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## **Energiron DR Technology Helps Emirates Steel Boosts Green Profile**

### **Monterrey, Mexico – November 5, 2009**

Two new Energiron direct reduction plants at Emirates Steel will allow Emirates Steel to commercialize the CO<sub>2</sub>, which is considered a by-product of the DR plant. The selective elimination of CO<sub>2</sub> from the process off gas stream is an integral system and an inherent feature of the Energiron DR Technology for optimization of the use of reducing gases and energy consumption. This DR process, which includes the selective capture of CO<sub>2</sub> emissions, will make the new Emirates Steel plant in Abu Dhabi among the world's "greenest" steel mills.

Tenova HYL and Danieli & C., partners in the development and sale of DR plants based on the highly advanced Energiron technology, currently have two plants underway at the Emirates Steel complex in Mussafah, Abu Dhabi, UAE. The first plant, which is now operating, is a 1.6 million tpa Energiron plant designed to feed the 1.4 million tpa steel plant with hot DRI via the HYL HYTEMP System. The second plant, a mirror image of the first and part of a duplicate turnkey steelmaking installation, is scheduled to be put into operation during late 2011.

Emirates Steel has been very conscious of its role in redefining steelmaking in the Gulf region, and a key aspect of this will be in the capture and reuse of CO<sub>2</sub> emissions from the DR plant. A first of its type in the region, the Energiron plant uses a chemical absorption system to allow the selective removal and capture of up to 50% of the total CO<sub>2</sub> generated by the reduction process. In the case of Emirates Steel, this CO<sub>2</sub> will be compressed and then pumped into oil wells instead of natural gas to boost oil production.

The Ternium 4M plant in Monterrey, Mexico, the Ternium 2P plant in Puebla, Mexico and the Welspun Maxsteel plant in India are all operating under this scheme, with the CO<sub>2</sub> being captured, cleaned and sold to local gas producers for resale to the beverage industry. The only Energiron DR plant which was still operating under the original process scheme (without CO<sub>2</sub> absorption), ArcelorMittal, has also recently included CO<sub>2</sub> removal technology at their 2 million tpa HYL plant in Lazaro Cardenas, Mexico.

Emirates Steel expects to be able to commercialize at least 25% of the CO<sub>2</sub> which would otherwise be emitted to the atmosphere.

ENERGIRON is the innovative direct reduction technology jointly developed and marketed by Tenova HYL and Danieli & Co.

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Tenova designs and supplies advanced technologies, products and services for the metals and mining industries. Tenova operates close to its customers through a network of 33 companies based on the 5 continents. For more information visit the company's website at [www.tenovagroup.com](http://www.tenovagroup.com)

**About Emirates Steel:**

Emirates Steel, a subsidiary of Abu Dhabi Basic Industries Corporation (ADBIC), is wholly-owned by General Holding Corporation, an Abu Dhabi Government-owned company. Strategically located in the Industrial City of Abu Dhabi (ICAD), just 35 kilometers away from the heart of the city, Emirates Steel is the only integrated steel plant in the UAE, utilizing the latest rolling mill technology to produce reinforcing bar and wire rod.

Emirates Steel currently has an output capacity of 2 million tons, with capacity expected to reach 6.5 million tons by 2014. The many strategic alliances that the company is establishing with leading technology providers, coupled with its state-of-the-art facilities, will allow Emirates Steel to maintain its position at the forefront of the industrial sector.

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