

Press Release

Aalborg, Denmark, 29 May 2019

Aalborg Energie Teknik a/s has secured an order for a 90 MW_t biomass-fired boiler plant at Solvay in Rheinberg, Germany

Aalborg Energie Teknik a/s (AET) assists Solvay in achieving its new greenhouse gas target by means of a new AET Biomass Boiler, which will lower the CO₂ emissions by 190,000 tonnes/year, as it replaces a coal-fired boiler plant. Solvay has set the target to reduce its greenhouse gas emissions by 1 million tonnes during 2017 - 2025.

With the high efficiency cogeneration plant, called the Woodpower project, in Rheinberg (Nordrhein-Westfalen), the use of fossil fuel is to be reduced by 25% at the site. The investment is a part of Solvay's strategy to serve their customers in a more sustainable and competitive way.



The Solvay plant in Rheinberg, where a major modernisation project of the energy supply will take place.

The AET Biomass Boiler will burn recycled wood, which will be sourced locally. It will be designed for a fuel heat input of 90 MW_t and a boiler efficiency of 92%. The AET scope of supply includes AET Combustion System, AET Biomass Boiler, AET SNCR DeNO_x System, flue gas cleaning system, boiler house, electrical system, and PLC control and SCADA system.

The AET Combustion System and AET Biomass Boiler will be optimised for the project and are similar in design to the boiler at Tilbury Green Power, which was recently commissioned by AET. The boiler is designed with a residence time of 2 seconds at 850 °C and with Inconel cladding in the furnace to protect against corrosion.



The AET Biomass Boiler has a short start-up time and a quick shut-down time as there is almost no refractory in the boiler. This also reduces the risk of slagging, reduces the cost of maintenance considerably and at the same time increases the availability.

The in-house power consumption for the boiler island, including flue gas cleaning, fans etc. is less than 1.3% of the fuel heat input. This enables Solvay to produce more power for export and/or own factory.

The combination of the AET Combustion System, AET Biomass Boiler and AET SNCR DeNOx System ensure low emissions, which comply with the German 17. BImSchV and the new BAT associated emission levels from EU. The heavy metals and Dioxines/Furanes will be well below the permissible emission limit values.

To ensure a trouble-free integration with the Solvay factory, the same DCS system as is used today at the Solvay factory will be applied for the entire CHP plant. Furthermore, the design of the boiler plant will in some ways be adapted to the existing energy plant at the Solvay site to obtain synergies e.g. for operation and maintenance as well as safety.

With the special design of the boiler, boiler house, bag filter and other components AET has been able to accommodate Solvay's high expectations for noise reduction and plant availability.

Norbert Mülders, Site Manager at Rheinberg, Solvay: "We are pleased to announce that AET will supply the boiler to our plant in Rheinberg. Some of the critical points for Solvay were to choose a proven technology with relevant references in operation, showing high availability and high efficiency".

Erik Flemming Hansen, Sales and Marketing Director, AET: "We are delighted to have been trusted by Solvay to supply a new boiler for Rheinberg, and to bring our strong competencies in to the project. We will do our very best to ensure that the high expectations of Solvay will be fulfilled. Furthermore, we are pleased to receive a new order in Germany, also due to coal now is being phased out in Germany".

AET has previously supplied biomass boilers to Pfeleiderer, Swiss Krono, Boehringer Ingelheim and Best Wood Schneider and is doing services and solutions in Germany.

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About Solvay:

Solvay is an advanced materials and specialty chemicals producing company, committed to developing chemistry that addresses key societal challenges. Solvay innovates and partners with



customers worldwide in many diverse end markets. Its products are used in planes, cars, batteries, smart and medical devices, as well as in mineral and oil and gas extraction, enhancing efficiency and sustainability. Its light weighting materials promote cleaner mobility, its formulations optimize the use of resources and its performance chemicals improve air and water quality. Solvay is headquartered in Brussels with around 26,800 employees in 61 countries.

www.solvay.com



About Aalborg Energie Teknik (AET):

The Danish company AET is a leading, independent engineering and contracting company supplying biomass-fired boiler plants, power plants, and combined heat and power plants (CHP) in the size range of 25 to 170 MW_t.

The AET business comprises design, engineering, delivery and service of plants fired with all types of biomass. The well-proven AET Biomass Boiler and AET Combustion System are based on more than 30 years of hands-on experience with industrial processes, steam generation and biomass combustion.

The company has a well-known and recognised reputation for supplying biomass-fired boilers and plants with exceptionally high efficiencies, high availabilities, high fuel flexibility and low emissions. Moreover, with very low maintenance costs, the AET biomass-fired plants ensure the investor a viable business case.

www.aet-biomass.com