

2019-07-12

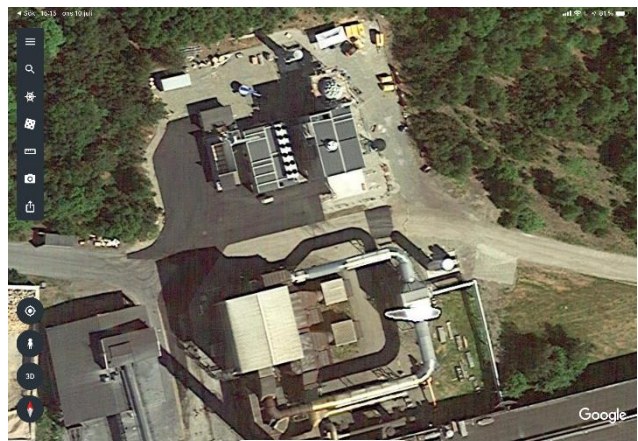
An important event in June was that our operating team together with ABB, Summsystem and our burner supplier Kanthal successfully ignited two burners on the gasifier. Burner 1 was named Aurora and Burner 2 Ulrika, following the tradition to name each burner after the female name on the name-day when each burner was put into operation.

There has also been a major focus on Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) of the various parts of the control system. At FAT, the process operates from a simulated environment at our partner ABB in Malmö. The tests are completely virtual (in a computer simulated process) but are based on functions programmed for the process. At SAT you test the control system's functions sharp, directly in the plant and according to the process in real time. This test confirms that the programmed functions behave the same as in the simulated test environment (in Malmö). The tests of the control program are performed step by step in each process block.

ABB's work on redesigning and supplementing the control system has proved to be more extensive than previously anticipated. The working methodology described above no longer gives us the opportunity to work based on the start-up plan that has existed (see below). The implication of this is that the start-up of individual objects comes later than in the previously communicated plan. Subsequently, the consequence of this is a more intensive program going forward when more objects are launched in a shorter period of time. In the end, however, the structure and quality of the control system will be significantly increased, leading to less troubleshooting at start-up. We have progress on many fronts and the work continues during the holiday season



*Sara Blomqvist, Marko Amovic and Sven-Ola Johansson during commissioning of the burners.*



*Finally you can find our plant at Google Earth (however, the picture is old since not the full plant is visible here).*

In March, we presented the structure of our test program for the commissioning of the Höganäs plant. Tests performed within our test program are as follows:

1. Cold tests

- a. Biomass system – done
- b. Dryer – done
- c. Water cleaning-system – done
- d. Pyrolysis – ongoing
- e. Compressors – done
- f. Cooling system – done
- g. Grinders – ongoing
- h. Programming burners gasifiers: Factory Acceptance Test (FAT) performed at ABB – done

2. Hot tests

- a. Burner system gasifier: Site Acceptance Test (SAT) performed with burner supplier - done
- b. Flare: commissioning is planned in July



*Outlet screw from pyrolysis during ongoing cold tests.*



*Expansions vessel after the syngas compressors.*



*Magnus Andersson and Matthias Scrive deploys a level guard to control the level of ash in the filter.*

June has also been a visit-intensive month where, i.a., our Japanese partner Forest Energy visited us at two different times with potential customers from a Japanese energy company and a Japanese chemical company. Another visit has been from a potential Scandinavian partner on catalytic processes to upgrade the gas to various fuels and chemicals. We have also had a visit from a potential customer with long-running projects on hydrogen and synthetic natural gas (SNG) in two EU countries.

Probiostål- project received attention in Helsingborgs Dagblad and in the Swedish national publicly funded radio (Sveriges Radio, SR) during the month.



Sara Blomqvist is interviewed by Helsingborgs Dagblad. Source: <https://www.hd.se/2019-06-15/nicorette-och-zoegas-kaffe-tillverkas-utan-miljoavtryck-har>



Höganäs AB's Energisamordnare intervjuas av P4 Malmöhus vilket även sändes nationellt i SR's nyhetsändningar. Källa: <https://sverigesradio.se/sida/artikel.aspx?programid=96&artikel=7242927>.

*Next update is planned to mid-August.*