

Application brief

Eclipse Product: FlueFire Burners
Submitted by: Leen Riedijk
Application Supplementary Firing
Site Location: Statoil - Asgård Terminal Kårstø Norway

System Description

The burner supplies heat to the exhaust gas flow of a gas turbine before entering a Heat Recovery Steam Generator. With the turbine out of operation, a fresh air flow is heated by the burner to provide heat to the Steam Generator. Steam is used for the steam turbines. Both the gas and steam turbines are driving compressors to boost gas pressure prior to transport to continental Europe.

The site location is classified as hazardous, on-shore and outdoors.

The burner is firing inside a water-cooled combustion chamber. The grid consists of in total 4 burner banks each consisting of 5 burner rows with flame propagation modules. Each bank is provided with automatic shut-off valves and can be operated independently. Burner fuel gas composition is subject to the available source and heat value may vary between 740 – 950 BTU/scfm.

Technical Data

Turbine		Turbine exhaust gas		Auxiliary air		Burner	
<i>Make</i>	GE	<i>Mass flow</i>	175 lb/s	<i>Mass flow</i>	132 lb/s	<i>Duty</i>	148 MMBTU/h in Turbine operation mode
<i>Type</i>	LM 2500 PR	<i>Oxygen level</i>	14.8 vol%	<i>Temperature in</i>	60 °F		284 MMBTU/h in Fresh air operation mode
		<i>Temperature in</i>	960 °F	<i>Temperature out</i>	2160 °F	<i>Fuel</i>	Natural gas
		<i>Temperature out</i>	1720 °F			<i>Frame size</i>	W x H = 2500 x 5600 mm

