Chinese steel producer Shandong Iron & Steel Corp. Ltd. (Shansteel) has ordered a selective waste-gas recirculation (SWGR) system from Primetals Technologies Ltd. for its new sinter plant in Rizhao, Shandong Province. It is the first order for Primetals Technologies from mainland China for this well-proven environmental solution after several units have previously been installed in Austria, South Korea and Taiwan, which have successfully demonstrated the positive impact on environmental emission reduction and operation cost saving. With a waste gas recirculation rate of up to 40%, the SWGR reduces waste-gas emissions to the atmosphere by 770000m³/h. In addition, coke consumption for the sintering processing is reduced by approximately 5%. Due to the lower waste-gas flowrate, downstream gas cleaning facilities can be designed 30% smaller, says the company. The startup of phase 1 of the new sinter plant is scheduled for September 2017.

Shansteel is a state-owned company, and listed one of the top 10 steel producers in China. It produces and sells steel products, such as plates, hot-rolled coils, cold-rolled coils, H sections, high-quality steel, special steel, hot rolled ribbed bars and so on. The company is headquartered in Jinan City, Shandong Province. Shansteel ordered the SWGR for its new Rizhao based plant, which will produce mainly products for modern automotive companies. The strategic target of constructing this new steel making facility is to be able to shut down several older production facilities in Shandong Province, which do not meet the required environmental standards anymore.

The new sinter plant will consist of two 550 m² sinter strands which will be installed in two construction phases. By using the SWGR technology, Shansteel will not only reduce the waste-gas emission to the atmosphere and the CO2 footprint of the overall plant by reduction of coke consumption, but will also be able to significantly reduce the capital expenditures (CAPEX) for the downstream gas cleaning facilities which can be designed for smaller waste gas capacities.

With the SWGR process, a significant portion of the primary sinter waste gas is recirculated back to the sinter strand by means of the necessary ductwork, an electrostatic precipitator for pre-dusting, a circulation fan and the recirculation hood which distributes the recirculated waste gas on the sinter strand while maintaining proper sealing to the atmosphere to avoid any gas leakages. The system is selective because the waste gas from different wind boxes can be recirculated. The process design is specifically tailored to the customer needs and will recirculate the gas from certain areas of the sinter strand. A smaller quantity of fresh air is added to the recirculation gas stream in order to maintain certain minimum oxygen content in the recirculated gas, which is required for proper sintering performance.

The key advantages of the SWGR system include a reduction of operational expenditures (OPEX) by reducing coke consumption by recirculation of CO in the waste gas as well as lower utility and agent consumption in the downstream gas cleaning facilities due to reduced waste-gas flowrate.

ThyssenKrupp confirm its talks with Tata about European steel plants

ThyssenKrupp, Germany’s biggest steelmaker confirmed that it is in talks with India’s Tata Steel about a consolidation of beleaguered European steel mills that are hit by overcapacity, weak demand and cheap imports.

Tata Steel said, it had suspended the process of selling its troubled UK arm while it held talks with potential partners, including ThyssenKrupp, about alternative and more sustainable solutions for its entire European business. In addition to its UK operations Tata Steel Europe also owns the former Hoogovens steel plant in the Netherlands.

ThyssenKrupp spokeswoman Nicola Roettger, said her company has long said it believes that a consolidation of the European steel industry is necessary, due to the extremely difficult economic situation.

“We have also said already that in such a situation, everybody’s talking to everybody else. Among other, we are also talking to Tata Steel,” she said.

She said it was to be left open for now if, when, and with whom further steps would be taken. More specific statements would be made only if decisive progress towards consolidation could be made.

Tata had said in a statement that the talks, which could include a possible joint venture, were at a preliminary stage and the European approach was in addition to its attempts, launched in March, to sell its main British steelmaking operations, which include its Port Talbot blast furnace plant in southern Wales. The firm said the British vote to leave the European Union, and the outcome of the UK government’s consultation on Tata Steel UK’s British Steel pension scheme, had prompted a rethink on the sale.

“Consequently, Tata Steel has now entered into discussions with strategic players in the steel industry, including ThyssenKrupp,” the Indian company said.