TRI TOOL UPDATE
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Keeping you informed of the latest Tips, Tools, and Technology.

TRI TOOL INC., 3041 Sunrise Blvd., Rancho Cordova, CA 95742 • (888)TRI TOOL • (916)288-6100 • FAX (916)288-6160 • www.tritool.com

Tri Tool Provides Welding Services and Equipment for Nuclear Project

Above: The DualARC™ dual-process weld head is shown performing in-process weld on preheated 16" pipe. An oversized 20" mounting track was utilized to provide sufficient operational clearance for the weld head above the resistance heating pads.

A major southeastern nuclear generating facility contracted with Tri Tool Thermal Services℠ (TTTS) to provide personnel and equipment for the turnkey replacement of degraded piping during a recent refueling outage.

The subject piping was part of the plant feedwater system and was targeted for replacement due to the flow accelerated corrosion (FAC) effect over several years of operation.

Above: The precision 37º bevel with "J" land prior to welding.

The scope consisted of the removal/ replacement of two separate 16" spools of carbon steel piping positioned between feedwater control valves and manual gate valves. The replacement piping spools were 16" OD x .844 minimum wall thickness and a type P22 material grade.

Once mobilized, TTTS was required to complete weld testing with an exact mockup of the subject weld joint. The mockup weld joint was then subjected to multiple Non-destructive Examination (NDE) processes, including phased array ultrasonic testing.

TTTS used Tri Tool 616 RBL Clamshells to sever existing piping for removal. Once the piping was removed, a Tri Tool 214B single point end prep machine was used to produce precision J-preps for automatic welding. Weld joint alignment was within +/- .010".

Due to the required preheat (350° F) for the replacement piping material TTTS and the utility chose to deploy Tri Tool's new AdaptARC® automatic orbital welding system to complete the welds. The TTTS welding team utilized the AdaptARC® weld system in the GTAW mode to produce a high quality root pass, hot pass, and the subsequent fill passes for completion of the critical piping welds.

Above: Typical work area showing limited radial clearance for operation, making a light, modular system the perfect choice.

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Fall Outage Season

Fall outage season is fast approaching. Do you have your Tri Tool Inc. equipment in top shape? As outage season approaches it seems like one of the last things we look at is the beveling equipment to make sure it is in top shape.

We get a lot of last minute rush orders for use on outages. A quick and easy way to avoid this is to call your Tri Tool regional manager and have him help you evaluate your equipment, to see what repairs you can do and what may need to be sent in to our repair facilities to be brought back to new specifications.

At the same time, you will be able to discuss what your needs may be for new or rental equipment, discover how Tri Tool's Service Division can help you with your outage requirements, or arrange to have an equipment training session with one of our technicians at your business or job site.

Above: The striking comparison of machinery returning from the rigors of operating in harsh environments , and the same machinery after thorough restoration to operational readiness.

Contact your Regional Manager for more information or assistance with Tri Tool's products and services:

- NY - Bob Davies, 315.343.0192, m.201.665.6316
- OH - Tom Emmerling, 440.914.0033, m.412.897.5136
- CA - Greg Fontes, 714.964.3564, m.916.761.0342
- TN- Charles Friedrichs, 615.722.1068, m.770.330.7522
- ID - Brian Evans, 208.542.5142, m.916.712.8506
- IL - Mike McCauley, 847.516.8810, m.847.778.2483
- TX-Gary Oberhammer, 936.448.1142, m.817.368.9309
- GA - Gary Watson, 912.920.8670, m.404.915.3375

Product News

An offshore configured ILUC1820 for SLay Pipeline Installations.

Tri Tool's new ILUC 1820 ClampMaster® incorporates the latest design advancements and refinements derived from extensive service experience on pipeline projects. The ILUC 1820 features an innovative E-Brake, and a new (patent pending) Clamping and Copper Backing mechanism. The ILUC 1820's design versatility permits both Purge Gas utilization for Lined Pipe Welding, as well as rugged and reliable multiple copper shoe weld backing applications.
Featuring a flexible modular architecture, the ILUC 1820 can be controlled with optional Wireless Remote, and is capable of traveling and cycling without the aid of air or power supply lines making this the ideal choice for 18" to 20" offshore pipeines that require precise line-up and reliable copper backing.

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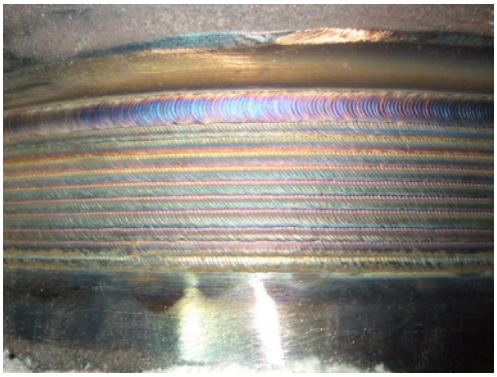
All welds were subject to several NDE processes, which again included phased array ultrasonic testing. All welds were examined before and after Post-weld Heat Treatment (PWHT) and deemed acceptable for service.

Please contact the TTTS office in Atlanta, Georgia at 800-356-3343 with any questions pertaining to this project or other inquiries as to how TTTS can assist you with a turnkey automatic welding project of this type.



Above: These beautiful uniform rows of filler metal reflect excellence in pre-programmed, auto-positioned bead placement and illustrate the precise distance between the weld paths. Below: The downhill travel of the DualARC™ orbital weld head shows the wire spool and the mounting track placement.

FOR MORE INFORMATION CALL 888-TRI TOOL OR VISIT WWW.TRITOOL.COM

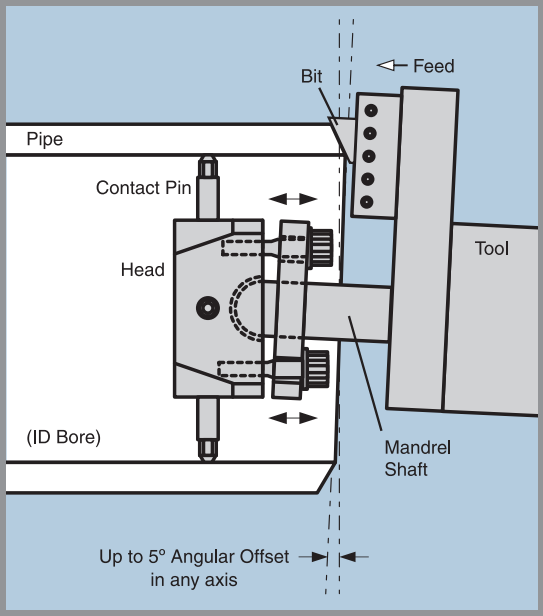
TECH TIP: Get Precision Angular Offset with a Miter Mandrel

Setting up a miter mandrel requires practice. Before you start your set up you want to make sure that all the slides are greased. The gap between the gimbal plate and mandrel should be equal all the way around (check with calipers). Make sure that the adapter plate is centered to the gimbal plate then snug the draw nut and all adjustment screws.

Set the jack screws to a diameter just smaller than the ID of the pipe. You will need to draw a line around the ID of the pipe Approximately 3 ½ inches from the desired length of the pipe. Set the front mandrel legs at 45 degrees, on the line, and tighten them equally so you keep the mandrel on center (use a tape or steel ruler to make sure you maintain center as you tighten the mandrel legs). Once you have it centered you can tighten all eight mandrel legs.

You're now ready to mount the indicator sleeve using the provided mounting nut. Then mount the dial indicator and mag base and perform final adjustments. After final adjustment, tighten all locknuts and screws.

For complete instructions or training call Tri Tool Inc. at 800-345-5015.



Above: Miter Mandrel illustration showing maximum angular offset.