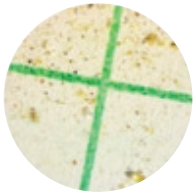
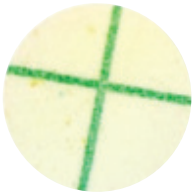
Case Study: Power Generation

GENERATING STATION INCREASES RELIABILITY BY CONSOLIDATING TO CHEVRON ISOCLEAN®

> **“Chevron’s Best in Class analysis provided a detailed plan to help us increase reliability and profitability.”**
>
> *Reliability Engineer*
> *Electric Generating Facility*



Typical Hydraulic Fluid



ISOCLEAN Certified Hydraulic Fluid

The Challenge

A California based electric generation company with combined cycle, hydro and peaking units was utilizing OEM lubricants in its GE 7FA, D11 steam turbines and LMS 2500 gas fired turbines. Facility management historically devoted minimal attention to plant reliability, but when they discovered an increase in costly and unscheduled downtime caused by gearbox failures and hydraulic issues, they hired a reliability engineer. The engineer asked a Chevron ISOCLEAN® Certified Lubricant Marketer to investigate and share improvement ideas.

Investigation and Findings

The Chevron Industrial Solutions Team performed a Best In Class Site Assessment at the facility. The expert team evaluated the type and number of lubricants on site, filtration systems effectiveness and current fluid handling procedures. Lubricant samples were taken and compared to their OEM recommended ISO 4406 cleanliness specifications; results showed that few of the plant’s systems were achieving them. In some cases, lubricants were 16 times dirtier than what the OEM recommended. A report of the findings was compiled and improvement areas were identified to help the plant save time and money and improve reliability.

Solution

The engineer and facility management agreed with the report findings. To improve and streamline their lubrication program, they converted all products in the plant to Chevron. This included starting with ISOCLEAN Certified Turbine and Hydraulic oils cleaned to 16/14/11 and implementing a plant-wide cleanliness spec of 17/15/12 for all other lubricants. Additionally, they consolidated from eleven lubricants down to six and from fourteen greases down to three.

Next, the team improved their on-site fluid handling procedures by identifying lubricant fill points and tagging them with the Chevron SmartFill™ Labels and featuring a Lube Room chart in all storage areas. Color-coded top off containers were implemented to ensure air management and identification for fluid top off procedures was easy and minimized the risk of self-contamination. They also ramped up their lubricant sampling program on all critical equipment with defined parameters so results get to all the right parties for appropriate long-term performance management.

Results

Plant management has seen a remarkable increase in fluid cleanliness and expects to realize significant cost reductions due to equipment lasting longer. They have seen an increase in uptime by reducing unplanned downtime and will re-evaluate component life targets after one year of using ISOCLEAN Certified Lubricants and the new handling practices.

Contact us to learn more about Chevron ISOCLEAN® Certified Lubricants:
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ISOCLEAN® CERTIFIED LUBRICANTS

CLEAN. REDEFINED.