STAR REFRIGERATION

CASE STUDY

GLAXOSMITHKLINE, STEVENAGE

STAR COMPLETES FLAGSHIP PROJECT FOR GSK

Star Refrigeration has completed work as part of an award-winning £5million project at GlaxoSmithKline's Medicines Research Centre in Stevenage.

GlaxoSmithKline (GSK) is one of the world's leading research-based pharmaceutical and healthcare companies. GSK's Stevenage site is one of nine pharmaceutical R&D facilities in the UK. The site houses GSK's largest chemistry pilot plant, which is used to scale up drug substances.

GSK was looking to boost cooling capacity within the pilot plant to carry out an increased number of pharmaceutical processes. As well as upgrading its refrigeration plant, the company also wanted to replace two existing chiller units in line with the phase out of R22 refrigerant. It was vital that the new refrigeration plant would be environmentally sound and energy efficient.

Star Built Screw Compressor Pack

Star Refrigeration was chosen by project management specialists PROjEN Plc, the main contractor on the GSK project, for their specialist knowledge of the refrigeration process. Star specialises in bespoke systems for industrial cooling and is committed to pioneering natural refrigerant solutions.

In August 2004 Star successfully replaced the two R22 chiller units with a central ammonia refrigeration plant. The new refrigeration plant was commissioned within a short timeframe to coincide with a planned 30-day shut down period at the pilot plant.

PROjEN's Senior Project Manager Steve Campbell says: "This was a time critical, flagship project for GSK. The client was looking to invest in an environmentally sound and energy efficient refrigeration plant. We strive to work in partnership with the leading suppliers of professional services on all projects and felt Star had the best ability to provide a quality service for both ourselves and GSK."

The new plant features state-of-the-art components including two screw compressors, two evaporative condensers and plate and shell heat exchangers. Star also connected two existing ammonia compressor systems to the new refrigeration plant. The new plant has a total cooling capacity of around 2,000KW. A computerised control system with dual display panels ensures built-in reliability and

continuous operation.

The new refrigeration plant is designed to cool a secondary heat transfer fluid (HTF) to –30C, with the facility to reach –40C for low temperature applications. This HTF is then circulated to meet cooling requirements in reactors and modules throughout the pilot plant . Star was also responsible for decommissioning, removing and safely disposing of the existing R22 refrigerant.

The new refrigeration plant forms part of a £5million project being managed by PROjEN at GSK's Stevenage site. Further investment managed by PROjEN includes new HTF pumps and a purpose built plant room to house the new refrigeration system.

PROjEN was recently presented with the Project of the Year title for the GSK project in the European Construction Institute's ACTIVE Awards 2004. The ECI ACTIVE Awards recognise outstanding projects undertaken by some of the largest contractors and project support organisations in Europe.

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.

Established in Glasgow in 1970, Star has over 250 employees nationwide and provides fast response 24-hour technical support from a network of nine branches to customers throughout the UK.

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.

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