

Case story | SLE Technology

Danfoss PAHT pumps enables SLE Technology keeping parts clean



**8,000
hours**

without service is a
key parameter to avoid
unexpected downtime in
a 3-shift production.

hpp.danfoss.com

The challenge:

Design parts-cleaning systems for some of the most demanding manufacturers in the world - with demineralized water.

SLE Technology produces high-pressure inline cleaning systems specially designed for continuous materials such as wire, foil, strips and punched strips. Before these materials are welded, glued or soldered to become part of a highend product, they must be clean - really clean - to ensure the durable quality SLE's customers demand.

Whereas manufacturers used to rely on mineral-based solvents to do the cleaning, environmental as well as cost concerns have increasingly led customers to use demineralized or deionized water (DI) under high pressure for parts cleaning. A product of reverse osmosis, DI is free of dissolved minerals, has low conductivity and is highly aggressive - and effective - as a cleaner.

The solution:

Demineralized water under high pressure from Danfoss PAHT axial piston pumps.

While the aggressive nature of DI is ideal for cleaning parts, it is also highly corrosive against the pumps that bring it to high pressure. Therefore only pumps whose wetted parts are made for stainless steel can be used.

According to Wolfgang Wiederer, head of sales & project engineering at SLE, the search for a suitable all-stainless steel pump soon led to the Danfoss PAHT. "We tried working with other stainless steel pumps, but their reliability was lower and their maintenance costs were higher.

Wolfgang Wiederer
SLE Technology



Many of our inline parts cleaners are installed in production facilities that run three shifts a day, year-round, so dependability and long intervals between service are key parameters for us. Danfoss leads the way in pump reliability with at least 8,000 hours of operation before service as quite normal."

Danfoss's axial piston technology has other advantages for SLE. Since the pumped medium - even a highly aggressive one such as DI - supplies all the lubrication necessary; there is thus no risk of the pump's oil lubricant contaminating the parts to be cleaned. Danfoss PAHT pumps are also considerably smaller than centrifugal pumps - making it easier for SLE to integrate them into their compact cabinets. And the constant pressure enabled by the axial piston principle suits SLE's requirement for consistent cleaning pressure perfectly.

The results:

Low-maintenance, high-performance parts cleaning - and deal winning total cost of ownership.

SLE's customers are demanding not only with regards to cleaning quality and reliability.

"Total costs of ownership calculations are part of practically every project negotiation," explains Wiederer. "And since high-pressure pumps represent such a significant proportion of the overall production and maintenance costs for one of our cleaning systems, the life cycle costs of the pumps we purchase are critical to our competitiveness. Danfoss PAHT pumps continue to be an integral part of our systems - and our ability to serve our customers."



The Danfoss PAHT high-pressure pump is a part of the cleaning system manufactured by SLE Technology

SLE Technology:

SLE Technology produces a broad range of innovative parts-cleaning equipment for everything from German cars to Swiss watches and Japanese medical equipment - using nothing but demineralized water, high pressure and advanced engineering skills.

SLE Technology was established in 1992 in Grefenau, Germany by Josef Liebl. SLE supplies parts-cleaning and lubrication equipment to a broad range of demanding manufacturing companies within the automotive, medical equipment, electronics, watchmaking and other industries. www.sle-electronic.com

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