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Nr. 1703 05.11.2010

05.11.2010

To whom it may concern

Turceni Energy Holding (Complexul Energetic Turceni) represents the Romanian's largest power producer.

Turceni Power Plant installed capacity is 2,310 MW, consisting of seven (7) units of 330 MW each out of which one (1) unit was decommissioned.

The existing units are block type, consisting of:

- Boiler – one through boiler with forced circulation and reheating, Babcock license, with a steam rated capacity of 1035 t/h at 540 ^{0}C and 196 ata,
- Turbine – condensing type, Rateau-Schneider license, (330 MW),
- Generator – synchronous generator, Alsthom license, (330 MW).

The fuels used are lignite as main fuel, with calorific value ranging from 1400 to 1800 kcal/kg, while natural gas is used as flame support and fuel oil is used only for boilers start-up.

During boiler operation, due to slagging and fouling processes, deposits of ash are formed:

- on furnace walls, particularly the upper zone (furnace outlet) which extend also into convective zone, as well as other surfaces exposed to radiant heat such as the inlet zone of the flue gas recirculation ducts,
- on convection heat absorbing surfaces – tertiary superheater and secondary reheat superheater - located immediately above the furnace area

that impede normal unit operation and lead to unit periodical shut down for mechanical cleaning of boiler heat exchange surfaces.

Under these conditions it was decided to carry out a trial test to one of power plant unit, using THERMA CHEM technology, in order to assess its potential for boiler ash deposits removal by quantifying the improved heat exchange transfer through an improved unit ***heat rate*** (defined as ***"heat consumption [Gcal] / unit production [MW]"***).

For evaluation purpose, it was decided to compare the unit operation parameters, for two similar operation regimes without respectively with THERMA CHEM technology implemented.

The trial test was carried out, during September – October 2007, along a period of forty five (45) days of continuous operation, on Unit no.4 which is equipped with DCS

(Distributed Control System) which made possible accurate monitoring of operating parameters.

The evaluation process of the two regimes indicated, for the period when THERMA CHEM technology was implemented an improvement of the ***heat rate*** by to **2.55** %.

Director Directie Energie,

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