

# **PENETONE 19**

4410

Gas Turbine Compressor Cleaner



## **DESCRIPTION**

**PENETONE 19** is an aqueous solution blend of high purity organic solvents and biodegradable surfactants designed for on and off line cleaning of gas turbine compressors.

**PENETONE 19** will remove oils, greases, soot, salts, atmospheric contaminants and other contaminants found on gas turbine compressors.

#### **APPLICATION**



**PENETONE 19** is recommended for use in the off-line and on-line washing of gas turbine compressor. It is effective in removing light coloured compressor deposits (which are usually salt) and dark coloured deposits (usually oil or industrial pollutants).

The best way to guard a Gas Turbine Compressor Unit against sulphidation attack is to wash the compressor and turbine frequently with **PENETONE 19**. Use **PENETONE 19** on:

- All interior and exterior parts of the gas turbine
- Compressor air foils
- Turbine blades
- Turbine internal parts
- Free turbine exterior surfaces

**PENETONE 19** is highly concentrated and can be diluted with up to nine parts water depending on soil conditions, to remove:

- Salts
- Light soils
- Atmospheric soils
- Sodium compounds
- Synthetic hydraulic fluids
- Cooling oils



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# **PRODUCT BENEFITS**

- Compatible with turbine materials
- Guards against sulphidation attack
- Keeps compressor air foils free from contamination
- High purity & contains corrosion inhibitor
- Reduces corrosion of compressor blades, stators and discs
- Excellent cleaning properties
- Maintains compressor efficiency
- Non Flammable

- Neutral pH
- Eliminates the risk of hot corrosion
- Economical
- Biodegradable
- Water soluble
- Easier disposal
- Easy to Use

#### PHYSICAL PROPERTIES

. Clear liquid
. Pale yellow
. Mild
. 1.000
. 7.85 ± 0.35
. < 8
. Non-flammable
. > 60°C
. < 10 ppm
. < 5 ppm
. < 10 ppm
. < 10 ppm
. < 0.1 ppm
. < 0.1 ppm
. < 10 ppm
. < 0.01 %

# **APPROVALS / CONFORMANCES**

- Rolls Royce (Canada)
- Solar Turbines Incorporated: ES-9-62
- Westinghouse Electric Corporation
- European Gas Turbines
- Siemens
- ASTM D 1976
- ASTM D 512
- ASTM D 1888
- ASTM D 482
- ASTM D 93





## **DIRECTIONS FOR USE**

Two year in original packaging in a cool and dry place.

Typical Use Directions (follow turbine manufacturer's instructions)

**Automated Spray Ring Systems: PENETONE 19** is normally siphoned, mixed with water, and spray applied to the compressor while being motored at crank speed. Allow a three to five minute dwell. Rinse thoroughly until water appears clean.

**Manual System:** Mix **PENETONE 19** and water at a 9:1 ratio. Spray apply through inlet while turning motor at crank speed. Thoroughly wet all surfaces. Allow three to five minutes dwell. Rinse.

## **STORAGE & SAFETY**

If swallowed, DO NOT induce vomiting. Give milk or water and seek medical attention. Avoid contact with the skin and eyes; flush affected areas with copious amount of water for at least 15 minutes. Seek medical advice if effects persist.

For further information please refer to the Material Safety Data Sheet.

# **PACKAGING**

Ref: A-4410-O2	Pail 25L
Ref: A-4410-U2	Drum 205L

#### **WARRANTY**

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countries. ORAPI is certified ISO 9001 and 14001.