

STAR DEVELOPS GAS RECYCLING SYSTEM FOR ALSTOM

Star Refrigeration has developed an innovative gas recovery and recycling system for Alstom, the power plant solutions specialist.

Alstom specialises in the design and manufacture of steam turbines, gas turbines and hydro power plants. The company continually develops new products to improve power plant and component performance.

Star's thermodynamic system has been installed at Alstom's UK research facility in the Midlands. The system was developed to replace existing equipment with a more environmentally efficient solution.

The new dual-purpose system supplies HFC refrigerant R134a to a research and development (R+D) test facility. The gas is then recovered and condensed by the system, before it is recycled.

The plant features an air-cooled evaporator and condenser in one unit. The evaporator uses ambient air to generate 1000kg/hr of R134a gas from liquid at 3.5 Bar (A).

A reciprocating compressor delivers superheated gas to the R+D test facility at the required pressure. The gas is later recovered and condensed in an air-cooled condenser.

It is then stored as a liquid in a high pressure receiver, before being re-circulated by the system.

The system also features a unique Star manufactured purger, capable of removing up to 4kg/h of non-condensable gases. The plant is operated by Telstar, Star's patented computerised control system.



Star Refrigeration's thermodynamic dual-purpose gas recycling system, developed for Alstom

Alstom's innovative system was developed in consultation with Star's technical advisory arm, Star Technical Solutions (STS). STS operates as an independent consultancy, working alongside Alstom from the design stage through to commissioning

Star-owned mechanical and electrical contractor Penec was responsible for the removal of an existing electrical system. Penec also completed the installation of new electrical panels and wiring.

Star Refrigeration is the UK's largest independent industrial refrigeration engineering company. Star focuses on the design, manufacture, installation, commissioning and maintenance of industrial refrigeration systems. The company offers a turnkey package to all users of refrigeration plant.

Star's technical advisory arm, Star Technical Solutions (STS), operates as an independent consultancy providing advice on refrigeration engineering issues. Star also owns food freezing and chilling equipment specialist Starfrost, as well as mechanical and electrical contractors Penec.

For more information, phone Star Refrigeration on 0141 638 7916, email star@star-ref.co.uk or visit www.star-ref.co.uk. Star Refrigeration, Thornliebank Industrial Estate, Glasgow G46 8JW.

				
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