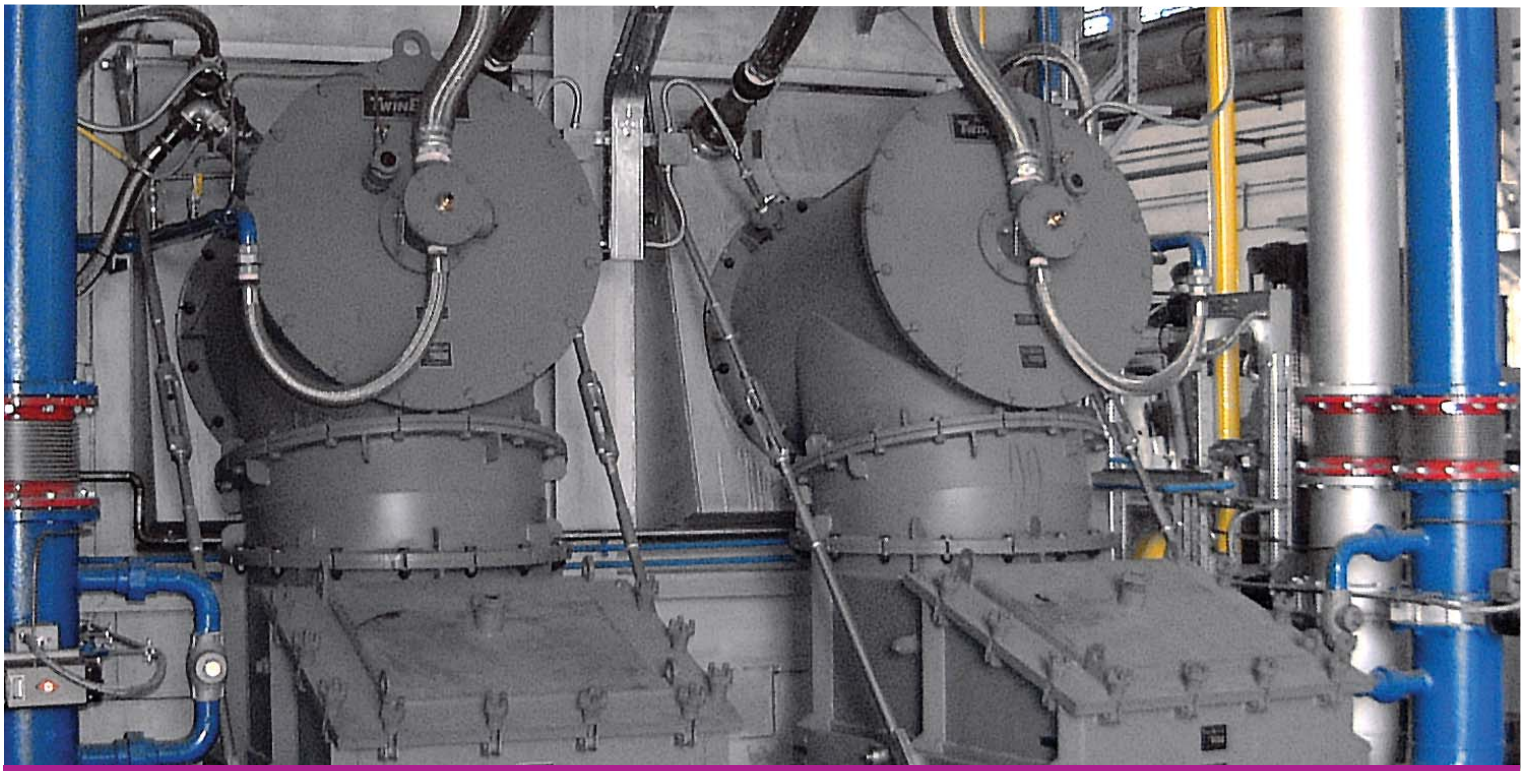
Combustion

North American TwinBed®II Regenerative Burners



Low NOx emissions and high fuel savings make it a perfect match for many high temperature heating and melting furnace operations.

- Aluminum Melters
- Steel Forge Furnaces
- Steel Reheat Furnaces
- Heat Treat Furnaces
- Retort Furnaces
- Glass Melters

Low NOx regenerative burners without complex baffles, or refractory stabilizers.

TwinBed II Features

- Low NOx emissions
- High efficiency
- No complicated refractory stabilizers or baffles
- Long life, air-cooled pilot
- Modular construction for flexibility
- No high volume of cold air required for stability
- Enhanced rugged construction
- Custom U-channel seals used on all high temperature joints
- All high temperature joints are protected from direct radiation
- Burner pairs available for capacities ranging from 1 mm Btu/hr to 29 mm Btu/hr

Lower Fuel and Operating Costs

TwinBed® II Regenerative Burners recover waste heat from furnace exhaust gases and preheat combustion air to significantly increase efficiency over conventional burners or burners with recuperators. TwinBed II regenerators are heat and corrosion resistant and tolerate hostile environments that can destroy recuperators.

TwinBed II burners have been successfully applied to a variety of high temperature furnaces. The higher the process temperature, the higher the potential fuel saving.

Ultra Low NOx Emissions

North American's proprietary LNI technology is truly the "Best Available Technology" for regenerative burners and outperforms all other regenerative burners. Field-proven NOx emissions are extremely low, even when compared with cold air burners.

How TwinBed II Works

To minimize NOx formation, two different air-fuel mixing techniques are used depending on furnace temperature. TwinBed II is operated as a conventional high velocity burner when furnace temperature is below autoignition temperature of the fuel-air mixture. Above autoignition temperature, fuel is switched to nozzles adjacent to the burner tunnel port. Low NOx Injection (LNI) of fuel into the furnace chamber lowers the mixing rate of the air with fuel and vitiates (mixes with inert furnace gases) combustion air to reduce the rate and temperature of the combustion reaction, thus significantly suppressing the formation of NOx. This "in-furnace" direct NOx control method maintains highest potential efficiency.

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