

CASE STUDY

AHLSTAR A pump solves handling of strong sulfuric acid liquid

In any phosphoric acid manufacturing process, there is a need for pumping strong sulfuric acid. Sulfuric acid is needed for a reaction, and it is added to an extractor together with the phosphate raw material.



AHLSTAR A23-40 pump

The Sulzer difference

Our customer in the phosphoric fertilizer industry provides a very good example of such pump arrangements. Using the pump with minimized maintenance, the operation is very stable and the solution is problem-free. The customer was very satisfied.

The challenge

In the past, metal pumps had gland packings without water supply in this application. This was because of water ingress into the sulfuric acid as well as temperature and corrosion growing dramatically, causing a shorter pump lifetime.

The solution

- AHLSTAR A process pump in duplex 41 material with JC single mechanical acid seal T10T can do the job.
- A specific feature of this pump is a bottom draining arrangement with stainless steel pipe and ball valve.

Customer benefit

- For this application, the lifetime of the seal faces is an important consideration.
- To maximize the lifetime in this application, vibrations should be as low as possible.
- All installation requirements, like a good concrete foundation and pump alignment were fulfilled.

Product data

Pump	AHLSTAR A23-40, ser. no 100096214
Material	41, JC-T10T (PTFEg/CER)
Capacity	25 m ³ /h
Head	32 m
Speed	1'450 rpm
Motor	15 kW, 1500 rpm

Process data

Sulfuric acid	92-98%
Temperature	40°C max
No solids	

Contact

merja.parssinen@sulzer.com

Applicable markets

Fertilizer industry

Applicable products

AHLSTAR pumps

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