CASE STUDY

powerstar

TRELLEBORG: UTILISING SMART TRANSFORMERS IN ENGINEERING ENVIRONMENTS

INTRODUCTION

Trelleborg is a world leader in engineered solutions that protect critical applications in demanding environments.

Its innovative engineered solutions accelerate performance for customers in a sustainable way.

THE CHALLENGE

Due to its ageing transformer, Trelleborg's site was experiencing large losses in its high voltage infrastructure resulting in wasted electricity and higher than necessary electricity costs.

As a company with a sustainable focus, this engineering leader was keen to upgrade its transformer to gain energy efficiencies and reduce its electrical consumption.

THE SOLUTION

Following analysis of the site, Powerstar identified that the existing transformer was experiencing high losses and could benefit from being replaced with its super low-loss amorphous core transformer, Powerstar SO-LO.

Its amorphous core enables magnetisation and demagnetisation to take place at a much quicker rate than in traditional cold-rolled grain-oriented (CRGO) silicon steel transformers which enables it to deliver greater efficiencies than ageing, traditional transformers.

Additionally, Powerstar SO-LO has online remote monitoring capabilities built in which enables the remote monitoring of the key performance characteristics of the transformer at any time, from anywhere with a secure internet connection.

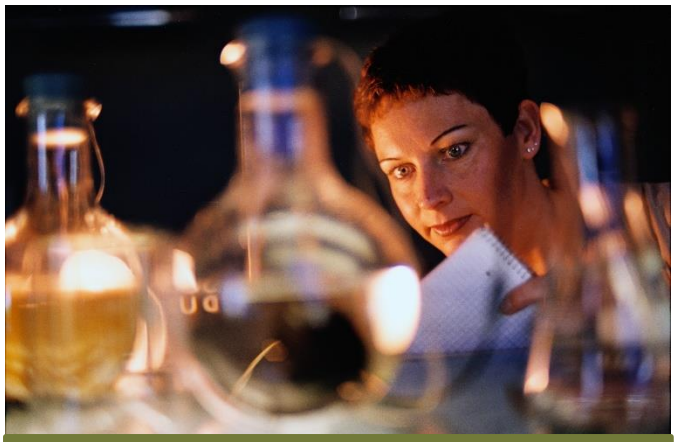
SAVINGS & BENEFITS

By replacing the existing transformer on site, a saving of approximately 2% of its annual kWh consumption was made for Trelleborg, resulting in a payback of under 3 years.

Post-decommissioning analysis revealed that by upgrading to a Powerstar SO-LO distribution transformer, it is providing the site with 44% fewer losses on its transformer, equating to a saving of roughly 135,000 kWh per year.

KEY FIGURES

- **Payback:** 2 years 10 months
- **kWh savings per year:** 135,097
- **Reduction in transformer losses (W):** 44%



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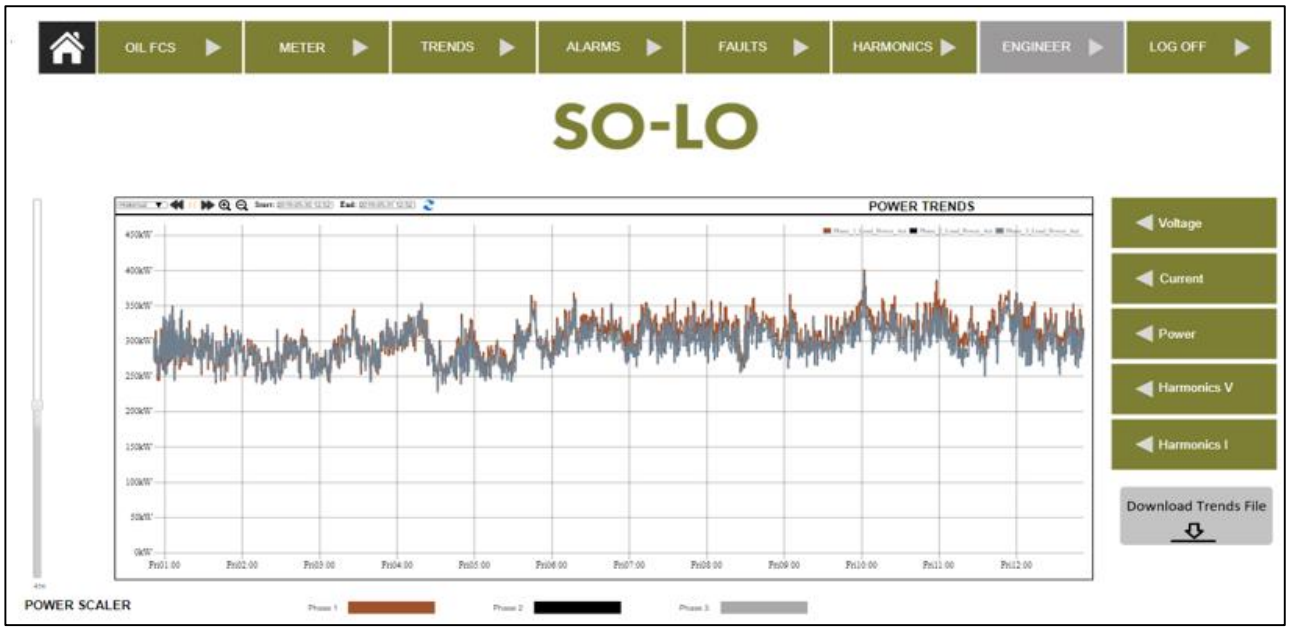
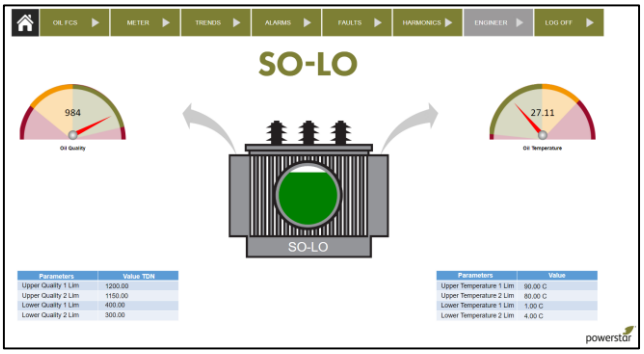
ONLINE REMOTE MONITORING PORTAL

The below screenshot of the remote monitoring portal for the installation highlights the key performance characteristics, in this case the power trends, that can be seen at any time, from anywhere with a secure internet connection.



More detailed data displaying a general overview of the transformer's performance in addition to issues such as oil analysis, the low voltage meter, and predictive maintenance can also be viewed from the remote monitoring platform.



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