalized. In the coming time, Roto ended up provided several customized several pumps with top-mounted bridge breaker assembly and accessories to the customers.

EXCEPTIONAL FEATURES

- Capable of handling solids up to 40%
- Can handle highly viscous and non-flowable media
- Capable of dealing with variable pressures
- A high degree of customization of hopper designs possible based on the study of fluids handled
- Capable of handling air in the pump; no auxiliary vacuum system required
- Low on maintenance and spares

Roto's Bridge-Beaker Pump

Performance Range

Flow Rate: up to 120 m³/hr

Viscosities: up to 3, 00,000 cst

Discharge Pressure: 48 bar

