Combustion technologies

Our customized combustion solutions and products are for different kinds of combustion and fuels from pulverized hard coal, peat and biomass to oil and gas fired boilers. Advanced low-NOx technology reduces emissions effectively and helps you to lower investment and maintenance costs.

OUR PRODUCTS AND SERVICES INCLUDE:

- Low-NOx system modifications for pulverized hard coal, peat, biomass and oil/gas fired boilers
- Biomass co-firing solutions for pulverized fired boilers
- Design, project and site operations, commissioning, operation and maintenance, warranty inspections and repairs and after sales services
- Combustion consultancy such as boiler performance analyses, combustion process optimization and operation load range improvements
- Feasibility studies and tailor-made solutions
- Low-NOx burners for wall and tangential firing system including over fire air (OFA) system
- Problem solving and troubleshooting including start-up and ignition systems and other auxiliary equipment, slagging, fouling and high temperature corrosion and combustion system and burner upgrades
- Computational modeling of combustion (CFD)
- Patented & licensed technology and in-house expertise

KEY BENEFITS

- Excellent NOx performance with following features: rapid ignition, stable flame, high combustion efficiency, wide turn-down ratio, avoiding high temperature corrosion and slagging in furnace, controlling unburnt carbon (UBC) in fly ash
- Low investment costs
- Short implementation period
- Reduced maintenance costs
- Simplified concept and construction
- Minimum modification for auxiliary equipment
- Reliable and safe operation

Customer’s voice:

“Fortum implements in our Jaworzno power plant, which is one of the biggest in Poland, a burner project, which reduces the nitrogen oxide levels. During this project the combustion technology of all boilers will be totally renewed to be in line with the new IED emission limits coming in force in 2016”, said in 2010 Jan Kurp, President of TAUROŃ S.A. Poland
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**LOW-NOx BURNERS FOR PEAT AND BIOMASSES**

NR-LE burner is developed for peat and biomass combustion for the purpose of reducing the NOx emission and minimum load. The NR-LE burner is based on NR burner technology. The NR-LE burner has been developed in co-operation with Mitsubishi-Hitachi Power Systems and Fortum.

**LOW-NOx BURNER FOR WALL FIRING**

NR burner invented and further developed by Mitsubishi-Hitachi Power Systems in Japan. The NOx reduction mechanism of the NR burner is based on high flame temperatures. The high temperature and stable flame are achieved by a Flame Stabilizing Ring.

**LOW-NOx BURNER FOR TANGENTIAL FIRING**

An unique low-NOx technology of rapid ignition flame for corner and tangentially fired boilers. Ultra-stable flame makes it possible also to reduce the boiler minimum load. The technology is patented by Fortum.

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