John Cockerill

Press Release

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John Cockerill Achieves Certification for H_2-Ready Heat Recovery Steam Generators

The shift towards hydrogen is key for achieving climate neutrality and supporting the energy transition in power generation, with the target of net zero emissions by 2050, as outlined in the EU Green Deal. In this context, John Cockerill Energy is proud to announce the award of a concept certificate from TÜV-SÜD for the H_2-readiness of its heat recovery steam generators (HRSGs).

The shift towards hydrogen is a key strategy for achieving climate neutrality and supporting the energy transition for combined cycle power plants, aiming for a net zero emission target by 2050, as outlined in the EU Green Deal.
The EU already integrates hydrogen in its energy mix and many countries will therefore inevitably phase out fossil fuels. In this perspective, hydrogen, as a highly reliable potential fuel for combined cycle power plants, and offering zero carbon emissions, will have a key role to play in power generation.

Considering its enormous advantages, Oil & Gas companies are gearing up to use hydrogen. New and existing natural gas-fired combined cycle power plants are therefore expected to fully operate on hydrogen or other fuels blended with hydrogens. They will therefore have to be H_2-ready.
After having established a guideline to define the H_2-readiness of power plants and their related equipment, TÜV-SÜD, as an independent third-party, proposes the certification for OEMs and EPCs. These guideline and certification can encompass an entire power plant with all relevant sub-systems.

In this context, John Cockerill Energy, one of the world leaders in the design and supply of heat recovery steam generators (HRSG) and exhaust gas bypass systems for combined cycle power plants, has modified its heat recovery boiler design to allow them to operate with hydrogen instead of fossil fuels.
John Cockerill’s HRSGs are steam generators that recover heat from hot flue gasses at the outlet of gas turbines. The heat is transformed into steam to feed a steam turbine and to produce power or a combination of power and heat. Our HRSGs enhance the efficiency of power plants while reducing emissions for each produced megawatt.

John Cockerill is therefore proud to announce the award of a concept certificate from TÜV SÜD for the H_2-readiness of its heat recovery steam generators for combined cycles and cogeneration applications, with drum-type and once-through boiler designs. The certificate confirms that John Cockerill's H_2-readiness concept for the bidding phase of new projects meets TÜV SÜD ’s guidelines requirements and that its heat recovery steam generators are ready to operate with up to 100% hydrogen.
This certificate covers vertical and horizontal technologies, both mastered by John Cockerill, with or without supplementary firing, and potentially the use of fresh air firing, both for new and retrofitted concepts.

John Cockerill has showcased its ability to ensure optimal performance of heat recovery steam generators while maintaining effective emission control. Its design includes selecting appropriate controls for the unit and addressing all safety-related aspects, such as ventilation, purging, fire and explosion protection, and conducting hazard and safety analyses.

"*We are proud to receive this prestigious certification,* says Eric Absil, President of John Cockerill's Energy Solutions Business Line, *which makes John Cockerill one of only two manufacturers to receive this recognition. Designing heat recovery steam generators for future hydrogen operations will significantly contribute to a reliable and sustainable power supply in the long term and will propel us in the energy transition, and the zero-emission generation.*"

ABOUT TÜV-SÜD

Founded in 1866 as a steam boiler inspection association, the TÜV SÜD Group has evolved into a global enterprise. More than 28,000 employees work at over 1,000 locations in about 50 countries to continually improve technology, systems, and expertise. They contribute significantly to making technical innovations such as Industry 4.0, autonomous driving, and renewable energy safe and reliable.

John Cockerill, enabler of opportunities

Driven since 1817 by the entrepreneurial spirit and thirst for innovation of its founder, the John Cockerill Group develops large-scale technological solutions to meet the needs of its time: facilitating access to fossil free energies, enabling sustainable industrial production, preserving natural resources, contributing to greener mobility, enhancing security, and installing critical infrastructures.

Its offer to companies, States and communities consists in services and associated equipment for the sectors of energy, defence, industry, the environment, transports, and infrastructures.

With over 6,000 employees, John Cockerill achieved a turnover of €1,201 billion in 2023 in 29 countries, on 5 continents.

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