

The art of separating oil and water

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THE JOURNAL RECORD

OKLAHOMA CITY – Kirby Mohr realizes sometimes an entrepreneur has to ride out the ebb and flow of business development, as he's seen in the case of his seven-year-old oil and water separations company.

"I've had some good years and bad years," the owner of Jenks-based Mohr Separations Research Inc. said. "This is looking like it might be a banner year, but – you hear me knocking on wood? – you don't have the orders until you have the orders."

Mohr helps companies save money by improving their oil-water separations by adapting their existing equipment and by providing new designs and processes where needed. Mohr holds degrees in chemical and environmental engineering from Iowa State University and Oklahoma State University. He has 37 years of engineering experience, the last 27 of which specializing in liquids separation and filtration.

"We know that environmental budgets are very limited and you need to justify every dollar you spend to clean up your water effluent," Mohr says in his company's promotional material. "Nobody wants to buy an oil-water separator – people only want their problems solved."

About half his contracts involve storm water treatment; the other half deal with industrial liquids. Many big companies around the world are required to pre-treat their own oily wastewater before releasing it to local municipalities for further treatment.

Mohr recently completed the design and supplied the equipment for two large separators for processing more than 18,000 gallons per minute of leakage water at a hydroelectric facility in Canada. And in Texas, he helped a large chemical company plant

reduce the hydrocarbon



PHOTO BY RIP STELL

Kirby Mohr, owner of Mohr Separations Research, works to prepare a separation filter for installation.

content in its water to meet local ordinances. Lately, he's been expanding his work to include separators for biodiesel plants.

"Many of those designs use centrifuges. Some of that is done because they're being sold on the idea by people who design centrifuges, and some of it is because other people follow along like lemmings. But it isn't necessary," he said.

He said the high-velocity, spinning technology is maintenance-intensive and expensive – "Anything that runs at 50,000 rpm is going to require maintenance," Mohr said.

Mohr sees a lot of potential in the market to help clients avoid centrifuge costs, so he's currently designing and testing alternative systems. But Mohr said he needs to build a research lab for additional work on the concept, which may lead him toward angel investors. He's already applied for a \$100,000 federal grant.

He also credited i2E for its support. I2E Inc. is a nonprofit corporation that operates the Oklahoma Technology Commercialization Center under the state-funded Oklahoma Center for the Advancement of Science and Technology, or OCAST. I2E's purpose is to encourage and support the development of technology businesses such as Mohr's.

"The problem I have is the same problem many small companies have: I need to do the work in order to eat, but I also need to do the research for the future. And there's only so many hours in the day," he said.

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