MTRI pumps resistant to aggressive electrolytes: Stainless steel pump head

TOPIC:
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LOCATION:
Germany

COMPANY:
Extrude Hone

Extrude Hone VMB GmbH specialises in building machinery and equipment for electrolytic deburring and fine shaping of metallic precision parts (ECM technology). Electrolytic metal machining is a long-known but until recently seldom used form of metal machining. The process is characterised by high precision deburring and edge radiusing of metallic components which imposes neither thermal nor mechanical stresses on the structure of the material. The extremely precise ECM metal machining offers maximum part-reproducibility and economy - the kind of precision valued for instance by manufacturers of ultrafine nozzles for the latest common rail diesel engines.

The Situation

ECM systems place extremely high demands on their pumps. Media may be alkaline or acid, pumps need to be resistant to salts and dirt particles and naturally they must be easy to service.

The pump units convey the electrolyte solution and also pump detergent into the washing stations. They pump used media back to the central treatment system, charge the filter systems and eventually empty the tanks. In short, everything that flows into an ECM system (apart from the electrical current of course), is conveyed by pumps.

The Grundfos Solution

After relying on two pump suppliers for a long time, Extrude Hone VMB now only enlists Grundfos: "We value the comprehensive range, flexibility and commitment at Grundfos. We always feel that we receive sound, expert advice," emphasises managing director Markus Günther.

Extrude Hone VMB's current ECM systems are entirely based on immersion pumps from the MTRI series with their stainless steel heads. Günther: "At a temperature of up to 35°C, sodium chloride and/or sodium nitrate salt solutions would dissolve a cast iron head in no time!" plus: "The cartridge seal on the MTRI pump is particularly easy to replace - something which is also much appreciated by our customers."

While all pumps are speed controlled, the frequency converters are located away from the process in a control cabinet. The reason is that the salt fumes, which cannot always be avoided, would be extremely corrosive to an integrated or top-mounted frequency converter. "Salt creeps irrevocably into the electronics, destroying them over time. We therefore keep the electronic components away from the process."

The Outcome

Markus Günther is more than satisfied with the Grundfos service: "Response times to queries and/or problems are very good - I might almost say praiseworthy!" They also appreciate the high level of commitment, for instance any technical fault (which is almost inevitable with new applications) is investigated and analysed meticulously, whatever the cause. "We then receive a full analysis together with recommendations on how to avoid the problem in future - whether it be using a different seal or employ a different material in general." The globally available service and spare parts supply offered by Grundfos is of particular importance as it enables Extrude Hone VMB to guarantee support for its international clients.

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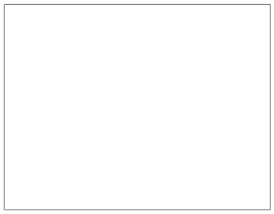

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