

CASE STUDY

CASE STUDY NUMBER 02: BRITISH AIRWAYS

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STAR PROVIDES FREE COOLING FOR BRITISH AIRWAYS

Star Refrigeration's Ammonia Thermosyphon Cooling System has been granted Millennium Product status by the Design Council, after Prime Minister Tony Blair challenged businesses to show that Britain is the creative powerhouse of the world.



The Thermosyphon Cooling System is a highly efficient, water-chilling system designed to provide "free cooling" when weather conditions allow. When the outside temperature is low enough cooling is achieved without running the chiller's compressor, which is its major energy consumer, allowing natural circulation of refrigerant between the evaporator and the condenser to be set up.

According to Managing Director John Rowell "In 1997 we developed the Thermosyphon Cooling System, in association with the Building Services consultants, Justham Dunsdon Partnership, to operate with ammonia as the refrigerant. This system has arguably the highest efficiency and lowest environmental impact of any mechanical refrigeration plant in operation in the world. I am hoping that as a Millennium Product, the Ammonia Thermosyphon Cooling System will be selected for inclusion in the Millennium Dome."

The first ammonia system, with a cooling capacity of 3,300kW, was installed for British Airways' new computer data centre at Heathrow.



British Airways new computer data centre at Heathrow

Its power consumption is only 34% of the next most efficient system considered for the project, saving the customer an estimated £166,000 per year in electricity bills. Other thermosyphon cooling projects recently completed include the first single chiller installation for comfort cooling of Nat West's new telephone call centre in Bradford and a paint cooling application for the Ford Motor Company at their factory in Genk, Belgium. The Nat West Project was the winning entry in the `As Built Environment' category of the Engineering Council's 1999 Environmental Award for Engineers.



Star's Thermosyphon cooling system

Andrew Summers, Chief Executive of the Design Council said: "We offer our warmest congratulations to Star Refrigeration for the selection of the Ammonia Thermosyphon Cooling System as a Millennium Product. We sincerely hope that it will be a big success for the company and we hope that Millennium Product status will encourage Star Refrigeration in further successful developments."

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 260 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 engineering issues. Star also owns food freezing and chilling equipment specialist Starfrost, as well as mechanical and electrical contractors Penec.

