

STAR REFRIGERATION HELPS HUNTSMAN KEEP PRODUCTS SNOW-WHITE

Customer:	Huntsman Pigments & Additives
Equipment:	Bespoke refrigeration system
Refrigerant:	Ammonia
Capacity	330kW
Temperature	-15°C

Since 1970, Huntsman has been a global leader in the manufacturing and marketing of differentiated chemicals. Huntsman is a leading supplier of Titanium Dioxide pigment, which is used to add brightness, whiteness and opacity to thousands of consumer products manufacturer across the globe.

The refrigeration plant at Huntsman Pigments and Additives’ factory at Greatham, UK needed updating due to the phase out of R22. Star Refrigeration has enjoyed a close working relationship with Huntsman, and first looked at the replacement project in 2010. After proposing an innovative, cost-effective solution that worked with the R22 phase out deadline, Huntsman appointed Star to deliver the replacement. David Laws, Star’s Sales Manager – Process Industries, said: “We have been working closely with the Huntsman engineering team for a number of years prior to this replacement project and offered a

number of alternative schemes before the direct system was accepted.”

Star carried out a GAP analysis of the project specifications pre-contract to ensure Huntsman’s requirements were satisfied. The process heat exchanger design was paramount to ensure that it matched the site installation configuration and the ammonia refrigeration packages were mounted with an explosion proof plant room.

Star proposed a cost effective project plan with the lowest life cycle costs. This involved the use of a zero carbon ammonia system located inside a purpose built plant room.



The refrigeration plant stays in line with Huntsman’s sustainability strategy by utilising zero GWP refrigerant ammonia, which will help to reduce carbon footprint.

All equipment is suitable for Hazardous Area Zone 2 11A T1 regulations to meet Huntsman site safety and compliance standards. Star also allowed for the easy integration of the entire refrigeration plant with their existing site control system.

One of the key features of the state-of-the-art direct refrigeration system was the high integrity construction of the process heat exchangers and materials used to prevent any cross contamination between the ammonia and process gas. The premium quality equipment also increases plant reliability, longevity and minimises the need for ongoing maintenance and repairs, as all components are built to industrial quality standards.

Star's approach to the project and the efficiency with which the works were carried out during the whole process, from the specification stage, to design, manufacture, installation and commissioning were praised, especially as the final phase was undertaken with minimal disruption to Huntsman's usual business activities.

Star rose to the challenge and came up with an innovative solution that complies with regulations, reduces the carbon footprint, boosts plant efficiency and ultimately increase the business's bottom line.

Over the past few years, the leading industrial refrigeration company has been helping world-class organisations and small businesses across the nation prepare for R22 phase out. This extensive experience makes Star a trustworthy ally for any business on the lookout for a reliable R22 phase out supplier

This was not the first project that Star had executed for Huntsman Pigments and Additives on Teesside, with the company previously installing an NH3 refrigeration/chilling system in 2002. This indirect system used brine cooled by an ammonia refrigeration plant. The brine was then circulated to cool the product.

Star has also been providing Huntsman with onsite maintenance since 2001.

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Case Study:

Huntsman