

Pollutants Can't Escape Praxair's VOC System



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New, more stringent clean-air regulations are requiring companies around the world to increasingly limit polluting emissions—including smog-causing volatile organic compounds (VOCs).

For a new and highly effective way to accomplish this, many are turning to Praxair, which offers an advanced cryogenic VOC removal and recovery system. Praxair's North American Industrial Gases (NAIG) has sold several of the systems over the past three years, and the market is growing.

"The system uses liquid nitrogen to cool the gaseous effluent produced by industrial production processes to very low temperatures in order to separate out the VOCs," said **Jennifer Humenik**, formerly NAIG business development manager and now **manager, Investor Relations**. "These include solvents, chlorinated compounds and olefin monomers."

Concepp Technologies Inc., which produces polypropylene foam used in auto parts, packaging and other applications, is one of Praxair's latest customers. The production of polypropylene foam involves bringing together polypropylene and volatile hydrocarbons (petroleum derivatives) within a vessel. They are then melded under pressure and other processing steps to create the expanded foam.

"While the volatile hydrocarbons had previously been burned off during the production process, a significant portion is now diverted in gas form to the VOC recovery and removal sys-



The VOC removal and recovery system Praxair installed allows Concepp Technologies to capture for re-use 99 percent of the volatile hydrocarbons diverted to it. The VOC unit rises up directly behind Lynn Mead (center) and Concepp's Eric Ley and Bruce Jackson at their facility in Wyandotte, Michigan. To the left is the liquid nitrogen tank Praxair installed to cool the unit.

tem," said NAIG **Business Manager Mitch Day**, who manages the Concepp account. "The unit condenses the hydrocarbons into a liquid state, making 99 percent of it available for re-use."

"Not only is the system environmentally beneficial, the cost savings for Concepp are considerable," explained **Region Application Consultant Lynn Mead**. "This system should help them reduce their hydrocarbon purchases significantly."

"We looked at several options, but Praxair's system made the most sense," said Concepp's Production Superintendent Eric Ley. "Thanks to the VOC system, we've been able to exceed our goal of re-using 85 percent of the volatile hydrocarbons used in the entire process, and the nitrogen we purchase to run the system is a lot cheaper than those hydrocarbons."

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