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Applicationbrief

Eclipse Product: Flue Fire Burners

Submitted by: John Stanley

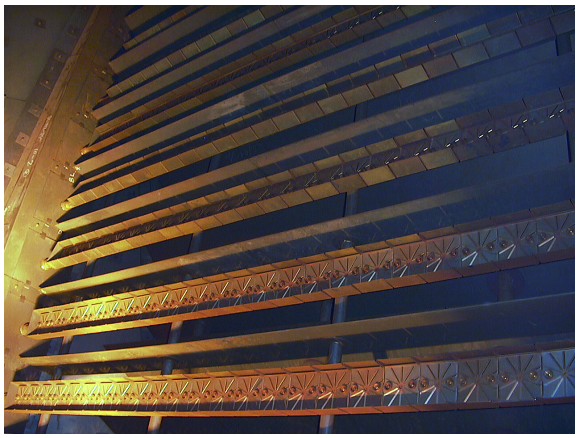
Application: Supplementary Firing

Site Location: Yeosu, South Korea

System Description: The burner supplied on this application raises the temperature of the exhaust gas coming from the turbine to the required temperature entering the HRSG. The burner consists of 10 independent rows with 24 heads per row. The total burner capacity is 230.0 MMBtu/hr. maximum with a low fire capacity of 23.0 MMBtu/hr. CFD analysis was used to design the inlet air distribution plates to provide more uniform air into the burner. As a result of the CFD analysis, the burners were angled to provide the best heat distribution entering the HRSG. See page 2 for before and after images.

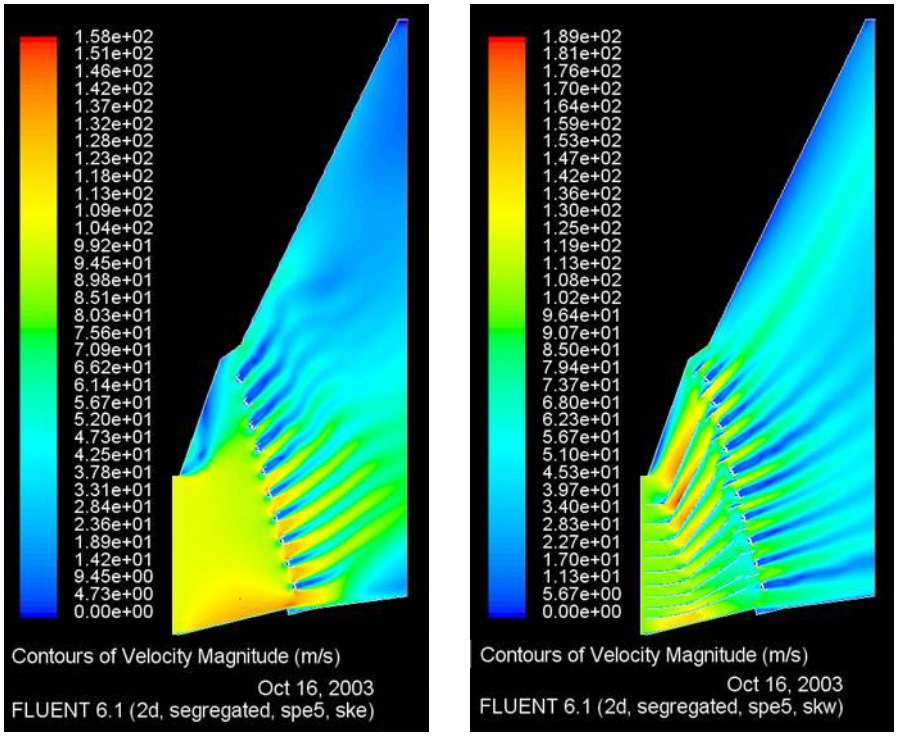
Technical Data:

Turbine	
Make	GE
Type	6581B
Turbine Exhaust Gas	
Mass Flow	529,000kg/h
Oxygen level	13.63%
Temperature in	546º C
Temperature out	898º C
Burner	
Duty	230.0 MMBtu/hr. (max.), 23.0 MMBtu/hr. (min.)
Fuel	Propane and LPG



Burner installed in duct

Overall view of Cogeneration Plant



CFD generated velocity contours before and after the addition of distribution plates illustrating improved flow distribution into the HRSG.

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