

CASE STUDY

ASSET MANAGEMENT

Pump repair expertise extends MTBF to over 1.5 x industry target

OVERVIEW

Industry	Food & Beverage
Application	Pump Asset Management
Actual Saving	£150,000 p.a.
Payback Period	Annually

Working alongside ERIKS the customer was able to **realise** significant **reliability** and **productivity** improvements



ISSUE

A major food and beverage manufacturer had worked with ERIKS – on a repair-only basis – for the pump assets in their UK production plant and over the course of several years.

Much of the repair work demanded ERIKS' specialist know-how to resolve problems sometimes caused by other less knowledgeable or less experienced repairers used in the past and sometimes to resolve issues resulting from operational changes or reliability issues.

This included returning pumps to OEM spec, using only European-manufactured replacement bearings, and identifying and employing the correct elastomers to cope with the temperatures and clean-in-place chemicals of the operating environment.

REACHING OPTIMAL PERFORMANCE

At the same time ERIKS also reviewed the asset for Total Cost of Ownership (TCO) including energy use,

life and maintenance cost recommending changes to impeller sizes or complete replacement based on TCO analysis.

However, once ERIKS had returned the plant to optimum operational performance, the customer began to question what value the partnership was adding when others offered a cheaper repair.

A VALUE-ADDED PARTNERSHIP

ERIKS Asset Management approach had resulted in fewer critical breakdowns, fewer plant stoppages, fewer repairs, less downtime and less lost production – yet the customer focused on purchase price and did not consider the improved plant performance.

This included not only high-quality repairs, but also applying know-how and expertise to the identification and mitigation of root causes, to prevent repeat problems.

SOLUTION

To illustrate the importance of their asset management approach, ERIKS extended its activity to compiled data across a number of key aspects with the support of the customer's engineering team. This included Pump Reliability, failure history, together with statistics for Mean Time Between Failures and a criticality/vulnerability study.

INITIAL ASSESSMENT

The initial assessment convinced the customer to ask ERIKS to investigate risk mitigation through a spares strategy for their pump assets, which totalled 359 across the whole site.

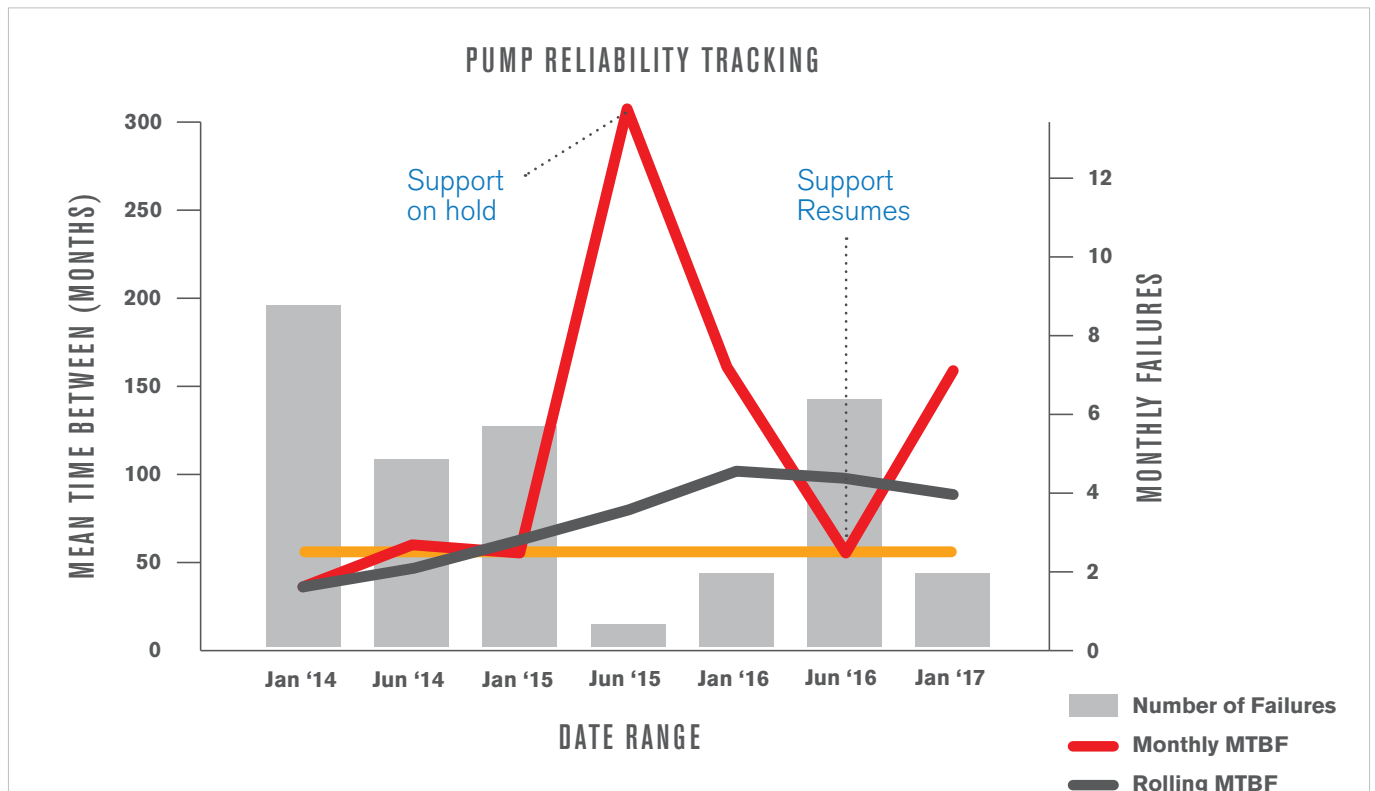
ERIKS began by undertaking the customer's first-ever fully detailed analysis of pump numbers, criticality, spares coverage and spares shortfall, the results of which are shown below (Fig. 1).

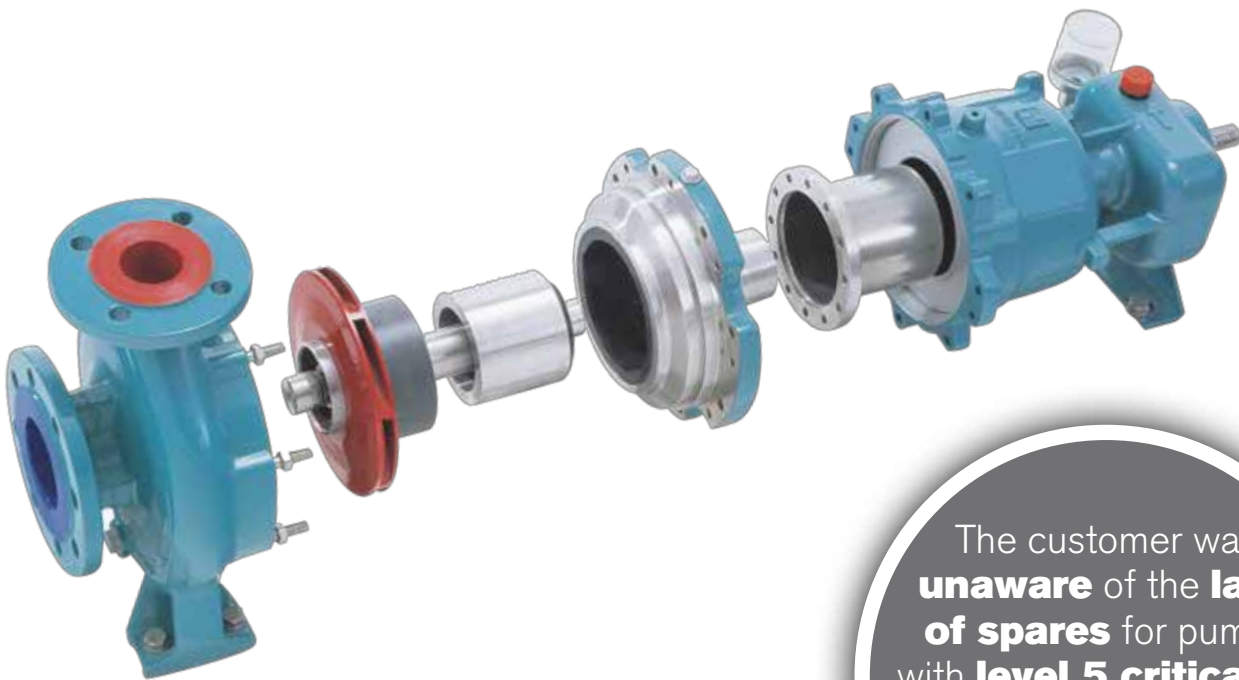
IDENTIFYING RISK

The customer was unaware of the complete lack of spares for pumps with level 5 criticality (Fig. 2), and the survey and analysis also revealed a number of other risks with their existing spares strategy.

ERIKS was able to identify the high-risk areas, implement a review of spares required, and help the customer to rationalise their spares stock and spares strategy.

Fig. 1





The customer was **unaware** of the **lack of spares** for pumps with **level 5 criticality**, the survey and analysis revealed a **number of other risks**

FAIL-SAFE SPARES STRATEGY

This included spares standardisation to optimise the number of spares required to be held in stock, and to reduce the cost of spares sourcing. It also involved proposing changing some pumps specifications to improve energy usage which also used the same spares list proposed.

The repair contract has subsequently been expanded to include catastrophic pump failure prevention, through the analysis of condition monitoring data, logging of potential issues and planning of scheduled intervention to minimise production disruption.

This allows ERIKS to act early when a repair or replacement of the pump is all that's required, rather than waiting for a catastrophic pump failure which may lead to damage to shafts, casings or other associated equipment and more importantly put people at risk.

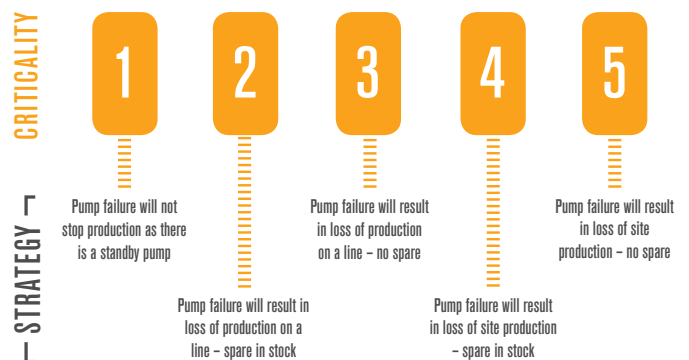


Fig. 2

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ASSET MANAGEMENT



ERIKS were able to achieve an **average MTBF of 90 months** against an **industry standard of 60 months**

Steady **rise** in plant **productivity** and **reduced** spending on **spares**

Spending has been **reduced** by **£150k** per annum

OUTCOMES AND BENEFITS

- The statistics compiled by ERIKS revealed that – against an industry target of 60 months MTBF – they helped the customer to achieve an average of 90 months
- This has led to a steady rise in plant availability
- Resulting in a reduction in spending on repairs
- The need for fewer repairs has also had a knock-on effect across several other areas. For example, there is less intervention, less manual handling, and an overall lower Health and Safety risk to their employees
- Whereas the customer spent £250k on maintaining the pump systems in the first year of the ERIKS' repair contract, spending has now been reduced to £100k p.a.

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