

# SiYPro™ Case Study

Light Ends Treatment



## Situation

A European producer of ethylene was experiencing short run lengths in their light ends section and high costs associated with their inhibitor system.



## Approach

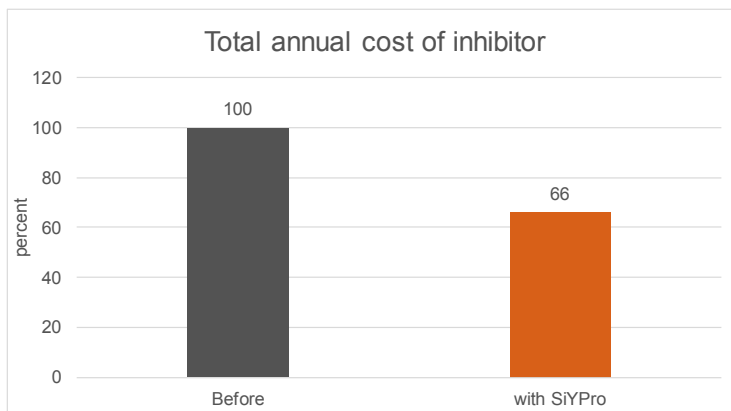
The most common problem in ethylene monomer purification is the polymerization of unsaturated species through a free radical mechanism, due to the high temperatures used during processing. Also oxygen-initiated peroxides lead to fouling. The SiYPro™ approach was to eliminate the cause of the polymerization.

## SiYPro™ Program

Based on the information the SiYPro™ Process Team received from the customer, the decision was made to use SiYPro™ E640. It was chosen because it strongly inhibits the thermal polymerization of unsaturated species during normal operations, and furthermore has the ability to destroy peroxides that are present in the system.

The product was added into the feed of the column to ensure a good distribution into the lower section, where the unwanted polymerization occurs.

A dosage of approximately 40 wppm based on the feed to the column was found to give the most beneficial cost-performance ratio.



## Results

After the application of SiYPro™ E640, the plant observed a significant increase in the run length of the column and its reboiler, and a clear reduction in the overall treatment costs.

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