

## Shrewd gearbox modification and pump retrofit unlocks 50% cost saving

CUSTOMER

Oil Refinery Major

LOCATION

Java, Indonesia

INDUSTRY

Downstream Oil & Gas

KEY SERVICES

1. Root cause analysis

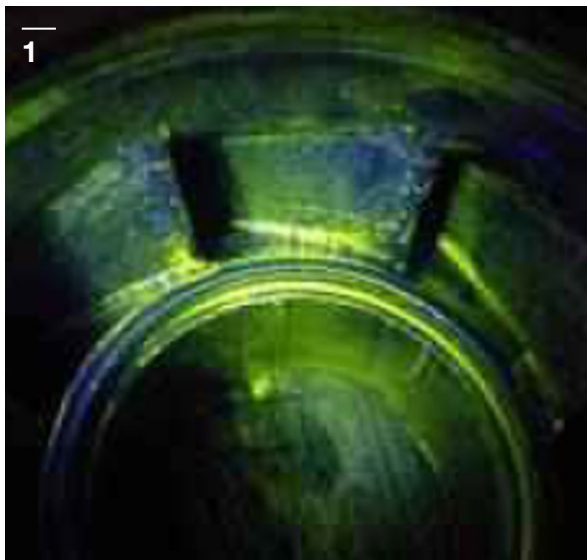
2. Lifetime assessment

3. Retrofit



## THE CHALLENGE

A large oil refinery on the island of Java contacted Sulzer to refurbish eight diesel pumps to meet an increased duty point.



The oil refinery wanted to modernize its diesel pumps to meet an increased duty point as part of a facility-wide upgrade project to support future fuel demand. Due to the age of the pumps (one of them dated from 1975!) and the lack of available technical information, the customer was unsure how to meet the new duty point reliably.

- Demand for fuel was placing increased pressure on refinery equipment
- Plant operators were unsure how to reliably meet a new pump duty point
- The customer needed a service provider who could work with legacy pumps
- There was no existing documentation for the eight pumps
- The refinery wanted to avoid the time and cost of purchasing new pumps



1. One of the diesel pump impellers

2. A service provider which could work with legacy equipment was essential

## THE SOLUTION

# Sulzer proved gearboxes could achieve this reliably without pump modifications, unlocking a 50% cost saving.

The combined teams of Sulzer's local Indonesia service center, Sulzer Pumps UK and Sulzer Pumps in the U.S.A seamlessly collaborated to source documentation, share knowledge and collate engineering data on the pumps. This unrivalled global technical pump expertise and Sulzer's decades of experience in the oil and gas sector provided an efficient solution.

- Sulzer tapped into its global network of rotating equipment experts, which collaborated to discover an optimal solution
- Sulzer experts recommended that new duty point could be achieved by increasing the pump speed, using gearbox
- Sulzer engineers proved that this speed increase was well within the performance envelope of the pumps
- The pumps were fully refurbished to as-new specifications
- New efficient motors and gearboxes replaced old diesel drives and turbines powering the pumps
- Complete drivetrain package provided as a pump skid



1. New motors would improve efficiency of operations

2. Sulzer pump experts from Indonesia, the U.S.A and the UK collaborated to deliver an optimal solution

3. The complete drivetrain package provided by Sulzer installed on its skid

## An optimal plug and play solution with a 50% cost saving



Taking a refurbishment approach provided a 50% cost saving to the refinery compared to purchasing new pumps. The refreshed legacy equipment reliably met the increased duty point in the fastest, most straightforward manner, thanks to Sulzer's unmatched pump engineering knowledge.

- A pump refurbishment tailored to the customer's budget requirements ensured an optimal solution that saved the customer time and cost while guaranteeing performance and reliability of operations
- Sulzer's pump expertise meant the new duty point was met efficiently
- A complete drivetrain package was provided as part of a turnkey solution
- The pump skids are in a plug and play format, allowing quick and easy reinstallation back at the refinery, a superior proposition which proved challenging for competing vendors to accomplish for this set of pumps
- Sulzer experts proved the viability of the gearbox solution with data
- With improving sustainability of operations important for oil and gas facilities, revitalizing existing equipment where feasible reduces carbon footprint by avoiding new procurement, eliminating associated supply chain emissions



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1. New motors would improve efficiency of operations

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2. Complete retrofitted pump package ready for deployment

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3. Substantial cost savings achieved through retrofit over new pump purchase

## PROJECT KEY FACTS

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CAPEX COST SAVINGS:

**US\$500k +**

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PROJECT LEAD TIME REDUCTION:

**5 months**

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MSDD BARE PUMPS RETROFITTED:

**8**

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AGE OF LEGACY PUMP RETROFITTED:

**47 years**

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## THE IMPACT

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**Retrofit expertise offers fast-tracked pathway to operational success while minimizing environmental impact**

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