CASTLE PUMPS LTD

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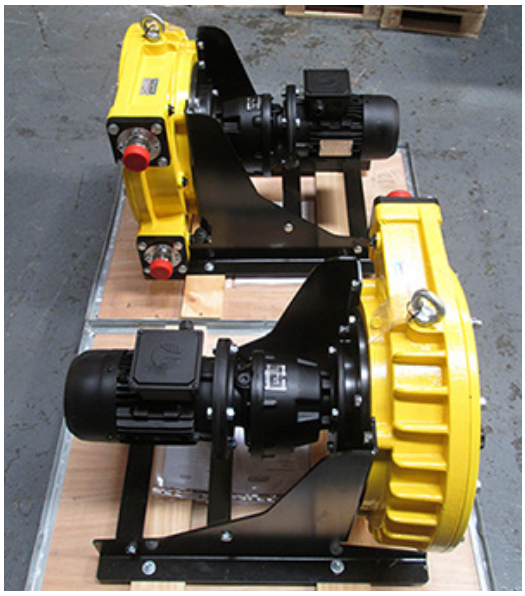
Case Study: Chemical Production Plant



Case Study Information

Customer	Chemical Production Company
Application	Aluminium sulfate transfer
Location	UK

Key Challenges

1. Extremely low flow rate for batching the fluid
2. Presence of solids within the pumped medium
3. Material compatibility with Aluminium Sulfate

Equipment Supplied:

2 x 1 ½" Horizontal Close Coupled Peristaltic Pump

Application	Aluminium Sulfate with 2-3% solid content
Drive Details	0.55kW, 3 Phase, 50Hz electric motor, IP55
Flow	1.495 l/h @ 29RPM
Discharge Pressure	2 bar
Tube	Natural rubber
Pump Body	Cast Iron with polyester powder coating
Connections	Stainless Steel AISI-316

Enquiry:

✓ We received an enquiry from a Chemical Production Company in the UK looking to dose small quantities of Aluminium Sulfate containing 2-3% solid content. The fluid was being transferred from one tank to another during a chemical process that was vital for the production of various chemicals at the plant. Due to such low volumes needing to be transferred, the pump had to be able to handle a very low flow rates efficiently.

Solution:

✓ Given the details of the above application, we specified two close coupled peristaltic pumps. Peristaltic pumps are often selected for corrosive fluids as there is only one wetted part, which is the inner tube that we supplied in Natural Rubber for compatibility. As the fluid is only confirmed by the tube's diameter, the solids present could be handled with ease.

These peristaltic pumps are also able to be slowed down to meet the required flow of the chemical process. Running the pumps at such a low speed would greatly extend the lifespan of both the motors and tubes, making them a low maintenance solution for the Chemical Production Company to deal with.
Upon receipt of order, these pumping solutions were manufactured and dispatched to the customer within 5 working weeks which met their project deadline with time to spare, ensuring no delays to production.