

Cleaning Systems



PROCESS COMPRESSOR CLEANING SYSTEMS FOR THE OIL & GAS INDUSTRY

The performance of Natural Gas process compressors can be radically reduced by fouling carried in the medium being processed.

These compressors are the most vital part of the chain of production so if they lose performance through fouling production drops by the same rate of performance loss.



What is the scale of associated losses?

Onset of performance loss may be rapid commencing soon after start-up – 10% in 1st year.

- 15 – 30% shortfalls are common
- 10% efficiency loss is translated into a 10% increase power in order to maintain production.
- Power constraints results in a drop in production – revenue and profits.
- A field producing \$500,000 a day with a 15% loss matters!

What are the foulant types?

- Saline deposits, concentrated sea salt
- Carbon dioxide, carbonate salts
- Hydrogen Sulphide, sulphide salts
- Metal, iron salts
- Hydrocarbons
- Sand, silica (desert based fields)
- Glycol, from antifreeze process
- Oil & grease from the compressor lube system

The solution to process compressor performance recovery

There are two choices to deal with this problem.

- Take the unit out of service, remove the casings and manually clean the compressors. This method is a very time consuming and costly solution.
- Or install a Rochem on-line/off-line system that allows the compressors to be cleaned in situ in a matter of minutes either on-line or in off-line re-circ mode.

What equipment is required?

Rochem HP nozzle system installed in the compressor suction pipeline.

Rochem HP self contained delivery system, these operate at pressures upto 100 barg.

What is the cleaning process?

Fill the wash delivery tank & connect to the Rochem HP nozzle via the outlet hose.

Inject the wash solution at a flow rate of between 5-20 lpm, dependant on the compressor size & flow, for 10 minutes dependant on the compressor size & flow.

Do I need to use chemicals for cleaning?

Water alone cannot remove all of the foulant types.

FYREWASH Chemicals are a range of specialist cleaning chemicals with outstanding performance designed for all types of fouling & meeting current OEM & environmental standards world-wide. They are mixed with treated water in a ratio of 4:1. Practice has shown that FYREWASH F1 & F3 are best suited to the cleaning of process compressors, offering the best cleaning solution.

Will the cleaning chemical damage compressor seals?

A material compatibility must be performed prior to use of the FYREWASH cleaning chemicals but generally the seal materials used are not affected by the chemicals.

What are the process connection size and form?

These can be manufactured to suit any application but standard nozzles use NPT or 1-1/2" ANSI/DIN flanges connections rated to suit the process application.





ROCHEM
TECHNICAL SERVICES
Established in 1978

ROCHEM Product Range

BP RANGE

Batch pump system for on-line/off-line compressor cleaning of gas turbine engines

For engines in the range of 0.5 – 250MW output

OW1 & OW2

Observation Windows for all gas turbine engines

VIP RANGE

For on-line/on-crank compressor cleaning of engines in the range of 0.5 – 250MW output

ED RANGE

Pump eductor system for on-line/off-line compressor cleaning of gas turbine engines

For engines in the range of 0.5 – 250MW output

NOZZLES

Gas turbine compressor cleaning nozzles

Dual and Triple Side Spray Nozzle for all gas turbine engines

TRIPLE STAGE FILTERS (TSF)

Filters for on-line & off-line compressor cleaning system nozzles

For Rochem nozzle systems (and many other in-line filtration applications)

PC RANGE

Process compressor cleaning systems

FYREWASH® F1

A high purity solvent & surfactant formulation for heavy duty on & off-line compressor cleaning

FYREWASH® F2

Highly biodegradable natural solvent for on-line and off-line compressor cleaning

FYREWASH® F3

Highly biodegradable water-based detergent for on-line and off-line cleaning of compressors

FYREWASH® F3RR

Developed specially to meet the needs of and clean Rolls Royce gas turbine compressors.

FYREWASH® SB

The original heavy duty on-line and off-line cleaner for gas turbine compressors

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