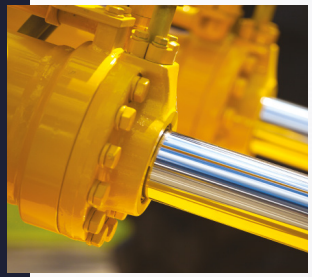


TANDELTA

Oil Condition Monitoring

Case Studies Summary

DIESEL GENERATOR SET

The Challenge

A series of diesel gensets were fitted with Oil Quality Sensors (OQSx) across a critical hospital site to monitor the quality of the fuel and oil to ensure the constant readiness, and to determine the most effective service schedules.

The Solution

The hospital has improved service planning and reduced maintenance costs, coupled with significant failure risk mitigation. This installation has also enabled the customer to demonstrate to public body stake holders, that their critical equipment back-up is always in optimal condition for immediate use in the event of a power cut.

Commercial Benefit

Annual maintenance costs on site have been reduced by £34K, and the site now has complete peace of mind that their system back-up is always in optimum condition.

MINING TRUCK

The Challenge

Maximising the productivity of large mobile plant equipment was a critical performance criteria for a large mining operation. Reducing downtime would have a major influence on increasing site profitability.

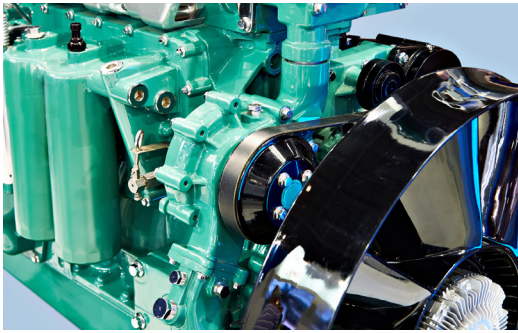
The Solution

OQSx sensors were fitted to the gearboxes, engines and hydraulic systems of a total of 36 large plant machines. OQDe display units were fitted in the cabs of each vehicle to provide immediate condition alerts, whilst data was also streamed back to the maintenance depot where it was used to predict optimal service schedules.

Commercial Benefit

The site has reduced their annual expenditure on oil consumption alone by over £295K thanks to Tan Delta Oil Condition Monitoring products.

NATURAL GAS ENGINE



The Challenge

OQSx sensors were installed on a fleet of 500kVA remote natural gas engines with the objective of reducing maintenance costs and catastrophic failure due to unexpected oil deterioration.

Solution

Two sensors were installed on each engine, both were connected directly to an OQDe display which provided an instant visual display of real-time data. The customer was able to easily monitor the oil quality whilst on their regular inspections, and provide monthly data log reports downloaded directly from the OQDe onto a PC and emailed to head office for further analysis.

Commercial Benefit

A reduction in oil consumption has led to financial savings of over £100K per annum and actual oil consumption has reduced by 43.2% by extending drain intervals.

HEAVY LIFT CRANES

The Challenge

Reliable equipment is critical to the efficiency of all ports. In particular the large cranes used to move cargo between the port and ships, which rely upon complex hydraulic systems.

The Solution

OQSx sensors were fitted to the hydraulic systems and onboard compressors. An operator panel gave a simple traffic light condition status, and live data was streamed back to the maintenance centre. Operators extended service intervals, and in the event of an unexpected issue, they were alerted prior to equipment damage.

Commercial Benefit

Actual oil consumption was reduced by 32.2% and annual operating costs across 36 site assets has been reduced by 86.5%, saving an annual cost of £247K.

MINING TRUCK

The Challenge

Contamination and moisture ingress are common problems on many gearboxes. Reliable operation of a critical geabox is paramount, but regular lab sampling can be expensive and time consuming.

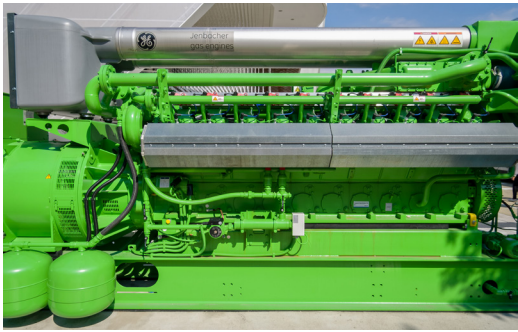
The Solution

OQSx sensors were fitted into the existing lubrication circuit (via an OEM port) on the critical gearboxes on a manufacturing site. The customer is now able to detect the early signs of hidden issues enabling remedial action to prevent accelerated wear and unexpected breakdowns, and can now accurately plan futire maintenance.

Commercial Benefit

The reduction in oil sampling and the associated man power required to take and analyse the samples saved the customer £1.5K per asset per year.

INDUSTRIAL ENGINE



The Challenge

Quality and cleanliness of biogas has a significant effect on the longevity and performance of lubricating oil. Delays in getting lab results means that operational efficiencies are missed due to the conservative nature of managing lab sampling.

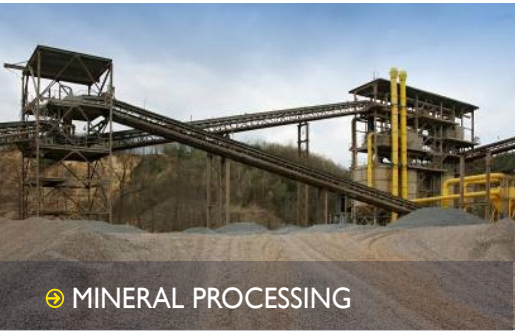
Solution

The OQDe kit was fitted to a Jenbacher 320 gas engines. They ran for 3 oil change cycles during which time traditional lab samples were also taken and the results from both were compared. The OQSx tracked the lab analysis perfectly. Real-time monitoring has led to increased oil change intervals and reduced need for sampling.

Commercial Benefit

Fitting this monitoring solution to a fleet of 35 engines has saved the customer over £125K per annum and also shown a reduction of 80% in catastrophic failures.

THE MOBILE OIL TESTER (MOT) KIT



MINERAL PROCESSING

The Solution

Using the MOT Kit, oil sampling is now conducted internally on a weekly basis, on all fixed assets and including the extensive mobile plant fleet, not just critical equipment.

Commercial Benefit

The change in vehicle maintenance policy has saved in excess of £1,500 annually.

MOBILE PLANT

The Solution

With 75% failures due to oil contamination, the MOT Kit has driven a new maintenance plan, allowing the client to take as many oil samples as required to a quality driven schedule.

Commercial Benefit

Over £3,000 saved annually with a more flexible approach to asset maintenance.

QUARRYING & EXCAVATION

The Solution

Previous failure was partly due to the time taken to receive lab results, the MOT Kit provides real-time data readings. The client has extended sampling to all assets without additional expense.

Commercial Benefit

Future catastrophic failure can be prevented, which would have in this case, saved over £20,000

CUSTOMER SUPPORT

Tan Delta work with customers to design, deliver and support, easy to install solutions, delivering significant cost reductions and increasing productivity.

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