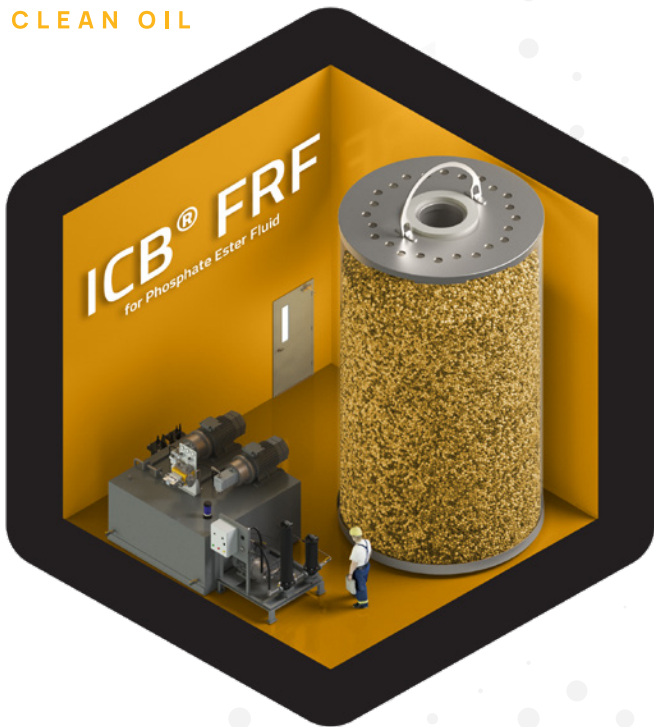


ICB® FRF CASE STUDY



BACKGROUND

Application: Power Generation

Location: CA, USA

Site: 602 MW Gas-Fired Combined Cycle
Plant with a Siemens KN Steam Turbine

PROBLEM

The Plant Operator experienced frequent valve failures in their Steam Turbine's Electro-hydraulic Control (EHC) system as the result of control oil breakdown/varnishing. To ensure reliable operation, the end user needed to replace the costly phosphate ester-based fire-resistant fluid (FRF) that their EHC system employed at least once per year.

SOLUTION

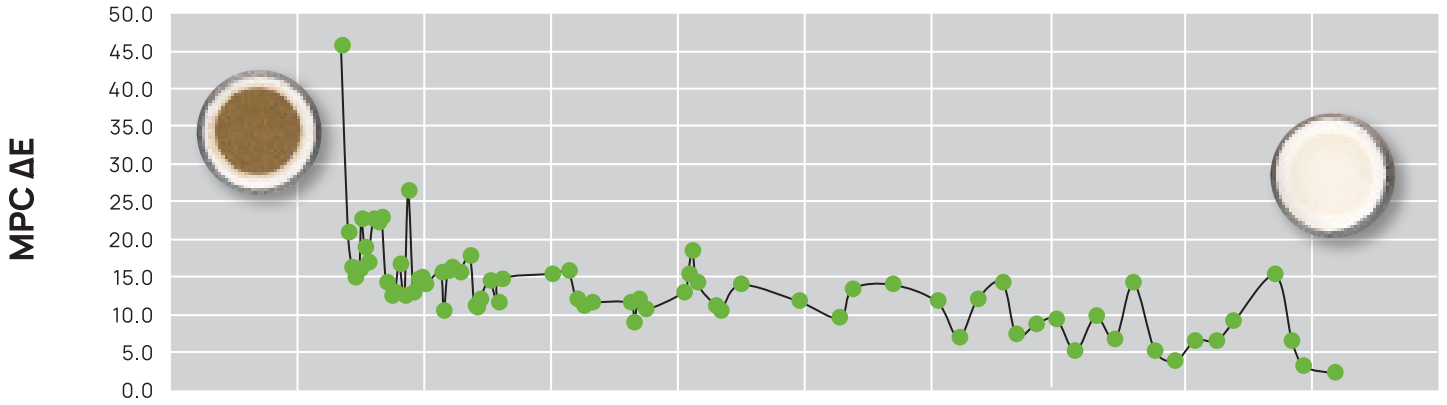
ICB® FRF filters were installed in the Turbine OEM's FRF filtration system.

RESULTS

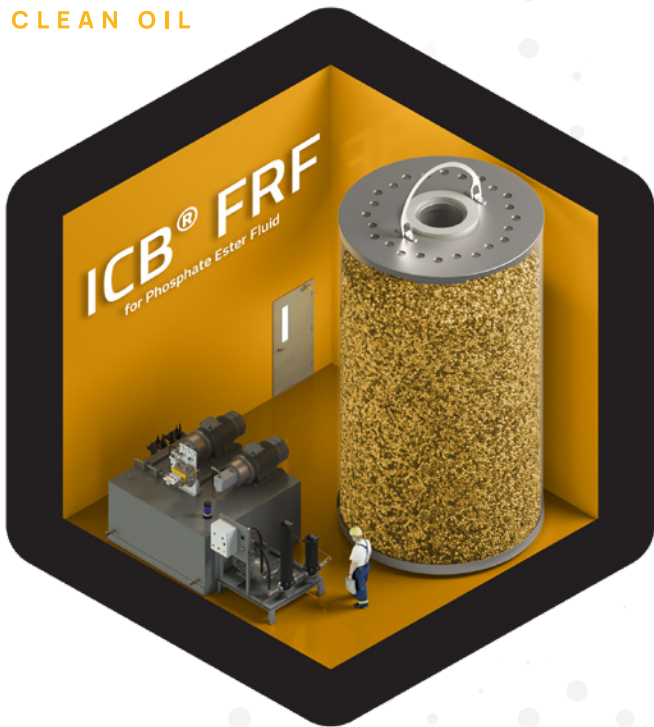
The installed ICB FRF filters effectively removed varnish and its soluble precursors from the site's FRF, improving its MPC varnish potential by 95% and maintaining its acid number and resistivity within the application's required ranges. Since the filters were installed, valve failures have been eliminated and the costly FRF has not needed to be replaced for 5 years (and counting).



POWER GENERATION



ICB® FRF CASE STUDY



BACKGROUND

Application: Power Generation

Location: TN, USA

Site: 525 MW Gas-Fired Combined
Cycle Plant with a GE D11 Steam Turbine

PROBLEM

Following an extended outage, the Plant Operator discovered that the phosphate ester-based fire-resistant fluid (FRF) used in the Steam Turbine's control system had become extremely acidic.

With an acid number that was 6x higher than the application's maximum in-service limit, the end user expected that they would need to replace the entire reservoir of costly synthetic fluid.

SOLUTION

An SVR® Lubricant Conditioning skid employing ICB® FRF filters was installed on the Steam Turbine's control system.

RESULTS

By regularly changing their ICB FRF filters at monthly intervals, the Power Plant operator was able to remove acids that were present, restoring their FRF's acid number to acceptable levels. As an additional benefit of ICB conditioning, the FRF's MPC varnish potential and resistivity were also brought back to within specification. Once the FRF was restored, continued oil conditioning prevented varnish and acids from accumulating again. Oil condition-related failures are a thing of the past at this site as the result of SVR/ICB FRF and the Plant enjoyed significant savings as the result of no longer needing to replace their costly, synthetic FRF.



POWER GENERATION

