

D-W GENERATOR



ROCHEM
TECHNICAL SERVICES
Established in 1978

ENSURE THE HIGHEST WATER QUALITY FOR ALL YOUR COMPRESSOR WASHING REQUIREMENTS WITH THE ROCHEM D-W GENERATOR

Pure water is essential for all forms of compressor washing

No matter where gas turbines are used; in ships, aircraft or industry; they need to be kept clean and efficient and the ready availability of high quality demineralised water is essential for compressor washing.



The D-W generator is another important product from Rochem, the world leader in gas turbine and process compressor cleaning systems & chemicals

D-W GENERATOR

HIGH QUALITY WATER IS VITAL FOR SAFE AND EFFECTIVE COMPRESSOR CLEANING

All gas turbine and process compressor OEM's insist on the use of high quality water for both on and off-line compressor washing. Typically OEM's require water quality with a Total Dissolved Solids (TDS) content of not more than 5 ppm TDS.

The Rochem D-W Generator meets and exceeds all requirements.

POTABLE WATER IS NOT GOOD ENOUGH FOR COMPRESSOR WASHING AND SHOULD NEVER BE USED UNDER ANY CIRCUMSTANCES

The use of potable water – which still contains relatively high levels of dissolved solids – for compressor washing can over time result in serious hot end corrosion problems in gas turbines and process compressors.

Tap water or potable water is typically in the range of 300 to 500 ppm TDS thus contains up to ca 100 times the amount of dissolved solids that are allowed by OEM's for compressor washing.

DEMINERALISED WATER IS IMPORTANT FOR OFF-LINE, CRANK-SOAK WASHING

Although off-line chemical washing and post rinsing is carried out when the gas turbine is unfired and is being turned at cranking speed by its starting system it is still very important to use good quality, low TDS water for chemical mixing and post-rinsing. The reason for this is that some of the chemical solution and post rinse water can accumulate and remain trapped in various parts and pockets of the combustion system and turbine even after the draining process so that when the engine is fired up the potentially corrosive dissolved solids in the wash and rinse water are left behind as the water evaporates to react with the heat to cause accelerated and so-called "hot-end corrosion".

HIGH QUALITY DEMINERALIZED WATER IS ABSOLUTELY ESSENTIAL FOR ON-LINE, FIRED WASHING.

Compressor corrosion like this can result from the use of poor quality water for on-line and off-line washing



Hot end corrosion can lead to this kind of costly failure. And the use of poor quality wash or rise water which contains relatively high levels of corrosives such as sodium, vanadium etc. can contribute significantly to this common yet avoidable problem.



The compressors of aircraft turbofan engines can also benefit from regular ground washing and save operators considerable amounts in even small amount of fuel burn- and good quality water is essential for this procedure.



BEFORE



These are photos of the same GT before (above) and after (below) a good wash regime was adopted. This included regular chemical washing for on-line with off-line washing also carried out on an opportunity basis. Both the chemicals and chemical injection system are Rochem supply.



AFTER

ON-LINE CHEMICAL WASHING IS A MORE EFFECTIVE, SAFER PROCEDURE THAN PLAIN WATER WASHING

At the heart of the Rochem D-W Generator is its unique disc-membrane module with advanced hydrodynamic flow characteristics which prevent scaling of the membrane surfaces and assure long and reliable life without need of any expensive consumable chemicals.



Advanced, patented nozzle technology is a major feature of Rochem compressor wash systems.



Rochem offers a full range of on-line and off-line compressor cleaning chemicals.

The benefits of using plain demineralised water only for fired washing are very limited and can even cause performance loss because plain water has no ability to chemically break down and remove non-soluble fouling such as oil and unburned hydrocarbons which are, in the main, the root cause of most compressor fouling.

Plain water washing can often result in the "carry through" of deposits from the front stages of the compressor to the hot, mid-stages where the water element is boiled off and the contamination – including dissolved salts – which it is carrying, is then re-deposited to cause hot, sticky or burned on fouling which is then very difficult to remove

CHEMICAL PURITY IS JUST AS IMPORTANT FOR COMPRESSOR WASHING AS WATER QUALITY

A perfect example of what can happen when only demineralised water is used regularly for on-line, fired washing. The oily/carbonaceous deposit has been washed through from the front to the mid-stages of the compressor where the water has boiled off and the removed fouling has simply been re-deposited.

By simply adding a small amount good quality compressor cleaning chemical to the wash water this problem could have been avoided.

Properly designed high temperature compressor wash chemicals are capable of micro encapsulation of the removed fouling to carry it safely to the combustion system where it is burned

Unlike old-fashioned ion-exchange equipment the Rochem D-W Generator uses low pressure membrane separation technology that does not require to be regularly replenished with expensive ion-exchange resins.

The D-W Generator is compact, lightweight and portable and will produce up to 750 litres/day of high quality demineralised water from any portable water source at the touch of a button



Become totally independent of costly outside sources of demineralised water; the Rochem D-W Generator is now available worldwide from the Rochem Technical Services Group R.T.S.



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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

ET SYSTEM

A highly cost effective, environmentally friendly solution to the management of contaminated chemical waste from off-line compressor washing

D-W GENERATOR

Supplies high quality demineralised water for compressor washing

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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ISO9001:2008
Cert. No. AQA665377



ISO14001:2004
Cert. No. RQA665378



Certificate No: AJA08/12780

ISO9001:2008 and ISO14001:2004 Lloyd's Accreditation attained by ROMACO – Manufacturers of Fyrewash Chemicals

ISO9001:2008 AJA Accreditation attained by RTS-Europe – Manufacturers of equipment