



CASE STUDY

INDUSTRY: CHEMICALS



CUSTOMER: Fushun Petrochemical Division of PetroChina Detergent Chemical Plant

LOCATION: Fushun, China



BACKGROUND: Armstrong International designed, engineered, installed and financed a steam system and condensate recovery system optimization project for the Detergent Chemical Plant, Fushun Petrochemical Division of PetroChina.

This is one of the several sub-projects covered in a system optimization agreement under the cooperation of Fushun Petrochemical and Armstrong.

- SCOPE OF WORK:**
- Optimize condensate collection stations for tracing lines
 - Merge, terminate or re-route the existing condensate return lines; change overhead pipelines and buried pipelines to overhead pipelines
 - Re-design the flash steam utilization system
 - Install condensate treatment to system (IEF) to remove oil, iron, silicon and floating matters from the condensate before being pumped to the demineralized water tank
 - Apply steam traps in tracing lines that resist back pressure and reduce steam carry-over

The annual condensate recovery: 103,000 tons; steam saving rate: 30%; annual steam savings: 43,000 tons; net energy savings: \$434,000; payback period: 2.5 years

- BENEFITS:**
- Pipelines enjoy little heat loss, even resistance distribution, high reliability and easy maintenance
 - Condensate heat is recovered to its utmost. No steam is discharged directly to the atmosphere
 - Condensate treatment integrates filtering with ion exchange. With a fully developed monitoring system, PLC control system and two industrial PC work stations, the system is automatic and carefree.
 - After treatment, the condensate can fully comply with the quality requirements for MP boiler feed water



Armstrong International

INTELLIGENT SOLUTIONS IN STEAM, AIR AND HOT WATER

North America • Latin America • India • Europe / Middle East / Africa • China • Pacific Rim

armstronginternational.com