

### Case Study

## Hydraulic Drive Firewater Pumps Improve Reliability



The full package on test

### The Sulzer Difference

As one of Sulzer Pumps core business segments, the oil and gas industry runs sophisticated production and pipeline transportation processes requiring reliable pumping solutions that meet stringent industry specifications.

Our ability to develop innovative solutions to customers critical performance needs keep us at the forefront of technology development in the oil and gas sector.

### The Project

Conventional and FPSO offshore production platforms require fire protection, which is typically achieved by a high-pressure firewater ring main supplied by a firewater pump. Traditionally, these are conventional, vertical line-shaft pumps driven by a diesel engine via a 90° gearbox. However, this solution requires intensive maintenance. Through its innovative hydraulic drive fire pump design, Sulzer Pumps brings a number of cost-effective improvements to this key application.

### The Challenge

Line-shaft pumps suffer from bearing wear on startup when the steady bearings run dry before the liquid column reaches them. Because the pump is not running most of the time, the pump bowl can be affected by marine growth fouling. When the pump needs to be serviced, the full length must be pulled, including removal of the shaft/coupling system, bearings and rising main section. These problems combine to make conventional fire pumps maintenance intensive.

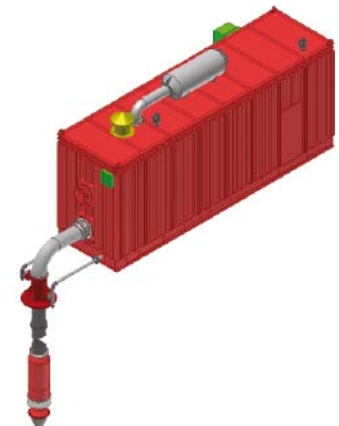
### The Solution

To address these challenges, Sulzer Pumps mounts a hydraulically-driven motor on the pump bowl. This arrangement eliminates the need for the problematic line-shaft and costly 90° gearbox. In addition, the hydraulically-driven design can be frequently rotated at low rpm to discourage marine growth. A diesel engine drives two pumps: One to power the hydraulic motor and the second to boost the seawater at deck level into the firefighting ring main. A compact blast and fire proof container houses the engine, control system and fuel supply.

### Customer Benefits

Sulzer Pumps' hydraulic-drive fire-fighting pumps provide a compact and inherently more reliable solution to providing firewater on oil production platforms. The ability to slow rotate the pump together with the significantly simpler design reduces routine maintenance needs. If the pump end does need lifting, the Sulzer design makes it much quick and easy to maintain.

The system has been installed on many FPSO vessels and is the preferred solution for this type of platform for many operators worldwide.



The pump and containerized deck package

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### Applicable Markets

O&G

### Applicable Products

Firewater Pump