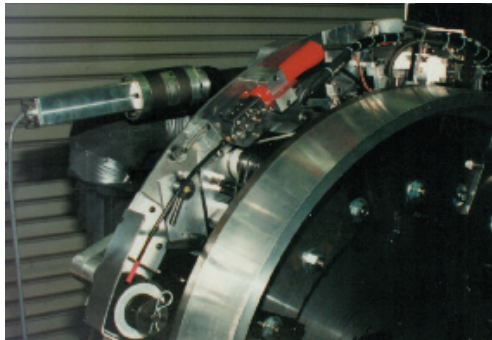




Special Focus: The Versatile 600 Series Split-Frame Platform

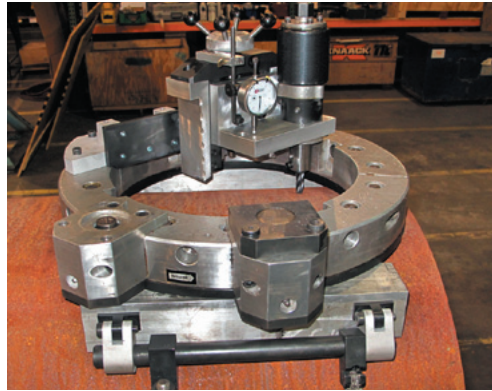
The 600 Series split-frame "Clamshell" lathe was designed to cut pipe to length and bevel it at the same time. The term clamshell originated in early models that were hinged on one side to open like a clamshell. It wasn't long after we started using the 600 Series that we realized there was a wide variety of applications for the clamshell, as a base or platform from which to work. (Tri Tool's clamshells will cut pipe and tube from a 1/4" to 60" and beyond.)



(Above) A modified clamshell system was designed to remotely cut an Omega Seal out of a reactor. The clamshell provided the base for a camera so that the work could be done remotely. A slitting saw was mounted to cut out the old seal. Finally, a weld head was mounted to weld the new part in place.



(Above) For a critical pipeline application, we mounted a milling cutter to the clamshell to make sever only cuts. The reason for doing this was that the pipe was under stress. If you were to cut it using tool bits, it would lock down on the bits and cause the machine to stall. Likewise, it would lock down on a saw or orbital pipe cutting device as well. Prior to our clamshell solution, brass wedges were driven behind the saw blades to keep the machine from stalling. The clamshell with the milling cutter cut 360 degrees, milled out the pinch from the stress and remained running. Additionally, the pipe end that the machine was mounted on was perfectly square.



(Above) A customer had a need to cut a hole in the side of a pipe. Because debris falling inside the pipe was a critical concern, a milling cutter was selected to perform the majority of the metal removal. A chain-mounted 616SB clamshell, configured to do a "blue line" saddle cut, was used. The machine design incorporated a dial indicator to track the depth of cut around the pipe. A vacuum was used to remove chips while cutting. An electric motor with several gear reductions rotated the clamshell and the operator controlled the depth of cut manually. By using chains to attach to the pipe, the system can work on many different diameters.



(Above) A customer built a hydro-electric plant water discharge system with several hundred feet of 75" pipe in a tunnel. During the winter there was a flood and it moved the pipe supports in the tunnel. The pipe had to be removed to replace the supports. The pipe had been installed using a slip joint that was welded on the ID only. The welding process used to install the pipe made it possible to take the weld out without causing damage to the pipe. To do this we mounted the tool blocks on a clamshell, in reverse of the normal mode and fed them outward. We then used milling motors attached to a tracking module to keep from violating the minimum wall. A bobcat was used to position the machine in the pipe.

(Continues on back page...)

Product News!



The new design of the 208B features an off-center worm drive.

After many decades, the rugged and dependable Model 206B BEVELMASTER® is being upgraded to the Model 208B. The new model designation reflects the extended size range that the machine will cut. The mounting range of the 208B will be 1.625" ID (41.28 mm) to 8.625" (219.08 mm) OD. The machine is driven by the same reliable worm drive design that has been so successful in the Model 212B.

In a similar change, the Model 212B will now be designated as the Model 214B BEVELMASTER®. The 214B will be familiar to all of the many 212B users, with the addition of longer tool holders to accommodate the larger pipe sizes. The mounting range of the 214B will be 3.44" (87.4 mm) ID to 14.0" (355.60 mm) ID.

These new machines should be available soon. Accessories from the 206B and 212B should mount on the new machines (with the existing cutting size limits) and accessories may be offered to utilize the extended cutting ranges of the two machines. Call for more information.

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

Special Focus: 600 Series

(Continued from front page...)

Nuclear D&D has a lot of applications for our clamshells, because they can be operated remotely. This allows the operators to set up the machine and get away to safety while the machine does the cutting. We have also set them up to be almost totally remote. The clamshell can also be fitted with a roller cutter system so there are no chips (Note: roller cutters are limited in the wall thickness they can cut).

Clamshells have also been used for underwater cutting in several applications. In one application, a cut



was made nearly 200 feet below the ocean surface. In that instance, hydraulic drive motors filled with what is called fish oil, more environmentally friendly than hydraulic fluid, were used. The clamshell was also lubricated with biodegradable shortening. We replaced the bearings with bushings.

We have used clamshells for cutting pipe underwater in a nuclear fuel pool. We couldn't vent the air motor into the water as it would bring radiation to the surface. To prevent this from happening we used an air motor that was encased in a can allowing us to attach hoses to vent the air outside of the fuel pool.



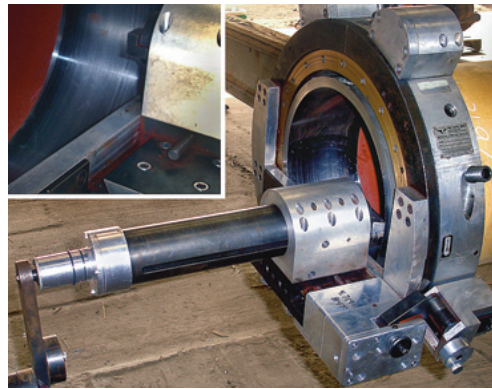
600 Series Clamshells have been very successfully used for opening nuclear waste storage canisters. We have several different systems including one that can be remotely controlled by a laptop computer.

By attaching a grooving module to the clamshell OD grooves can be put in a pipe. One application was completed at a baseball stadium with a roof that opens and closes. As the roof opened the wheels that the roof rode on moved on their shaft. There was a need to lock the wheels onto the shaft so they

would not move when the roof opened and closed. Using the clamshell a groove was put in the shaft and then a groove on the shoulder of the wheel. Finally, the customer was able to install a collar and locked them together.



(Above) Socket weld removal is an application the clamshell lends itself to very well. Using our SB, SBM and SBCM clamshell you can remove the socket weld and separate the fitting from the pipe, saving both so they may be used again.



Clamshell doing deep counter bore operation.

Many applications are easy for customers to learn. Our regional managers are always available to help with your particular application and their phone numbers are listed on the front of this newsletter. Give them a call and they will stop by to help you.



Call and ask for a catalog featuring the complete line of OD Mounted 600 SB and RBL Series machines.

What has been the most widely distributed premium in Tri Tool history? The Pocket Pipe Chart.

POCKET PIPE CHART - DEC. INCH							
Pipe Size	Schedule	Wall	ID	Pipe Size	Schedule	Wall	ID
1/8"	10S	.049	.307	2"	5S	.065	2.245
	40ST, 40S	.068	.269		10S	.109	2.157
	80SX, 80S	.095	.215		40ST, 40S	.154	2.067
1/4"	10S	.065	.410	OD 2.375	80XS, 80S	.218	1.939
	40ST, 40S	.088	.364		160	.344	1.687
	80SX, 80S	.119	.302		XX	.436	1.503
3/8"	10S	.085	.545	2 1/2"	5S	.083	2.709
	40ST, 40S	.091	.493		10S	.120	2.635
	80SX, 80S	.126	.423		40ST, 40S	.203	2.469
1/2"	5S	.065	.710	OD 2.875	80XS, 80S	.276	2.323
	10S	.083	.674		160	.375	2.125
	40ST, 40S	.109	.622		XX	.552	1.771
3/4"	80XS, 80S	.147	.546	3"	5S	.083	3.334
	160	.188	.464		10S	.120	3.260
	XX	.294	.252		40ST, 40S	.216	3.068
1"	5S	.065	.920	OD 3.500	80XS, 80S	.300	2.900
	10S	.083	.884		160	.438	2.624
	40ST, 40S	.113	.824		XX	.600	2.300
1 1/4"	80XS, 80S	.154	.742	3 1/2"	5S	.083	3.834
	160	.219	.619		10S	.120	3.760
	XX	.308	.434		40ST, 40S	.226	3.548
1 1/2"	5S	.065	1.530	OD 4.000	80XS, 80S	.318	3.364
	10S	.083	1.492		160	.438	3.038
	40ST, 40S	.113	1.432		XX	.600	2.712
1"	10S	.109	1.097	4"	5S	.083	4.334
	40ST, 40S	.133	1.049		10S	.120	4.260
	80XS, 80S	.179	.957		40ST, 40S	.237	4.026
1 1/4"	160	.250	.815	OD 4.500	80XS, 80S	.337	3.826
	XX	.358	.599		160	.438	3.524
	5S	.065	1.530		XX	.674	3.152
1 1/2"	10S	.109	1.442	5"	5S	.109	5.345
	40ST, 40S	.140	1.380		10S	.134	5.295
	80XS, 80S	.191	1.278		40ST, 40S	.258	5.047
1 1/2"	160	.250	1.160	OD 5.563	80XS, 80S	.375	4.813
	XX	.382	.896		160	.500	4.563
	5S	.085	1.770		XX	.750	4.063
1 1/2"	10S	.109	1.682	To calculate pipe circumference: OD x π (3.14159) = circumference			
	40ST, 40S	.145	1.610				
	80XS, 80S	.200	1.500				
1 1/2"	160	.281	1.338	TRI TOOL INC. 3041 Sunrise Blvd. • Rancho Cordova, CA 95742 (916) 288-6100 • Fax (916) 288-6160 Call Toll Free: (888) TRI TOOL • www.tritool.com			
	XX	.400	1.100				
	5S	.065	1.530				

The popular Tri Tool® Pocket Pipe Chart is an easy way to look up reliable pipe dimensions when and where you need them. Easy to read and made from durable plastic to resist oils, the free Pocket Pipe Chart has been the most highly asked for and widely distributed of any Tri Tool premium item (almost a quarter million of these have been given out). It is available in both standard and metric versions. Perfect for welding classes or the tool box, the pipe chart contains standard pipe sizes and schedules to 30", OD/ID/Wall thickness dimensions, conversion formulas, both a standard and metric scale, and up-to-date company contact information. Call (888) TRITOOl to get one for you (and all your co-workers) today.

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

TECH TIP: Setup of Bits for Simultaneous Sever/Bevel with a Clamshell.

After securely mounting the clamshell to the pipe, select a good reference spot somewhere along the cut-line. This spot will be used to set BOTH bits to the correct starting height. First, rotate the machine so that the SEVER bit tip is above your selected spot. Using the star wheel wrench, on the star wheel, turn the feed screw inward until the bit just touches the pipe. You now need to retract the SEVER bit away from the pipe, but before you can set the clearance height, the free play of the feed screw must be removed. Lightly reverse the star wheel until you feel the thread clearance tighten, then count **2 1/2 turns**. Now, make sure the star wheel is properly aligned so the star wheel tips do not "jam" into the tripper pin. Next, repeat this process for the BEVEL bit, feeding it in to the same reference point you used for the first bit. The only difference being (after removing free thread clearance), retract the BEVEL bit **3 turns**.

