

CASE STUDY

A world designed to last

Epicerol

Pioneering a better way
to produce epichlorohydrin

T.EN TECHNIP ENERGIES



Overview

Epicerol is a breakthrough technology with respect to conventional propylene-based processes and presents major advantages to other glycerin-based technologies.

Epicerol® is our proprietary technology for the production of epichlorohydrin (ECH) from glycerin and is the benchmark method for producing high quality product on a consistent basis. The Epicerol trademark is recognized worldwide by leading clients because it is cost competitive and cleaner than other ECH processes.

50 KTA
PLANT CAPACITY

60%
CO_2 EMISSIONS REDUCTION

20-40X
LESS WASTEWATER

7-10X
FEWER BYPRODUCTS

Contract:
License, Basic Engineering and support services

Award:
2019

Delivery:
2021

Client:
Meghmani Finechem Ltd

Location:
Dahej, Gujarat, India

Challenge

Meghmani Finechem Ltd. (MFL) turned to Technip Energies for crucial expertise in producing epichlorohydrin from glycerin at its Gujarat, India plant.

Epichlorohydrin (ECH) is a compound used to produce epoxy and non-epoxy resins. With numerous applications for adhesives, electronics, composites and paints and coatings, ECH is a valuable commodity.

Meghmani Finechem wants to be the first Indian company to manufacture ECH, aiming to start up a plant by 2021. However, traditional methods of manufacturing ECH from propylene are expensive and environmentally unsound. To move the project forward, MFL called on Technip Energies to provide a solution.



Solox section, ABT, Map Ta Phut, Thailand

Solutions

A renewable response: Manufacturing ECH from clean, safe glycerin



100 kta ECH plant, ABT, Map Ta Phut, Thailand

Technip Energies proposed its EPICEROL® technology to MFL. Instead of using propylene to obtain ECH, EPICEROL® uses glycerin, a renewable feedstock derived from natural sources. This is the most sustainable ECH process available, cutting CO_2 emissions by 60 percent, limiting chlorine use and reducing wastewater by 20-40 times what is typically used in the propylene process.

MFL has signed a licensing agreement and is moving forward with construction of a unit that will be integrated into the Chlor Alkali and Derivative Complex in Dahej, Gujarat. Along with the rights to all proficiencies and IP related to the technology, MFL also is engaging with Technip Energies for engineering and design support, procurement and purchase services and training, and technical assistance. Technip Energies' team in Lyon, France will run point on the project with help from Technip India for onsite inspection services.

Results

The MFL unit will further demonstrate our technology's benefits, which have been on display at Advanced Biochemical Thailand's 100 kta industrial plant in Map Ta Phut. The plant has been continuously running at full capacity since 2012.

The Indian facility will mark the first time Technip Energies has licensed EPICEROL® since it acquired the technology in 2018 from Belgian chemical company Solvay. Since the acquisition, Technip Energies has focused on knowledge transfer, augmenting our team to show clients that our expertise matches this technology's many advantages. We are building on this success in India and beyond.

Epicerol offers a cost-effective ECH production process using sustainable raw materials, resulting in a highly environmentally friendly process, with fewer emissions and harmful byproducts."

Stan Knez

Senior Vice-President Process Technology