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Applicationbrief

Eclipse Product: Flue Fire Burners

Submitted by: Douglas McDonald

Application: Supplemental Firing

Site Location: Otter Creek Ethanol

System Description: The Eclipse FlueFire Burner is used to supply heat to exhaust gasses from a turbine upstream of a Heat Recovery Steam Generator (HRSG). The turbine supplies all of the electrical power for plant operations, while the HRSG provides steam for plant processes. The system is designed to accommodate the addition of a second turbine, which will be pant legged to the existing turbine. The burner is capable of operation, with either flow from a single Taurus 70 Turbine or the combined flow from two (2) Taurus 70 turbines.

Technical Data:

Turbine:	
Make:	Solar Turbines, Inc.
Model:	Taurus 70
TEG-Current (Single Turbine):	
Flow:	214,200 lbs./hr
Oxygen Content:	14.3%, wet
Temperature In:	926 ºF
Temperature Out:	1,700 ºF
Burner Duty:	51.0 MMBtu/Hr
TEG-Future (Two Turbines):	
Flow:	428,400 lbs./hr
Oxygen Content:	14.3%, wet
Temperature In:	926 ºF
Temperature Out:	1,400 ºF
Burner Duty:	63.0 MMBtu/Hr
Burner:	
Type:	72 FFB FlueFire
Duty:	63.0 MMBtu/Hr
Dimensions	72" W x 130" H
Fuel:	Natural Gas

Duct Burner prior to installation showing 8 rows of burner with flame propagation plates.

Duct Burner with Inlet Transition.

Duct Burner Installed with Diverter Valve Upstream.

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