



CASE STUDY

INDUSTRY: REFINERIES



CUSTOMER: Greenergy

Greenergy

LOCATION: Immingham, United Kingdom

SCOPE OF WORK: Since Armstrong International's initial steam and condensate audit in 2011, the condensate return network at Greenergy's biodiesel refinery was optimized step-by-step. Critical reboilers were equipped with Armstrong condensate pumps to avoid water hammer and leaks due to flooding/stalling. Dedicated condensate return lines were added to reduce condensate back pressure. An obsolete flash recovery system causing high backpressure on low pressure steam users was removed. The last step in the condensate return system upgrade process was to replace the condensate receiver unit.

The existing condensate receiver was undersized and unreliable due to cavitation of the centrifugal pumps. An Armstrong 5EPT-312 open condensate receiver package was installed to return 15.3 tons of condensate per hour of from the site to a new external boiler house.

This project followed the 2011 Audit and was part of a Basic Design Study on how to connect the site to a new external biofuel fired boiler house.

BENEFITS:

Armstrong's condensate return system optimizations increased Greenergy's condensate return of at least 1.2 tons per hour. Greenergy's improved system reliability and more constant condensate return flow to the boiler house reduced load swings on the biomass steam boilers. Greenergy also recognized financial savings of at least 2,700 dollars per year.



5EPT-312 condensate receiver package during