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.

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

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Applicable markets
Fertilizer industry

Applicable products
AHLSTAR pumps