

CASE STUDY

Upgrade of Water Injection Pumps

Sulzer was contacted to upgrade the MSD water injection pumps at the N/A offshore platform operated by Kerr-McGee (China) Petroleum Ltd. The customer wanted to increase the capacity so that it could maintain field production rates. Sulzer engineers accomplished this by completely replacing the rotor in the original motor.



Sulzer retrofitted pump

“ *The retrofit was done three years ago, and the pumps are working well.* ”

Li Tao, project leader Sulzer

The Sulzer difference

Sulzer is the world’s leading manufacturer of engineered pumps. Customers can save money by putting our engineering experience to work. We have the ability to retrofit and upgrade existing pump systems no matter who the original supplier is. We will provide optimal solutions to correct pump system design problems and improve reliability.

The challenge

The existing injection pump could not sustain sufficient flow to meet the need for the necessary increase in flow within the power constraints of the driver. Also, improved reliability of the pumps was needed. The motor margin met the requirements of the new performance, so there was no need to replace it.

The solution

A completely new rotor performance was calculated and designed to fit the existing casing within the driver. The replacement met the new performance requirements, such as supporting greater heads and flows, containing new bearings, eliminating vibration problems, and improving reliability.

Customer benefit

The flow rates were increased without changing the motor. We increased the production and improved reliability. This was done by installing a new rotor of balanced and standardized clearance, which eliminated vibration of the pump.

We were able to reduce the routine maintenance. These pumps have now been operating for three years without the need for an overhaul.

Product data

Retention of existing driver	Cost saving
Retention of base plate	Cost saving of ~ CHF 10,000
No change required to existing pipework	Cost saving
Update complete rotor	Increase of performance and efficiency
	Increased reliability
Replaced new bearings	Decrease of vibration

Contact

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Applicable markets

Customer support services, offshore

Applicable products

Retrofit

www.sulzer.com

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