

INDUSTRIAL REFRIGERATION

Greenway® RTU, the ideal cooling fluid for meeting environmental standards in the food industry

The RICARD company, which has been committed to a responsible approach since 1932, has converted its two cooling processes from MPG to Greenway® RTU for its new ISO 22000 certification.

The Ricard distillery in Bessan, near Béziers, produces the two flavours essential for producing Ricard Pastis, the legendary drink from Marseille now famous all over the world. In March 2013, this plant with a surface area of 11,000 m², was certified according to the ISO 22000 Food Safety Standard, as were the other two production sites based in Bordeaux and Lille.

To enhance their environmental commitment and meet the recommendations of this certification, the two cooling processes using diluted monopropylene glycol have now been converted to Greenway® RTU, a ready-to-use cooling fluid with 1.3-Propanediol (Bio-PDO™) base and longlife organic corrosion inhibitors.

“Since 1932, respect has been at the heart of our commitments, whether we are talking about consumers, employees, partners or the environment”, explained Michel Foulquier, Regional Site Manager at Bessan. “Under this certification, we performed a risk analysis on all of our industrial processes. In the cooling process we use Friogel® cooling fluid, which is approved by the French General Directorate of Health, but we wanted to go further in our approach and to use a more environmentally-friendly fluid”.

A strict production process

To respond to this environmental awareness, Ricard made use of the Cantie Process company, who are responsible for the design of cooling and heating processes on the site, to find



the right product. This company, which specialises in the food industry, chose Greenway® after consulting several suppliers, including Climalife. “It was the only cooling fluid approved by the Ministry of Health and in which the raw material used comes from a natural resource, glucose syrup”, said Nicolas Cantie, Managing Director.

The first system cools the second stage of the rectification column used for the star anise, which is the principal ingredient processed by Ricard. The star anise, mainly harvested in China and distilled for the first time there, arrives at the Bessan site in the form of essential oils. These are then processed in this column in order to separate the 12 to 14% of impurities through the use of various parameters (vacuum, pressure and flow rate) to obtain the molecule known as anethole.

Certain volatile compounds are trapped at a temperature of -1 / -2°C which requires a glycol production system at -5°C with a Dai-kin EUWAB 16 KAZ chiller unit with a cooling capacity of 22 KW.

To produce Ricard, a second ingredient is necessary, liquorice. This is crushed on the site and then placed in autoclaves in the INOXA building. As it passes through successive baths, via a steam heating process and then a cooling phase in a loop circuit with chilled water at 7°C, the liquorice flavours are extracted and give a homogeneous liquid.

The second glycol circuit cools and controls the storage temperature of the alcohol that will be added to the manufacturing process. It produces water at +2/+6°C using a TRANE CGAN300 cooling unit with a cooling capacity of 76.2kW installed on the roof of this building. The alcohol is cooled via two plate heat exchangers and then stored in two T51 insulated tanks with variable cooling speeds where the Greenway® circulates. These tanks are maintained at +10°C.

Conversion to Greenway® RTU

The work took place over three days last spring, taking advantage of a production shutdown. The two glycol circuits were drained once the machines were stopped in coordination with the site maintenance managers. The circuits and filters were cleaned and then rinsed with clean water. Greenway® RTU was then injected by pump.

After purging any air, the installations were restarted and samples were taken at different levels to check the temperature. The product has now been in circulation for more than nine months and the results are satisfactory.



Company: Cantie Process

Business: Design and installation of heating and cooling production systems - Air processing - Management of energy and technical fluids.

Location: Mazamet (81) - France

Date created: 1967

No. of employees: 20

Turnover: €5 million in 2012