

RTI International and Casale SA Announce Global Licensing and Cooperation Agreement for RTI's Breakthrough Warm-Gas Desulfurization Process Technology

RESEARCH TRIANGLE PARK, NC– Today, Casale SA and RTI International announced the signing of a global licensing and cooperation agreement that grants Casale the rights to be the exclusive sublicensor for RTI's breakthrough warm gas desulfurization process technology that produces cleaner energy and chemicals from coal and other high-sulfur feedstocks.

This advanced market-ready technology enables high-sulfur gas streams, such as synthesis gas from coal or petcoke gasification, to be cleaned at elevated temperatures (250-650°C), thus reducing or eliminating the need for substantial gas cooling and expensive heat recovery systems. This increases the overall process efficiency, reduces greenhouse gas emissions, and also reduces the capital and operating costs of the entire gas cleanup block by as much as 50 percent when compared to conventional cleanup technologies.

This technology uses a novel transport reactor design and a unique high capacity, regenerable, attrition-resistant sorbent with excellent performance. This technology can achieve up to 99.9 percent removal of total sulfur from syngas at temperatures as high as 650°C and over a wide range of sulfur concentrations and operating pressures. The process was demonstrated on a 60,000 Nm³/h synthesis gas stream in a coal/petcoke gasification plant at Tampa Electric's Polk Power Plant in Florida, where it operated successfully for more than 3,500 hours.

The integration of this technology with a downstream activated-amine carbon capture process enabled further reduction of total sulfur in the syngas to sub-ppmv concentrations (as low as 100 parts per billion), suitable for stringent synthesis gas applications such as chemicals, fertilizers, and fuels.

"RTI has been developing this technology over a number of years with support from the U.S. Department of Energy and we are enthusiastic that our testing of the technology through pre-commercial scale was completed so successfully and that the technology is now ready for commercial deployment," said Raghbir Gupta, Ph.D., global head, Energy Technology Division at RTI. "We are very excited that Casale, a technically strong global leader in syngas conversion technologies, will be our partner in taking this technology into the global marketplace."

"Casale already has a strong presence in fertilizer and methanol plants based on gasification, where we are a leader in the supply of sour gas shift and synthesis technologies," said Ermanno Filippi, Ph.D., chief technology officer of Casale. "This agreement allows us to further expand our offering in these plants in the field of synthesis gas cleaning and conditioning, and to offer the warm gas desulfurization process for IGCC (integrated gasification combined cycle) and other gasification-based units. This agreement builds upon a very successful longstanding relationship between Casale and RTI."

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RTI International is an independent, nonprofit research institute dedicated to improving the human condition. Clients rely on RTI to answer questions that demand an objective and multidisciplinary approach—one that integrates expertise across the social and laboratory sciences, engineering, and international development. RTI believes in the promise of science, and RTI staff are inspired every day to deliver on that promise for the good of people, communities, and businesses around the world.

For more information, visit www.rti.org.

Casale SA is a privately owned Swiss Company, wholly owned by CASALE HOLDING, with headquarters in Lugano (Switzerland). Casale, the Swiss global leader in ammonia, urea, methanol, melamine, nitric acid, nitrate and phosphate technologies, is a global provider of integrated solutions for the production of fertilizers and chemicals from syngas.