

ICB® RO Case Study



BACKGROUND

Application: Pipeline Compressor Station

Location: AB, Canada

Site: Rolls Royce/Cooper Power Turbine

PROBLEM

A Compressor Station's Power Turbine was found to be running hot. Oil analysis revealed that the turbine's oil had a high MPC varnish potential. The presence of varnish and other oil breakdown products was identified as a contributor to the system's poor performance.

SOLUTION

An SVR® Lubricant Conditioning skid employing ICB® RO filters was installed on the station's power turbine.

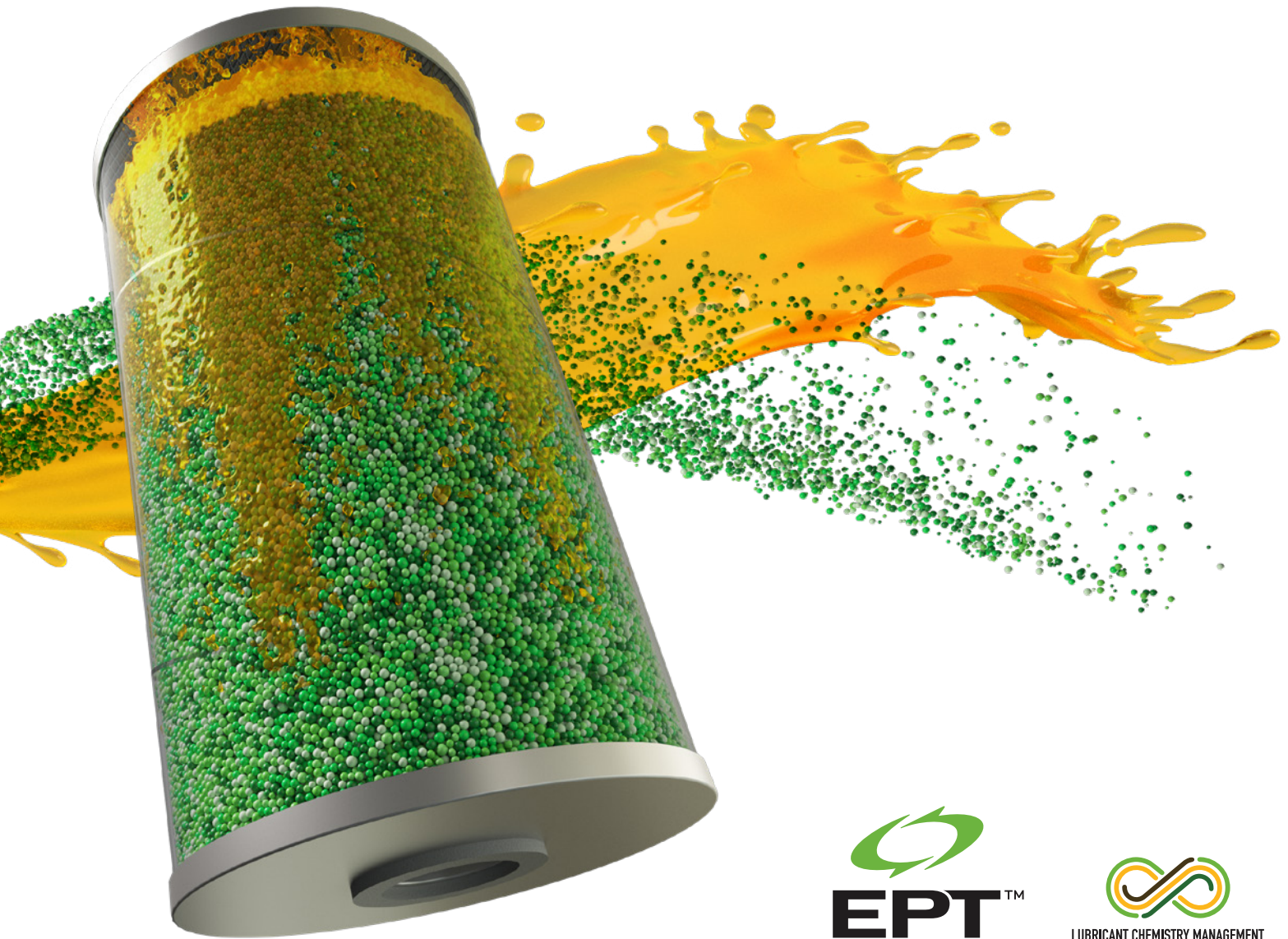
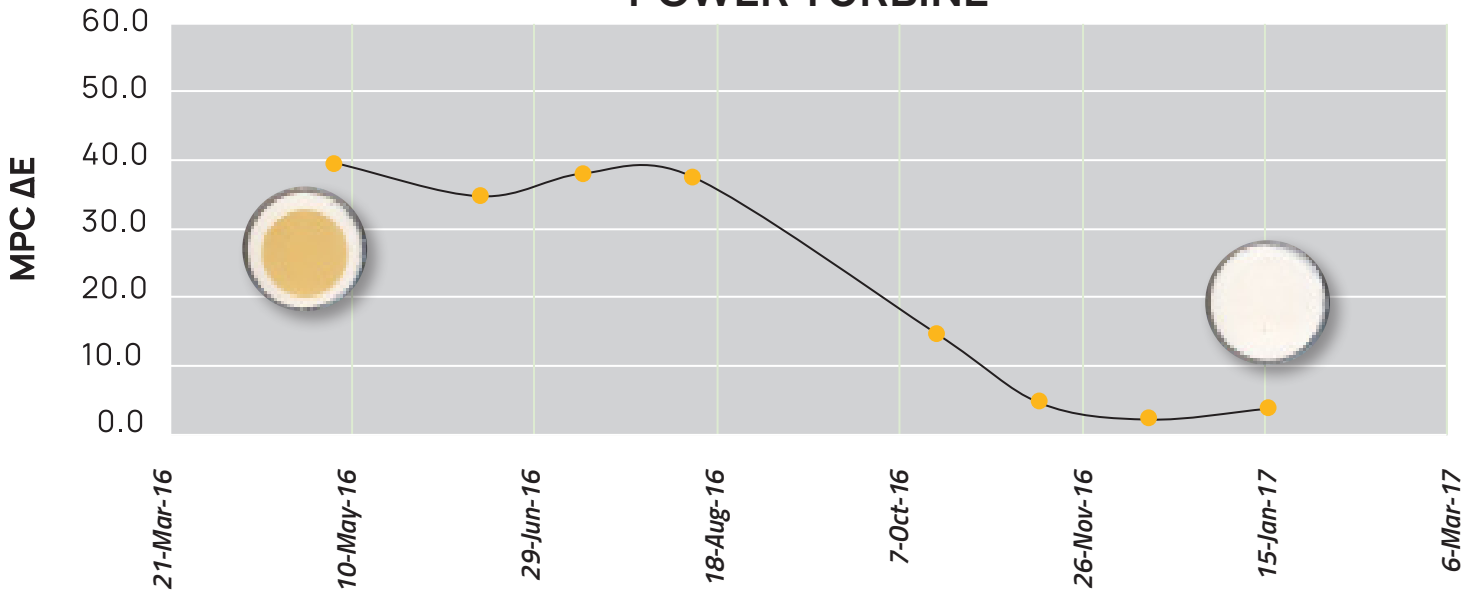
RESULTS

The installed SVR Skid complete with ICB® RO filters effectively removed varnish and its soluble precursors from the site's power turbine, improving its MPC varnish potential by 94%. Once the varnish was removed, continued oil conditioning prevented varnish from accumulating again.

Since the SVR complete with ICB RO filters was installed, the Power Turbine has operated reliably within an acceptable temperature range.



POWER TURBINE



ICB[®] RO Case Study



BACKGROUND

Application: Compressor Driver (Gas Plant)

Location: AB, Canada

Site: 11 MW Solar Mars Gas Turbine

PROBLEM

Based on varnish-related failures and issues at other sites, gas plant operators elected to install an SVR[®] Lubricant Conditioning skid with ICB[®] RO filters during their Compressor Driver's commissioning process.

SOLUTION

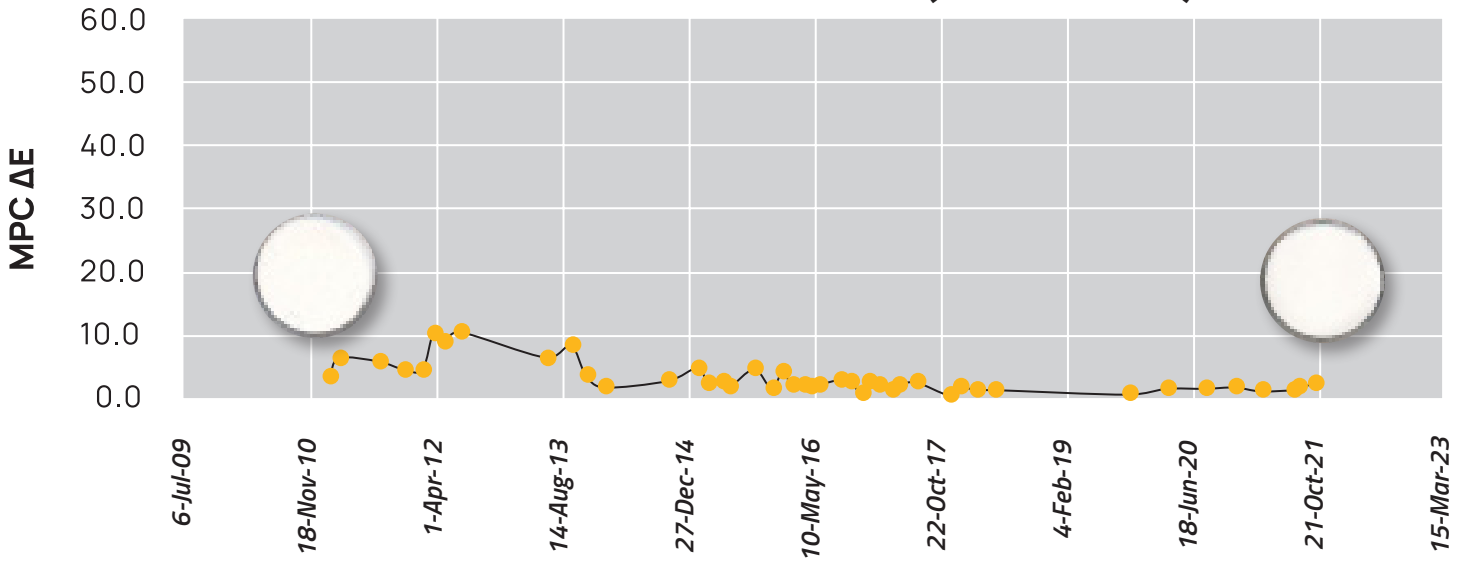
An SVR Lubricant Conditioning skid employing ICB RO filters was installed from the Compressor Driver's first day of operation.

RESULTS

For more than a decade of baseload operation, the Plant's SVR/ICB RO filters have effectively removed varnish and its soluble precursors. These oil breakdown products form as a normal function of service. Typically, they accumulate until they cause high MPC varnish potentials and reliability issues. By conditioning their oil with SVR/ICB RO Filters, this Gas Plant has been able to maintain a near-zero MPC varnish potential and their Compressor Driver has not experienced a single oil-related failure or issue during its lifetime.



COMPRESSOR DRIVER (GAS PLANT)



EPTTM
CLEAN OIL

LUBRICANT CHEMISTRY MANAGEMENT

ICB® RO Case Study



BACKGROUND

Application: Power Generation

Location: CA, USA

Site: 560 MW Combined Cycle Power Plant
with 2
Siemens SGT6-5000F Combustion Turbines
and 2 Siemens SST-800 Steam Turbines

PROBLEM

A coalescer was struggling to keep up with the amount of water making its way into one of the Plant's steam turbine lube oil systems. Oil analysis revealed that the lubricant's water separation abilities (demulsibility) had degraded significantly over time. As a result, the contaminant moisture in this system was present in an emulsified form which cannot be readily separated from the oil, significantly increasing the turbine's risk of failure.

SOLUTION

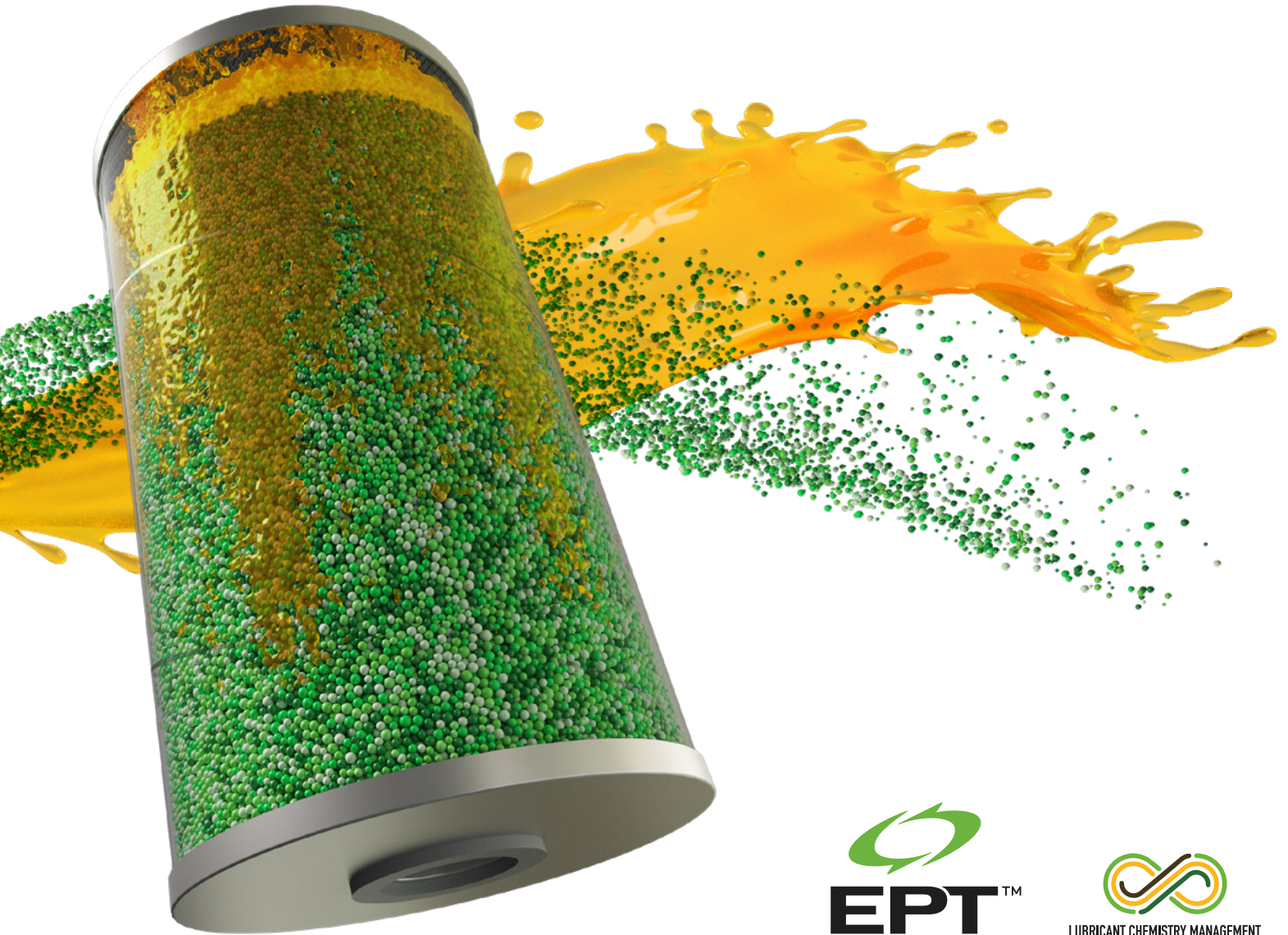
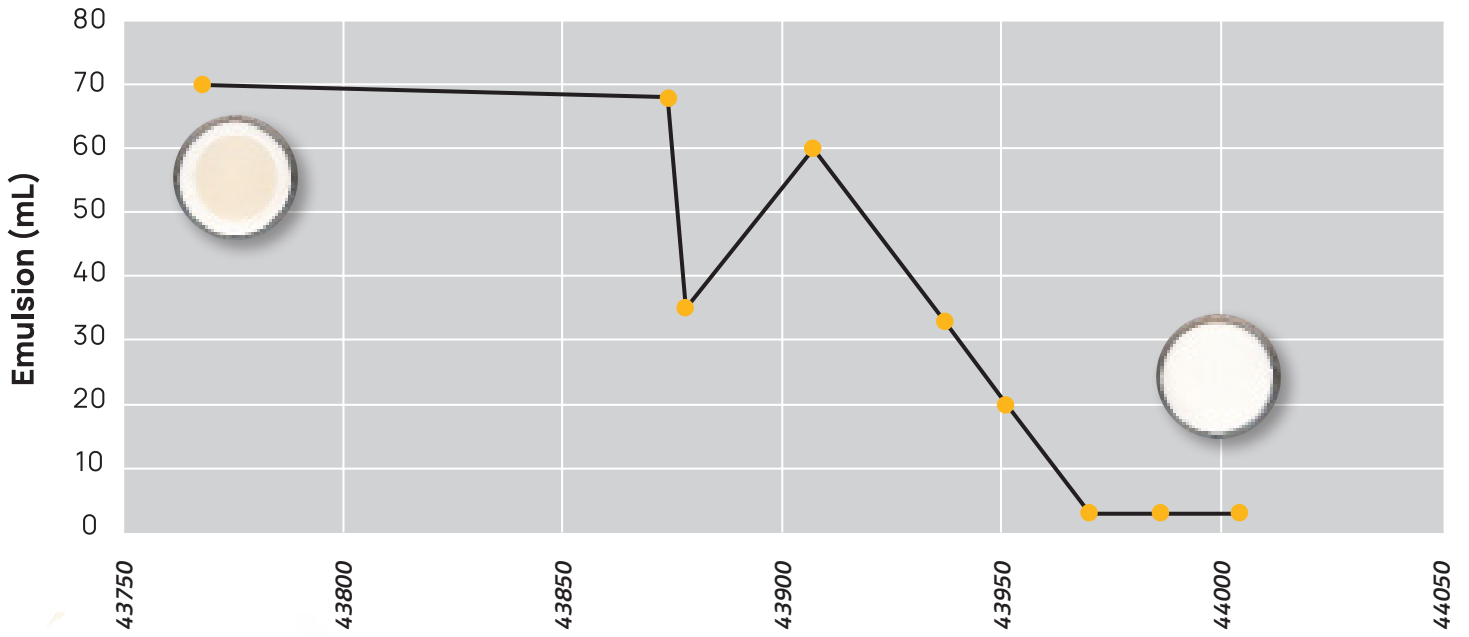
An SVR® Lubricant Conditioning skid employing ICB® RO filters was installed on the Steam Turbine whose oil separated poorly from water.

RESULTS

The installed SVR Skid/ICB RO filters effectively removed varnish and other soluble contaminants from the steam turbine oil. These breakdown products increase a fluid's tendency to form harmful emulsions. With them gone, the amount of emulsion that the oil produced fell by 95%, allowing the unit's coalescer to do its job. Free from water, the Plant's steam turbine has operated reliably ever since.



DEMULSIBILITY




EPTTM
CLEAN OIL


LUBRICANT CHEMISTRY MANAGEMENT
