

Unique Technology

FOCUSES SQUARELY ON

More Efficiency, Less Pollution

IN 2008, DRESSER-RAND ACQUIRED the assets of Enginuity LLC, a private, U.S.-based company specializing in reducing exhaust emissions through combustion and catalytic-based technologies. Enginuity focused on reciprocating gas engines used for natural gas transmission in North America. Today, Dresser-Rand is offering the benefits of Enginuity's unique technology – and its unique mission – to clients *worldwide* through its controls, automation equipment and aftermarket services.

These products and services play an important role in today's global economy by offering technology solutions that address the global challenges of carbon issues and climate change. They do this by enabling natural gas-fueled engines to run smoother and more efficiently on less fuel and with fewer emissions. In fact, their potential to provide outstanding value to clients and an improved environment was a significant factor in Dresser-Rand's decision to acquire Enginuity.

THE ENGINUITY LEGACY

Enginuity built its reputation in the North American natural gas transmission market by offering controls and automation equipment that bring engines into compliance with emissions standards. The company's mission, however, went far beyond the minimum and was directed to creating harmony between energy use and the environment. In fact, Enginuity's underlying business philosophy was founded on the premise that addressing the energy market from an environmental perspective would provide an extra measure of value in an uncertain business climate.

D-R Enginuity employees responsible for product development keep a close watch on current and projected emission requirements to help clients meet increasingly stringent regulations.

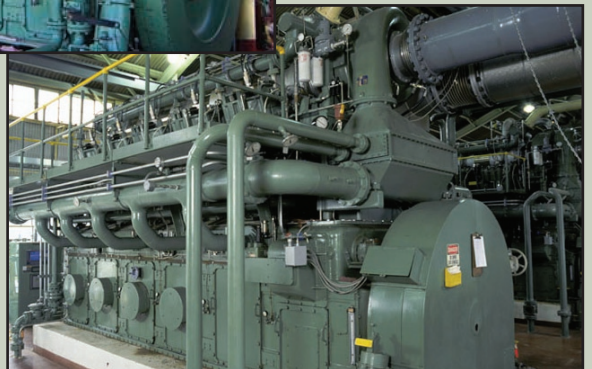
“Upgrading equipment to meet new emission levels requires more than traditional emission-

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Before: Gas engine rated at 2,400 hp and 250 rpm (unit characterized as having high emissions of NOx and relatively poor fuel efficiency).

After: Same engine retrofitted with high-flow turbocharger, after-cooling, HPFI, iBalance, high-energy ignition system, and new PLC-based controls using Dresser-Rand Enginuity combustion control algorithm (unit now operates at less than 3 g/bhp hr NOx with fuel consumption of 6,800 btu / bhp hr).



reduction techniques,” Chad Fletcher, general manager, Dresser-Rand Enginuity products, tells clients. “Increasing efficiency has a positive impact on the total mass of emissions produced. The less energy or fuel required, the lower the total mass of emissions. Further, our solutions address total unit efficiency, including the compressor, so that throughput is increased for the same horsepower. The result is lower emissions with less fuel consumed and increased throughput. That’s a win for the environment and the business.”

THE MISSION CONTINUES

Fletcher explains that Enginuity solutions focus squarely on reducing pollutants such as nitrogen oxide (NOx), carbon monoxide (CO), hydrocarbons, hazardous air pollutants, and greenhouse gases that include hydrocarbons [primarily methane (CH₄)] and carbon dioxide (CO₂). In fact, their solutions installed to-date reduce NOx emissions by about 120,000 tons a year and greenhouse gas emissions by more than 100,000 tons a year.

He points out that something not well known “is that methane is 23 times more potent as a greenhouse gas than CO₂. Our solutions reduce methane levels by as much, if not more than CO₂, and with the factor of 23 methane reduction is actually the biggest contributor to the solution.”

Fletcher sees increased efficiency and lower emissions as essential to the energy market.

He compares this improved automation to the difference between a 30-year-old car’s computer components and a modern car’s sophisticated computer system. Just as upgrades and

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improvements in technology during the past three decades produced safer, faster, easier to control, and more fuel-efficient automobiles – so, too, is Dresser-Rand doing to the automation equipment and other technologies, like turbochargers and fuel injection systems, on aging natural gas-fueled engines in the energy industry.

IT’S ECONOMICAL TO UPGRADE

With the large number of “green energy” options on the market, upgrading equipment isn’t grabbing many headlines. But for many Dresser-Rand clients, switching an entire facility to a new, sometimes unproven, energy source, or undergoing an upgrade that doesn’t comply with emission levels, simply isn’t an option. Revamping existing units is much more viable because the upgraded equipment fits the same space and uses an existing power source for the fraction of the price of a full unit replacement.

Although, occasionally, a unit must be retired, upgrading it is often possible – a cost-effective process that reduces downtime, increases reliability and allows the unit to run more efficiently. The savings for one unit are often

impressive, but Dresser-Rand’s focus on upgrading a client’s entire compression infrastructure not only reduces emissions across the board, but also gives the client peace of mind.

There is little doubt that the mission of bringing energy and the environment into harmony is not only possible, it’s already happening. And with the acquisition of Enginuity, Dresser-Rand is now even better prepared to improve equipment efficiency and reduce emissions, one client at a time. ■