

Jet Machine Works, Inc. Improves Productivity with Newall DROs



Jet Machine Works, a sub-contractor which manufactures large-part components involved with all facets of the petroleum, mining, heavy equipment and power generation industries, faced continuing difficulties with its DRO systems. In the mid-1990s, the company used various brands of digital readouts on its HBMs, VTLs and other manual machines.

“Regular failure of our DRO systems, due to glass and tape scale contamination, was a constant maintenance issue,” said Kyle Reneau, VP of Jet Machine Works. “Scale breakage due to the large parts and tools hitting the glass and tape scales was also a constant source of DRO failures. The use of DROs on these big machines is crucial as any scrap due to misreading a dimension is costly and time consuming.”

Reneau was introduced to Newall Electronics Spherosyn scale technology in the mid 1990s. He decided to try a Newall DRO system with its unique stainless steel/ball bearing scale technology on a 4” Summit HBM. “It didn’t take long to determine the Newall system had the durability to withstand the rigors of machining these large parts,” Reneau said. “We decided that as the other brands would fail or have maintenance issues, they would be replaced with new Newall DROs. If new equipment came in with a competitive DRO installed, it would be replaced with a new Newall system if any part of that DRO system failed.”

The company currently uses Newall DRO systems, distributed in the Houston, TX, area by C.W. Rod Tool Company, exclusively on its machines. One of the company’s vertical boring mills features a Newall C80 DRO, which is supplied with features commonly found on DROs such as inch/metric, absolute/incremental, zero reset, axis preset, center find and more.

It also features, as standard, bolt hole calculator, arc contouring, programmable memory, job numbers, polar coordinates, line hole calculator, tool offsets, taper calculation, data hold, data recall and feed rate display. The C80 also provides "Segmented Error Compensation," and is designed to be easily upgraded.

Jet Machine Works also uses Newall SGH-TT Linear Encoders on its CNC horizontal boring mills. The SGH-TT is Newall's most popular incremental encoder for CNC feedback, according to the company, and is compatible with most major brands of PLC and CNC controls. "The design of these linear encoders allow installment in almost any position, unlike glass-scale linear encoders, which usually need to be installed with the lip seal facing downwards to prevent contamination," said a Newall spokesperson. "Self-aligning fixing brackets allow virtually effortless scale mounting, needing only a single hole for each set of brackets."

The process of replacing and upgrading its DRO systems with Newall products has proven to be a successful endeavor for Jet Machine Works. "Newall systems have been working trouble-free for the last 15 years," Reneau said. "Maintenance problems due to scale contamination requiring cleaning and breakage were eliminated. Now, every DRO system in the shop is Newall. If a Newall DRO component is ever required due to accidental damage, it may be replaced under Newall's 3-Year No-Fault Warranty. Beyond the 3-Year No-Fault, there is an extended 5-Year Manufacturers' Warranty and Lifetime Scale Manufacturer's Warranty, standard with every system.

The DRO systems have performed so well, Jet has now standardized on Newall's SHG-TT linear scales for CNC feedback. The SHG series of linear scales offer the same scale design and performance characteristics as Spherosyn, with output signals compatible with a majority of CNC controls." The installing and replacing of older DROs with Newall products to reduce maintenance and improve productivity has been a significant step taken by Jet Machine to continue its growth. "Since our beginning in 1977, Jet Machine Works has maintained a healthy, viable growth pattern," said Reneau.

"Business increased even during the depressed market of the mid-1980s." The company has prospered even during difficult economic periods by focusing on the manufacturing of unconventional items. "Specialty or difficult items have been the basis of growth for Jet Machine throughout the years. Jet Machine began to manufacture balls for ball valves in 1984 and large piston rods used in mining dump trucks in 1986. In 1989, Jet machined 48-inch diameter drill bits that were used to build a two-story golf driving range in Japan. We have thrived by continually adapting and expanding to meet customers' needs and exceed their expectations."

The Newall DROs have allowed Jet Machine Works to maintain the company's primary goal: to provide the highest quality of large capacity parts to its customers at a competitive price. "The owners and employees take pride in the ingenuity and team effort that makes Jet a success in today's market," said Reneau. "Management is up to the challenge of meeting new demands. Jet's current CNC turning capacity is 153-inches diameter in addition to 24 feet of mill travel. Our precision equipment is suitable for many industries but is primarily used in the manufacturing of large oil field products. Manufacturing unusual or prototype components is our specialty. Jet Machine Works has served the Gulf Coast area for 33 years and look forward to continuing to provide high quality oil field products."

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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

CONTACT US

Americas

Newall Electronics Inc.
1803 OBrien Rd
Columbus, OH 43228
Tel: +1 614 771 0213
sales@newall.com
newall.com

Rest of World:

Newall Measurement Systems, Ltd.
Business Park, Unit 1 Wharf Way
Glen Parva, Leicester LE2 9UT
United Kingdom
Tel: +44 (0) 116 264 2730
sales@newall.co.uk
newall.co.uk