

WEDIN Newsletter (05/15/01)

"Local company completes unique project: Giant screws"

By JUDY WHITMAN: Cadillac News staff writer



Photo by John L. Russell/Record Eagle

Cadillac- It was a one-of-a-kind project.

A total of 10 men worked in shifts around the clock for the last three months at Wedin International Inc.

The result of their efforts was unveiled Tuesday: a pair of 32-foot-long, perfectly balanced steel screws that will operate the world's largest swage auto frettage.

But what's a swage auto frettage, you ask? Wedin vice president Jack Rabun Jr. is quick to explain. It's a machine that bores out the barrels of large guns incorporated in military equipment.

The technology, which dates back to the Korean War, extends the accurate firing life of gun barrels by driving in a carbide-bit boring mechanism which expands and reinforces the walls.

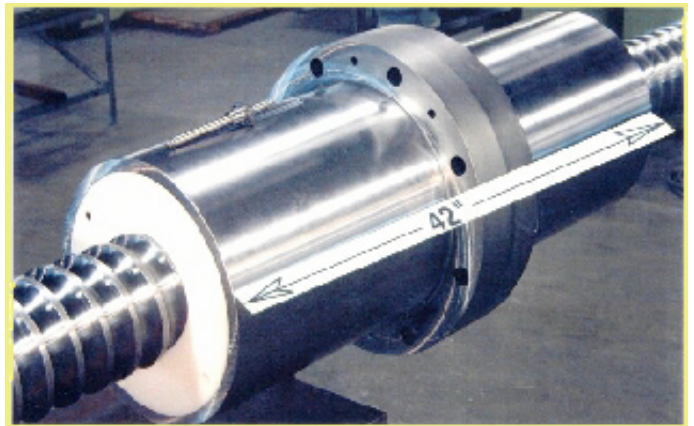
"It give the gun a 70-shot life without any warpage," said Rabun. Without the boring, the gun would begin to lose accuracy after only 10 shots.

The giant screws were commissioned by Fairfield Machine Co. in Ohio. At present, they're awaiting shipment in Wedin's Cadillac facility. At 6 inches in diameter, each hardened steel screw weighs 2,500 pounds and is equipped with two nuts 42 inches in diameter, weighing 500 pounds apiece.

"We started with raw stock material," said Rabun, adding, "Straightness is the important thing."

Dimensions were checked continually throughout the process of grinding the threads to ensure that the screws didn't go out-of-round.

"We have to constantly keep them cooled down, or they would heat up and distort," explained Dave Skiff, a ball screw assembly worker from Manton..



Oil was used as a coolant while grinding the screws'



threads, while water was using during the grinding of the diameter.

"You wouldn't want to mess these up," said Rabun, crediting the plant's workforce with doing a superior job. "These people really work hard to do the job right the first time."

Taking difficult jobs like crafting the swage screws are one of the strategies that has kept Wedin competitive in a global market, Rabun said. The family-owned business " which has operated a plant in Cadillac for most of its 65-year existence " has

thus far been able to avoid laying off any of its workers despite a widespread economic downturn.

Photo by Judy Whitman/Cadillac News

"We've been very fortunate," said Rabun, who spends more than 250 days a year on the road promoting the firm's products.

His brother, Brian, serves as sale manager, while his father, Jack Rabun Sr., works in the firm's Augusta, Ga., office. His son, Jack Rabun III, will graduate from Ferris State University on May 7 and will be a full-time employee of the company as of May 12.

Besides manufacturing screws and gears, the company maintains an engineering department capable of building machinery "from concept to creation," Rabun said.

"Our design Engineering Department recently redesigned a machine placement," he said. The equipment's original design allowed it to be moved in 18 seconds.

A design team headed by Jason Crosby re-engineered the piece, allowing it to be moved in 1.5 seconds, Rabun said.

The firm is continually seeking new challenges. Skiff noted that he actually prefers working on the larger projects as opposed to minor ones. However, the swage auto fretage screws aren't the biggest manufactured by Wedin.

Four years ago, the firm was hired to craft a number of 52-foot-long screws for the Gemini project. Rabun explained the screws are currently being used to raise and lower the mirrors of giant telescopes stationed in Hawaii and Chile.

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