



Tri Tool Provides Critical Solutions for International Land-Based Pipeline



The classic Model 224B in a non-classic role as the primary weld prep tool for a special land-based pipeline with Inconel lined bore.

Tri Tool Services provided mission-critical support to a major petroleum producer in Oman. Working in unison with Tri Tool International, this service project required multi-level support including custom equipment engineering, machinery handling workstation design and manufacturing, equipment logistics, specialized customer training, along with field machining and project coordination personnel.

The customer was confronted with a petroleum transportation problem that would require advanced technical support. Corrosive Hydrogen Sulfide components in raw petroleum, in association with the factors of heat and friction, have the capability to chemically and mechanically attack and dissolve the inner bore surface of pipelines. This damage can

amount to over an inch of dimensional loss per year, and in some instances can be theoretically greater than the original wall thickness. One approach to deal with the problem is to fully line the ID bore of carbon steel pipe with a uniform cladding of Inconel 625 for its proven characteristics of acid resistance and weldability.

This requires weld end preparation to ensure that when welding the joint with Inconel filler wire, the root pass provides an uninterrupted corrosion resistant surface.

The Inconel welds demanded extreme accuracy and the pipeline sections to be used were known to have a serious out-of-round condition. To make matters worse, this project was to be performed deep in the eastern desert of the Arabian peninsula, a place that is a 2.5 hour drive from the nearest civilization and where the temperatures can soar over 140° Fahrenheit in the day and drop to bone-chilling cold at night.

The equipment that was selected for this project was the PFM 816 PipeMaster®, the versatile Model 224B BevelMaster®, and the newly designed Tri Tool® Laser Dimensioning System.

Pipeline section ends were precisely ID bored to uniform wall thickness with a PFM 816 fitted with an OD tracking system.

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The normally ocean-going PFM-816 happily working in 140° heat!

Product News!



The new RBL is designed to operate with lifting/support frame.

Special Design RBL.

Tri Tool designed and built the custom 110" RBL clamshell above to sever a large vessel with a wall thickness of 5".



Boring Project

The boring machine shown above was custom modified to line-bore a stainless steel canister (closed on one end) to match blend the front 133" length of the canister to the existing rear bore. The main area of the bore will be held to a +/- .015". After .500" is removed from the ID diameter over the full 133", there will also be 3 transitioned over-sized areas along the length of the bore. An additional 1.310" will be removed from the ID with a required 18 degree transition into and out of bore at each intersection. The surface finish requirement is <125 rms.

Call for more information on either system.

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

Tri Tool Thermal Services Automatic Orbital Welding Capabilities

Tri Tool Thermal Services (TTTS) has successfully completed numerous welding projects since obtaining our code welding stamps in July, 2006. Equipped with state-of-the-art, fully digital, multi-process automatic AdaptARC® welding systems and equipment (manufactured by Tri Tool Inc.), TTTS can deliver outstanding on-site project support.



TTTS has an entire library of "ready to use" procedure qualifications for commonly used materials and combinations of system configuration/design. TTTS has trained and qualified over 100 welders (operators) in accordance with ASME Section IX requirements.

The operations staff at TTTS is dedicated and determined to ensure that every project large or small is an overwhelming success. Collectively, the TTTS management staff has over 100 years of supervisory and welding experience with a large part dedicated to specifically to automatic orbital welding processes.

If project success is important to you, then let us evaluate your welding project and provide an efficient, cost effective welding solution.



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Next the pipe ends were measured, indexed and cataloged for bore matching with the new Laser Dimensioning System. Weld end preparation was performed immediately prior to welding with the Model 224B. Tri Tool also provided assistance with implementing a mobile welding station that could reliably position the production equipment for optimal prep and weld cycle times.



Laser Dimensioning System recording measurements for ID bore matching.

This project took over two years to complete. It was a collaborative effort that every Tri Tool employee can be proud of and is a stellar example of the advanced state of consolidated solutions that Tri Tool can provide to industry, combining multidisciplinary machine and service technologies and support in the most severely demanding applications, anywhere in the world.

Customer Training at TRI TOOL INC.

One of the more important aspects of buying new equipment is the training offered. Tri Tool believes that one of our most important advantages is offering training to ensure the end-user can get the full benefit of the equipment, be safe, and enjoy the cost savings that is associated with using our equipment.

Different Training Programs

With the purchase of standard equipment one of our regional managers (or in some cases one of our technicians) will train your employees on the proper use of the equipment for free at your place of business or job site.

Rental equipment is different. For safety reasons we require that you be trained before you rent equipment 12" and above. We do not offer free training with rental equipment unless you come to our Rancho Cordova, CA facility (where all training is free). Optionally, you can hire one of our technicians to spend a day or two on your job site to get you started with your project and receive the proper safety training. This training will save you time and money over the life of your project.

CUSTOMER TRAINING IS ALWAYS FREE AT TRI TOOL'S RANCHO CORDOVA FACILITY

Customer training at our Rancho Cordova facility can be for any tool or accessories and is sometimes the best way to obtain comprehensive training for your operators and your training staff. Please call and we would be glad to discuss all training options with you.

2011 Scheduling Calendar Available from Tri Tool

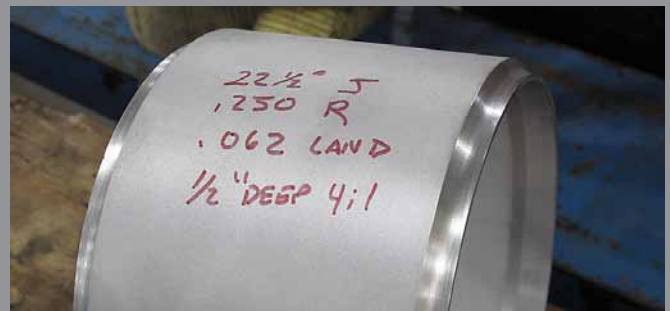
Here is the newest installment of our popular, plant maintenance oriented, Scheduling Calendar for 2011. Make sure you get one of these handy 24" x 36" wall calendars while supplies last! Call Tri Tool (888) TRITOO.



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

TECH TIP: Keep a Set-Up Template for Revisiting Cut Configurations

Speed up the set-up of tool bits for J Preps, compound bevels, counterboring or any other complex cut geometry. Make a master "coupon" with the desired cuts that conform exactly to the desired finished dimensions. After the end prep has been checked for accuracy, part off the pipe end with enough run of pipe for secure remounting. Note the prep style on the pipe section and save that piece of pipe for future reference. When you need to set up for that prep again, mount the reference prep at the right feed position and tighten the mounting elements. Now you can set the tool bits using the reference pipe section as a guide. You will still have to check for accuracy, and may still need make minor adjustments but you'll be close. Obviously, this makes more sense in production situations when you encounter the same prep repeatedly.



Above: Pipe section saved as a reference template for setting-up bits on future cuts.