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For immediate release

Electrochemical Cutting and Grinding Provide Faster Cuts and Greater Accuracy Than Laser Cutting

Ramsey, NJ --- Cutting metal hypotubes requires precision cutting equipment that maintains a high surface quality. Laser cutting and electrochemical cutting or grinding are popular processes used for this application.

Laser cutting uses a high powered beam to cut the tubing by melting it. Recast, slag, heat-affected zones, and rough edges are left behind, requiring time-consuming secondary processes to deburr the tubes and remove any debris. When cutting through the tubes, beam deflection can affect the accuracy of the cut causing damage. Tubes and other parts are typically cut one at a time limiting production rates.

Electrochemical Cutting (ECC) and Grinding (ECG) generate an electrochemical reaction that dissolves the metal surface in conjunction with mechanical abrasive grinding. This combination provides faster cycle times and higher quality than conventional cutting and grinding methods. ECC and ECG provide faster, accurate, and burr-free results with no heat-affected zones, no debris after rinsing, no metallurgical damage, and no distortion.

“ECC and ECG are burr-free, which eliminates the need for deburring or other corrective secondary operations, reduces scrap, and improves efficiency,” explained Tom Travia the Director of ECG Sales at Glebar Company. “The very low cutting forces make them ideal for tubing and heat-sensitive alloys.”

Using the CS1-E Burr-Free Electrochemical Cutoff Machine from Tridex Technology, multiple tubes can be cut to length at the same time. It features a highly precise feed system that can be accurately positioned to .00040” (.01mm). Tridex’s ECC machines also have the ability to cut off and grind notches in the same operation.

In a typical example, using ECC 89, 25 G (.020” diameter) hypotubes are cut per cycle. The cycle time is 20 seconds or 0.23 seconds per piece. Comparatively, laser cutting would take approximately two seconds per piece or three minutes for all 89 hypotubes.

For secondary operations such as notching, bevel grinding, and multi-facet pointing, the Burr-Free Electrochemical Surface Grinders (ECG) SG-1645 or SG-2060 from Tridex can be used. An optional pallet index table on these surface grinders allows for high production grinding without stopping to load and unload parts.

A major benefit of the Tridex ECC and ECG machines is that they are simple to set up and operate featuring intuitive software and controls. The software collects shop floor data for OEE and process monitoring.

For more information on Electrochemical Cutting or Grinding, the CS1-E, SG-1645, or the SG-2060, visit www.glebar.com, email info@glebar.com, or call (484) 388-5000.

The CS1-E Burr-Free ECC Cutoff Machine (left) and SG-1645 Burr-Free ECG NC/CNC Surface Grinder (right) from Tridex Technology, a Glebar Company.

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About Glebar Company

Glebar Company (www.glebar.com) is an innovative, vertically-integrated, process improvement company that designs and configures its standard platform of modular precision centerless grinding machine systems to provide turnkey, custom solutions for its customers. The company focuses on delivering a process to its customers while maximizing customer return on investment. Founded in 1952, Glebar serves companies all over the world, across many market segments including medical, industrial, aerospace, automotive, consumer goods, and mining. Its machines are known for their precision, longevity, flexibility, and efficiency.

Glebar machines are made to the highest quality and safety standards. Every machine is backed by a 24/7 customer service operation which includes a team of technicians, design engineers, and customer service representatives. The company also stocks a stand-by inventory of critical parts and tooling for next-day delivery in the U.S., Europe, and Asia. It employs a dedicated applications team conducting research and development activities, customer process enhancement, and pushing the limits of grinding wheel technology. Glebar is an ISO 9001:2015 Certified Company and is ITAR Registered.

In 2020, Glebar Company expanded its capability and is now offering Electrochemical Grinding (ECG) technology, through the acquisition of ECG leaders Tridex Technology and Everite. Glebar now offers innovative turnkey ECG manufacturing solutions designed to improve cycle times, maintain quality levels, and allow operators to easily set up and run multiple machines.

For more information about Glebar, call (201) 337-1500, visit www.glebar.com, or send an email to info@glebar.com.