CASE STUDY
INDUSTRY: REFINERIES

CUSTOMER: Luminant

LOCATION: Dallas, Texas, USA

BACKGROUND: Luminant, Texas' largest electricity generator, voluntarily committed to significantly reduce key emissions from its coal-fueled generation fleet to meet EPA requirements. To accomplish their goal, Luminant relied on the combined efforts of Armstrong International and its representative partner, George B. Allan, to solve their flue gas reheat problem.

SCOPE OF WORK: Armstrong was invited to conduct a plant walk-through to evaluate Luminant's facilities. While Luminant's initial plan focused on replacement of the existing air preheat coil system which had failed , it was apparent that this plan would not totally solve their emission problems. Armstrong formed an internal team of experts to design a comprehensive engineered system that required solutions across multiple divisions, including steam applications, condensate management products, heat transfer solutions and wireless monitoring intelligence.

The ultimate focus was to guarantee that the heated ambient air would consistently meet required temperatures needed to mix with the exhaust gas to prevent acidic condensate inside of the stack or stack liner materials. Luminant also required system monitoring to ensure plant managers received real-time data on all operations.

Armstrong's team of experts designed a system solution concept to utilize plant-supplied superheated steam to heat the ambient air to desired final temperatures, which was above steam saturation temperature. The comprehensive engineered solution included subcooling coils, condensing coil banks, desuperheating coils, condensate management, and wireless monitoring to provide early detection of flooding, steam loss, and losses in heat transfer.

Luminant is on their way to fulfilling their mission of lowering harmful emissions with Armstrong's intelligent system solution. Exceptional project management was provided to meet Luminant's strict time requirements, and maintain tight control over all supplied components and engineering details.