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Strategic Alliance for New DR/BF– Ironmaking Technologies between Tenova, Danieli, and Nippon Steel & Sumikin Engineering

May 20th, 2014 – Tenova HYL and Danieli & C, have entered into an agreement with Nippon Steel & Sumikin Engineering Co., Ltd. (NSENGI) to combine and commercialize their Energiron DR technology with an optimized blast furnace technology, as well as syngas technology (high efficiency coal gasification and steelworks by-product gas utilization technology) developed and owned by NSENGI.

The two key areas of combined know-how involve the integration of the Energiron Direct Reduction technology with the blast furnace as well as the areas of interface between existing and future syngas technologies with the Energiron process.

The charging of specialized DRI to the blast furnace, produced by Energiron with high carbon content and its reduction ratio adjusted, will target a significant decrease in the blast furnace production cost in comparison to the conventional DRI charging to the blast furnace method.

This new alliance will allow the three parties to combine research and development activities with their respective expertise in Energiron DR, blast furnace and syngas technologies, with the ultimate objective of developing a new iron making technology which will reduce CO₂ emissions and operating costs, while increasing productivity and/or decreasing capital expenditures for integrated steelmaking facilities. Such includes execution of EPC projects by the parties in connection with the above collaboration.

In addition, the optimized combination of Energiron Direct Reduction technology and syngas technology (high efficiency coal gasification and steelworks by-product gas utilization technology) will enable Energiron Direct Reduction plants to have access to non natural gas sited customers.

The alliance also provides for the joint marketing of existing direct reduction technology to blast furnace customers.

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This new Alliance formed by Tenova, Danieli and NSENGI seeks to capitalize on key advantages of Energiron, which in addition to capacity also include environmental and economic benefits beyond those offered by existing technologies.

TENOVA is a worldwide supplier of advanced technologies, products and engineering services for the metals and mining industries, including pioneer position of modern direct reduction technology.

DANIELI ranks among the three largest suppliers of plants and equipment to the metals industry, worldwide and is leader in minimills, in long product casting and rolling plants, and among the front runners in the flat product and iron ore sectors

NSENGI is one of the leading engineering companies with competent knowledge of steel plant engineering technology, especially in the fields of blast furnace steel plants and syngas technology.

ENERGIRON is the innovative HYL direct reduction technology jointly developed by Tenova HYL and Danieli & C. The name is derived from the unique DRI product which distinguishes this technology from other available processes.

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