



Lyondell chooses Zitrec L

Our Customer

Lyondell is producer of the basic chemical building blocks that go into clothing, food packaging, construction and homebuilding materials, household furnishing and automotive parts. The Lyondell motto says it well: “*Creating the basic elements for life*”.

Those basic elements are propylene oxide and derivatives including mono propylene glycol (MPG), butanediol, glycol ethers,...

The Application

In 2003, Lyondell started a new plant to produce propylene oxide and styrene monomer in their newest Rotterdam (NL) plant in “de Maasvlakte”. The Maasvlakte site actually produces 285,000 ton propylene oxide and 640,000 ton styrene monomer per year.

The new facility is a joint venture with Bayer. Today, this facility removes process heat by means of a refrigerated cooling water system containing 210.000L of uninhibited MPG. This uninhibited MPG is produced in another Lyondell facility in the Botlek (NL).

Achieving the reliability target

For the new plant, the minimum reliability target is set at 98%. Mr Olijve, Operations Superintendent, told us :

“... The 98% reliability target can only be achieved when you carefully select every component of your installation, including suppliers, by not making compromises – select the best for the best price. But most importantly, we can only keep our factory performing at that level if you can maintain your installation thoroughly. On the other side, the



Mr. Olijve, Operations Superintendent, in front of the Lyondell plant near Rotterdam



maintenance costs and efficiency are also important performance indicators that need to be in line with the other Lyondell facilities and are regularly benchmarked with other companies... ”.

Mr Olijve continues to say: “ ... *Critical to us was the use of MPG considering its non-toxic properties, implications of potential contamination with our products, the frost protection it offers but certainly also to prevent corrosion problems.*”

“It is our experience that when using uninhibited MPG or water as a heat transfer fluid for a longer period, we experienced higher maintenance costs and reduced reliability because of corrosion in the cooling water system. We definitely wanted to prevent that from happening in this new facility!”

Customer Satisfaction

Lyondell-Bayer has used Zitrec L -5°C, a tailor-made dilution for their application. During a follow-up meeting with Tom Lansbergen after almost 1 year of service with Zitrec L, Mr Olijve comments: “... *I am very pleased with the service and technical support provided by Artec. Artec proved to be a flexible and reliable company and I am very pleased with my choice – for a next project, I’d choose them again!...*”. Looking back over the last year of use of Zitrec L, no problems caused by corrosion were found.

After sales support

As after sales support, Artec has recently examined a sample of Zitrec L, currently about 1 year in the installation, and found that it was as good as new – no metal-ion contamination caused by corrosion of materials was found.

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