

PRESS RELEASE

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Tenova supports TimkenSteel's safety and cost reduction program with NextGen[®], iEAF[®] and Water Detection Technology[®]

Mississauga, Ontario 18/12/2017 – TimkenSteel, Faircrest Plant – Canton, OH, US – has placed an order for Tenova's proprietary off-gas based technology package including a **NextGen[®]** off-gas analysis system, **iEAF[®]** dynamic process control technology and **Water Detection Technology[®]**. TimkenSteel is a leading producer of carbon and alloyed steel including large diameter SBQ bars and seamless mechanical tubing. Tenova's equipment will be installed as a fully integrated technology solution on TimkenSteel's ca. 1 million net ingot tons per year, top charge EAF at the Faircrest Plant.

When fully implemented, the combined technologies will bring a number of **operational, safety and environmental benefits** including reduced energy consumption, water leak detection, increased productivity and yield and reduced greenhouse gas (GHG) emissions.

Tenova's technologies are designed to work in tandem to provide a complete process solution that combines leading edge hardware, fundamentally sound process control models, web based automation and the most comprehensive water detection available in the steel industry.

NextGen[®] is a proprietary hybrid multipoint laser/extractive off-gas analysis system that delivers exceptionally fast analytical response times, requires minimal maintenance and reduces hardware and installation costs. A single, multipoint NextGen[®] analyzer will be located in the control pulpit at Faircrest and will provide simultaneous and continuous full spectrum off-gas analysis at both upstream and downstream locations.

iEAF[®] process control software to be installed at Faircrest will dynamically optimize EAF energy consumption, maximize operating cost savings and reduce power-on-time. This complete process control solution uses NextGen[®] off-gas analysis together with proprietary optical off-gas velocity & temperature sensors, a PLC link and a real-time EAF mass & energy balance to dynamically control chemical & electrical energy inputs and to optimize refining & endpoint control practices.

Water Detection Technology[®] uses NextGen[®] off-gas analysis of both H₂ and H₂O vapor and proprietary software and is designed to quickly detect and alert Faircrest's operators when there are abnormally high water levels in the EAF.

TimkenSteel's installation represents the second order for Tenova of this fully integrated solution in North America and it provides TimkenSteel with the most comprehensive technology package of off-gas based EAF process control technology available in the world.

About Tenova

Tenova, a Techint Group company, is a worldwide partner for innovative, reliable and sustainable solutions in metals and mining. Leveraging a workforce of over three thousand forward-thinking professionals located in 22 countries across 5 continents, Tenova designs technologies and develops services that help companies reduce costs, save energy, limit environmental impact and improve working conditions. visit www.tenova.com