

## The right inlet filter makes all the difference — clearcurrent PRO

### Background Information:

The customer has 2 x 6B gas turbines installed to power the processing utilities at their refinery located on the European Atlantic coast. In 2011, they pursued advice from our industry experts on the effectiveness of their existing filters, and after consultation, chose to install clearcurrent PRO cartridge filters on both turbines.

This is a coastal site located within a few miles of the ocean, and therefore airborne salts are particularly prevalent. Salt migration through to the turbine can cause compressor fouling and eventual corrosion of the compressor blades. In addition, water and moisture is of concern for any filters containing cellulose – which swells in moisture-rich environments, such as this one.

### Result:

Over a period of 18 months, the enhanced properties of the clearcurrent PRO cartridges gave the customer reduced degradation across the compressor section of the gas turbine. The reduction in degradation contributed to a greater generated power output (MW), at predictable and reliable rates, while also having a direct effect in lowering heat rate (BTU/kWhr) significantly from when the previous filters were installed.

### Customer Challenge:

The customer was very pleased with the results, and wanted to further test whether an inlet filter could have such a dramatic effect on the performance and reliability of a turbine.

To prove the ability of clearcurrent PRO cartridge filters to provide higher output at lower heat rates, while maintaining comparable levels of differential pressure, the customer switched out filters on one turbine with some competitor product they had in stock to see if there was a noticeable difference. The CLARCOR Industrial Air clearcurrent PRO filters remained on the second unit.

### New Result:

In just three months, there was a significant downgrade in performance of the first turbine (Figure 1). By switching back to their old filters, the customer has seen quickly increasing heat rates and decreasing levels of output.

By contrast, the performance levels when clearcurrent PRO was installed (Gray Box Figure 1), remained steady the entire duration the turbine was in operation.

### Solution:

An inlet filter can make a dramatic difference in the performance of your turbine. The customer re-installed clearcurrent PRO filters on the first turbine, while maintaining clearcurrent PRO filters on the second turbine, which continue to show excellent performance benefits. The customer can continue to count on the clearcurrent PRO filters protecting the compressor while also improving performance. These output levels have remained steady, which reduces the risk on the customer.

For more information, contact your clearcurrent representative at [CLARCOR Industrial Air](#):

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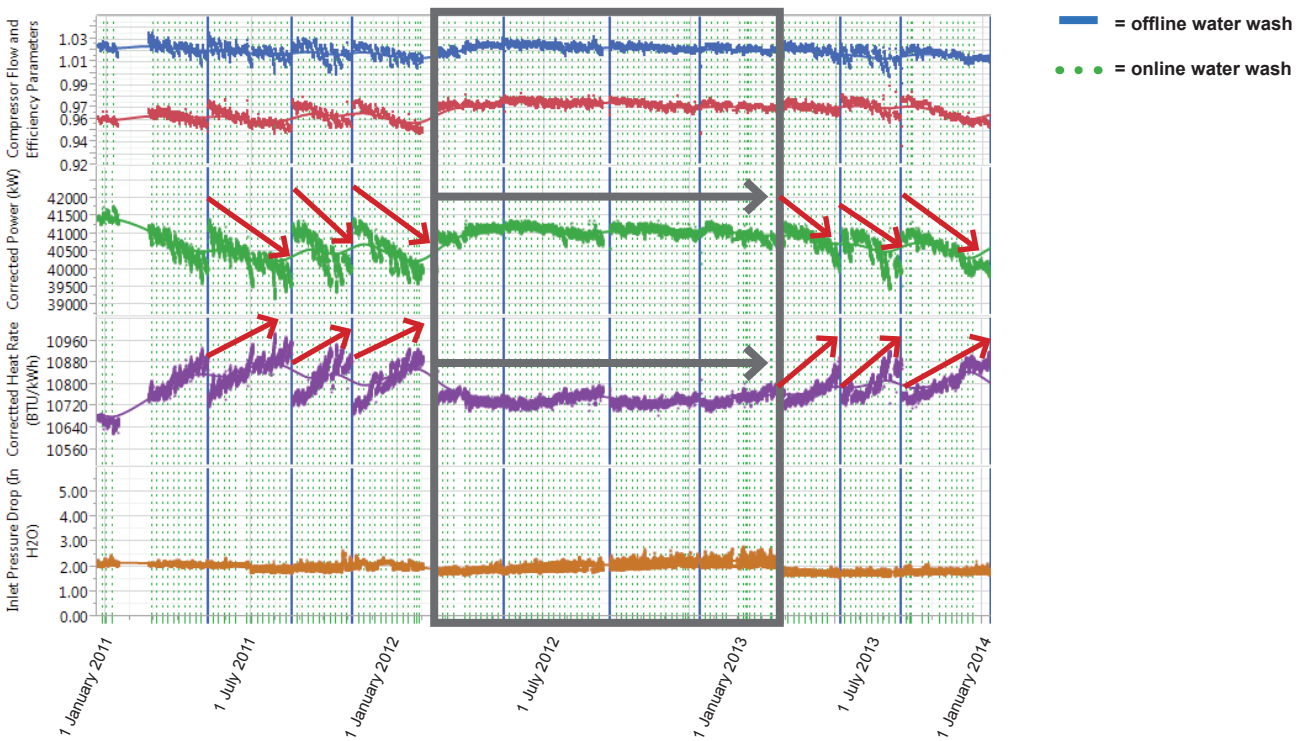
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Industrial Air

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### About:

The clearcurrent PRO cartridge filters are part of the portfolio from CLARCOR Industrial Air, which specializes in providing inlet filtration solutions for gas turbine operators. Compressor health starts with the inlet system, and clearcurrent PRO cartridge technology from CLARCOR Industrial Air promotes compressor health and turbine performance through a variety of proprietary filtration-related factors. To learn more about CLARCOR Industrial Air innovative gas turbine filter solutions, visit <http://www.clarcorindustrialair.com>.



**Gray box in Figure 1** Results of experiment. Inlet filters do make a dramatic difference. By changing back to their old filters, the customer saw output decline and heat rate increase immediately proving clearcurrent PRO’s ability to provide predictable, reliable turbine performance. Steady performance results produced by the clearcurrent PRO are highlighted in the gray box.

## Predictable, Reliable Performance produced by clearcurrent PRO cartridge filters

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