

METHODS FOR SOLVING COLD, OR BACK END CORROSION

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ABSTRACT

Every time when containing sulphur fuels are fired in heaters or boilers, sulphur dioxide, and to a small extent sulphur trioxide, are formed in addition to CO₂ and water vapor. Also, when cooled below the water vapor dew point, CO₂ can combine with water vapor to form carbonic acid, which though weak, can attack mild steel. While thermal efficiency of the equipment is increased with reduction in exit gas the temperature (or enthalpy), lower temperatures than the acid gas dew point are not advisable for metallic surfaces in contact with the gas. In addition to sulphuric acid, hydrochloric and hydro bromic acid should be existing. This article deals with methods for solving cold, or back end corrosion with the most commonly used heat recovery equipment, namely economizers or water preheaters.

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