



# Technical Paper

## Chemical and process industry

### Session 10-3

## PFA/PTFE-lined mag-drive process pumps for up to 600 m<sup>3</sup>/h - even for highly corrosive media

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## Summary

Centrifugal pumps with a magnetic coupling are technically mature products and have been widely installed in many fields of application for decades, especially when a leakage-free design is required (i.e. feed of toxic or highly dangerous media).

When it comes to handling highly corrosive media, as in chemical plants, lined magnetically driven pumps have become the first choice. While an inexpensive metal material is used for “dry” components, all parts in contact with the liquid are covered by a thick-walled, chemically resistant material, such as fluoropolymers.

Until now only mechanically sealed pumps of lined or metal design were available in the highly corrosive segment for capacities above 300 m<sup>3</sup>/h. Needs for sealless designs could only be managed with metal pumps made of expensive and long lead-time materials such as Hastelloy, titanium, tantalum, nickel, Alloy 20 etc.

A new design of a magnetically driven centrifugal pump for flow capacities of up to 600 m<sup>3</sup>/h will be presented - the new pump has become the world's largest centrifugal pump of its class.

This paper will describe opportunities provided by this new design, show how it can reduce investment and operational costs and improve the performance and reliability of process plants. A practical example in a chemical process plant will be included for illustration.