## 2018-12-03

During November, the installation work in Höganäs has continued, cold tests of the first process steps, i.e. the biomass and dryer, have started and installation work continues to follow the revised timetable with minor adjustments. The pipework is proceeding at high speed and during the month, X-ray of pipes has also begun, and the insulation of pipes is still ongoing.



Piping system to the dryer with hot flue gases from the pyrolysis



Piping system for water supply



Piping system for steam and steam condensate



X-ray of pipes

Signal controls for low and high voltage systems have continued throughout November and are expected to be completed in December. Transport screws for the biomass between the various process steps have been cold tested with and without material, as well as the dryer. The start of the hot tests will be in December after it has been postponed for two weeks, due to delays in programming work. In order not to risk further delays, we have expanded our programming strength, and during the first week of December, an expert on ABB Safety System from Denmark will also check for the system set-up.



During November cold tests of the dryer started, in this picture you can see some of Cortus employees, Ryo Nakakido, Tobias Boström & Ronny Zahn



Biomass pocket with feeding- and transport screws were tested with and without material during November.



Continued cold tests, one of Cortus test leader, Ryo Nakakido



The biomass pocket contains 80 m<sup>3</sup> and is the starting point of the WoodRoll® process which after several steps converts biomass to an energyrich synthetic gas with a high content of hydrogen.

November 16, the Swedish Crown Princess Victoria and Prince Daniel visited Höganäs AB and Cortus Energy. This to see the world's first plant that on an industrial scale demonstrates fossil-free steel production based on thermal gasification of biomass. A unique facility that in the long run can revolutionize the entire steel industry's efforts to phase out fossil natural gas and metallurgical coke.

Cortus Energy's CEO Rolf Ljunggren and Magnus Petterson, Energy Coordinator Höganäs AB, presented the project and how the production of iron powder can be more climate friendly by switching from fossil to renewable energy by gasifying biomass with WoodRoll®. After the presentation, the Crown Princess couple was guided by Cortus Energy CTO, Marko Amovic, who showed the WoodRoll® plant in Höganäs.



The Crown princess Victoria and Prince Daniel by the Cortus plant in Höganäs



The Crown princess couple is being guided around the plant by Cortus

During December, the work to complete the plant will continue and the plan to produce gas in early 2019 will remain.



Transport of the flue gas gloria



The flue gas gloria installed on top of the gasifier

Next update is scheduled in early January.



Erection of the flue gas gloria