Breakthrough Ironmaking Technology To Begin Fourth Trial

Thursday 27 March, 2014

Tata Steel is to begin a fourth test production campaign on the HIsarna pilot plant at its IJmuiden works in the Netherlands. The trial is scheduled to start mid-May and last about six weeks.

HIsarna is a new technology, partly developed in IJmuiden, which enables the direct input of coal and fine iron ore into the ironmaking furnace. The technology saves energy consumption by eliminating two of the key raw materials processing stages in blast furnace ironmaking: coking (the production of coke from coal) and sintering (the agglomeration of fine iron ore). Should the HIsarna technology prove technically and commercially viable, the elimination of these processing steps could reduce the emission of carbon dioxide from conventional ironmaking by 20%.

Hans Fischer, Chief Technical Officer of Tata Steel's European operations and hub director of Tata Steel in IJmuiden, said:

"We are very proud to have succeeded in designing and constructing this installation and to have advanced this potentially breakthrough technology to this stage. During the third test campaign last year liquid HIsarna iron was produced in longer production runs than in previous campaigns and was used for the first time in the commercial steelmaking process.

"A project of this size is not carried out by a single company. We are working closely with several other major steel companies in the ULCOS (Ultra Low CO2 Steelmaking) consortium and with mining firm Rio Tinto. The project is being carefully monitored by scientists and steel producers from all over the world. HIsarna has the potential to become a 'game-changer' in the steel industry. It is one of several technologies regarded as having real prospects of further improving the sustainability of steelmaking.

"Despite the challenging economic circumstances in Europe, Tata Steel and its ULCOS partners have continued to support the HIsarna project. But future phases of HIsarna's development will require very substantial investment that will exceed what the project partners can provide by themselves. We are now looking for further support from the European Commission and the Dutch government to enable this potentially breakthrough technology to progress to the next and more advanced stage."

The fourth test campaign aims to produce liquid iron in a series of production runs, each lasting several days, and to test the use of different types of coal and iron ore. After analysing the results of this campaign, Tata Steel and its partners will start preparing for a prolonged fifth campaign in 2015 which would last six months. Should the results of this test prove positive, the next crucial step in HIsarna's development would be the design, construction and trial operation of an industrial-size HIsarna plant.

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Notes to Editors:

About Tata Steel's European Operations:

The European operations of Tata Steel, whose main steelmaking sites are in the UK and the Netherlands, comprise Europe's second largest steel producer. They supply steel and related services to construction, automotive, packaging, rail, lifting & excavating, energy & power, aerospace and other demanding markets worldwide. The combined Tata Steel group is one of the world's largest steel producers, with an aggregate crude steel capacity of more than 29 million tonnes and approximately 80,000 employees across four continents.
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