

Case Study

AHLSTAR WPP Pump, a Good Solution in Difficult Liquid Pumping



AHLSTAR WPP33-100 Pump

The Sulzer Difference

Sulzer Pumps' wide product portfolio, in-depth knowledge of our customers' processes and features of their liquids enable us to select the right products for our customers' processes.

Project Highlights

The second step of absorption in fluorine salts production is part of the phosphoric fertilizer process. The performance of these pumps is important in production. The reliability requirement of the pumps is high. The pumped liquid is both corrosive and abrasive but not as difficult as in the first step of absorption (fewer solids and chemicals dissolved). The particles are fine but abrasive.

The Challenge

Originally the customer had locally made pumps with a limited lifetime and poorly working gland packing. The customer decided to use Sulzer pumps for the application after successful attempts in the first step of absorption. The pump arrangement is the same (pump type, material, seal).

The Solution

In accordance with Sulzer Pumps' solution, the first step of absorption in fluorine salts manufacturing uses an AHLSTAR WPP wear resistant pump with open impeller in the EH (hardened 4L) material (300 HB hardness) and with the Dynamic Seal. The pump operated in a good duty point: a good sign for optimal performance.

Customer Benefits

The best possible combination of pump type, pump material and seal type resulted in a correct product for a particular application. Several pumps are now successfully running in the same application.

Pump Data

Pump	AHLSTAR WPP33-100, open impeller, Dynamic Seal, ser. no 100088292
Material	EH (4L HB300)
Capacity	90 l/s
Head	45 m

Process Data

Fluoric ammonium	
NH ₄ F	20 g/l
Temperature	60 °C max
γ	1100 kg/m ³
Solids	35 g/l
Solids size	15-50 mkm

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Applicable Markets

Fertilizer Industry

Applicable Products

AHLSTAR Pumps

