

## CIRAS' TECHNOLOGY ASSISTANCE PROGRAM—CONNECTING IOWANS WITH TECH, EACH OTHER

**ABOUT PENGO CORPORATION.** Pengo Corporation is located in Laurens, Iowa and has 60 employees. Pengo, is one of the world's largest manufacturers of drilling attachments and related wear parts.

**THE CHALLENGE.** Pengo had an opportunity to test a new auger in front of a major client, and it failed. The company does not have any metallurgists on staff and needed assistance in determining why the shaft failed. Eric Matthias, the director of new product development at Pengo, contacted CIRAS, part of the MEP National Network™, for assistance.

**MEP CENTER'S ROLE.** The company turned to CIRAS materials specialists Paul Berge and Adam Bosenberg, who quickly found decarburization in the area surrounding holes created for a driveshaft pin. Further testing at Iowa State University's Center for Nondestructive Evaluation identified tiny cracks extending from the pin holes deeper into the metal. Berge diagnosed the problem as improper heat treatment. "When the process is conducted in the wrong environment," he said, "you end up with the surface of the steel losing carbon and then it turns back into soft iron, which is a lot weaker."

"They've been huge for us, I actually just sent two more of my engineers down there today to work with them again."

-Eric Matthias, Director of Business Development

## RESULTS



\$50,000 in cost savings



\$400,000 in new or retained sales



\$200,000 in new products

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## CONTACT US



Iowa State University  
1805 Collaboration Place,  
Suite 2300  
Ames, IA 50010



(515)294-3420



[www.ciras.iastate.edu](http://www.ciras.iastate.edu)

