Tube-Mac®

Setting the Standard in non-welded Piping Systems

Tube-Mac® was founded in 1977 by our progressive thinking founder always seeking new ideas and methods to join pipes together quickly, cleanly and "without welding". Quality and integrity is an integral part of Tube-Mac's commitment to supplying the finest hydraulic/ lubrication piping systems and services on the market today.

By the early 1980's Tube-Mac® was the first company to introduce the 37° Flare Flange and Retain Ring Flange systems to North America. A complete understanding of hydraulics and uncompromising dedication to cleanliness are what propelled Tube-Mac® to the forefront of these types of worldwide piping installations. Continuous investments in cutting edge machining and pipe fabrication technologies plus continuous product improvements keep Tube-Mac ahead of it competition. The TMI® 37° Flare Flange and TMI® Retain Ring Flanges systems were primarily used in various hydraulic oil and lubrication applications but over the years new applications are being introduced such as high pressure air, to expand its customer base. After more than 45 years, Tube-Mac® has thousands of successful projects and satisfied customers around the globe.

Tube-Mac® has offices in four countries and authorized distributors/installers in over thirty countries around the globe. It is this network of Quality People that service our customers. For an office or distributor near you please visit www.tube-mac.com

Headquarters: Stoney Creek, Ontario Canada

Tube-Mac USA

Tube-Mac Spain

Tube-Mac Austria

Tube-Mac®

Speed

With construction schedules becoming more and more compacted, today's piping installations demand ***SPEED***.

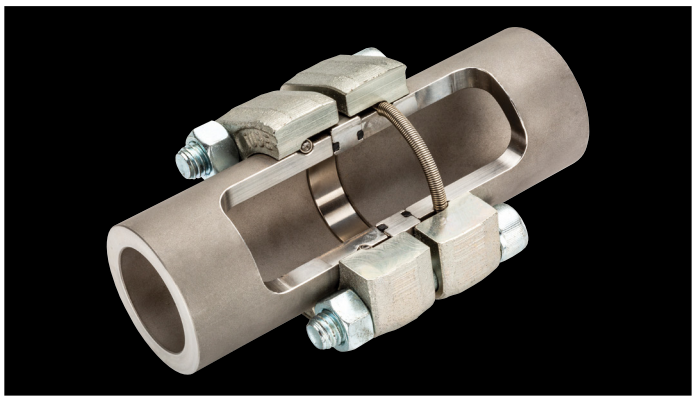
The Tube-Mac piping systems rise to the challenge, setting a new standard with state-of-the-art, leak-free pipe connections.

Method 1: TMI® 37° Flared System.

For low, medium and high pressure systems this configuration is the quickest, most economical and easiest system to fabricate and install. Cut and debur the ends of the pipe. Slide the flare flanges onto to each pipe. Using a TFM-01 flaring machine, flare the pipe ends 37° and then insert an O-ring face cone in one end and a Flat face cone in the other end. Slide the flanges together, install the bolts and nuts then tighten to the recommended torque values.

Method 2: TMI® Retain Ring System.

For very high pressures with heavy wall pipes, this configuration is the choice of engineers. This method requires some engineering and pipe layout. The pipes are machined to precise dimensions and a groove is cut on the outside diameter. After machining, the retain ring flange is slid onto the pipe and a retain ring is sprung over the pipe end and into the groove. The union is completed by inserting an O-ring seal retainer between the pipe ends. Slide the flanges together, install the bolts and nut then tighten to the recommended torque values.



Also available are butt weld adapters suitable for a variety of outside diameters and wall thicknesses as well as for low and high low pressure applications. These are pre-machined butt weld adapters with or without a retain ring groove. Pipe ends are prepared with a bevel for butt weld. The flanges are slid onto the pipe and the butt weld adapters are then welded to the pipe end. After cleaning the weld, the retain ring in sprung over the adapter and into the groove. Slide the flanges together, install the bolts and nut then tighten to the recommended torque values. For extreme high pressure applications where external high shock is evident such as forging presses, then it is highly recommended to use butt weld adapters with no retain ring groove. In such cases, the retain ring profile is machined as part of the butt weld adapter. This makes for a much more robust connection. Finally to Speed up the overall installation and commissioning time cold drawn, phosphated pipes along with cold bending techniques to install its piping systems. Portable pipe benders used in the field offer large bend radii with great flow characteristics and low pressure drops. For confined areas where tighter radii are required, mandrel pipe benders are utilized.
Both processes bend the pipe cold without introducing any heat. It is because of the non-welded flange connections and cold pipe bending philosophies Tube-Mac® is able to eliminate all the high labour costs associated with welding.

- No special skilled labour required vs. qualified welder
- Actual flaring time is measured in "seconds" vs. "hours" for a welded joint
- No special hot work permits
- No fire watch personnel required
- No leaks as a result of stress fatigue cracks as seen in welds
- No cost to x-ray welds
- No cost to rework welds
- No acid flush chemicals and neutralizers required
- No added cost or environmental issues to dispose of chemical wastes
- Field bend and fabrication – reduces engineering design time

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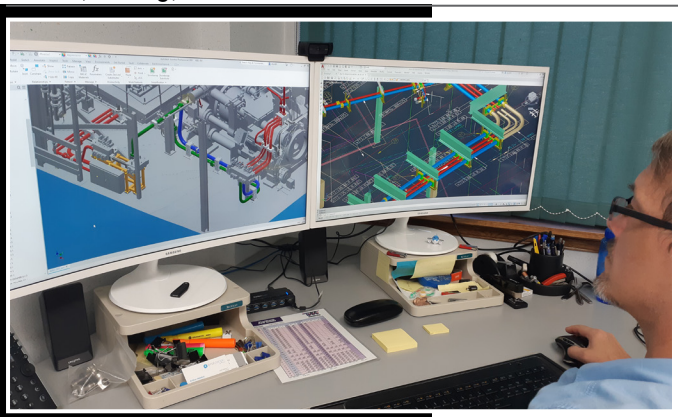
Total Piping Service

With years of applied hydraulics expertise and the latest technologies at our disposal, Tube-Mac® is able to offer ***TOTAL PIPING SERVICE.***

Through continued education and total team effort, Tube-Mac® is able to support all phases of a piping installation before, during, and after construction.

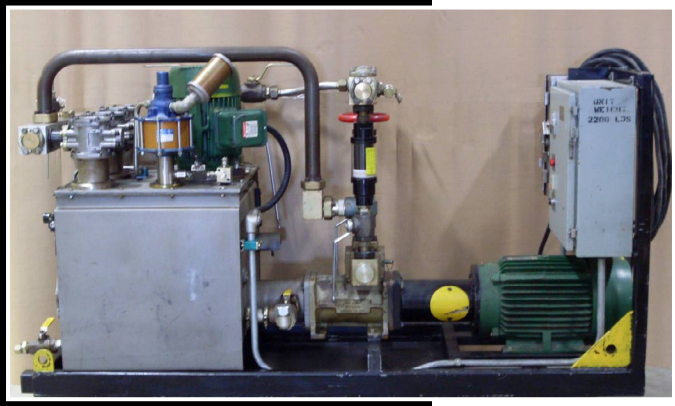


Engineering

Close contact between the field technicians and Tube-Mac® project managers is maintained throughout the duration of each project. This interaction provides each project with the immediate service that is required. While utilizing state-of-the-art AutoCAD software, practical engineered piping solutions can also be generated at the design phase, which enhances the installation even further.

Field Coordination

Tube-Mac® Field technicians accompany virtually all piping installations. Each technician is well versed in hydraulic logic and is a qualified instructor on proper bending and installation procedures. While helping to assume the task of crew coordination and total quality assurance, the Tube-Mac® technician is a significant cost saver to the installation contractor.



Flushing & Testing

In the spirit of total piping system commitment, Tube-Mac® has developed the means to flush and pressure test all Tube-Mac® piping installations. This is possible through the use of a portable flushing and testing units. Tube-Mac® can filter each piping system to customer specified cleanliness levels, while at the same time, hydrostatically test each system.

Component Sales

Tube-Mac® offers for independent sale a complete line of hydraulic piping accessories from a large inventory allowing for the fastest possible service.
After market availability of all Tube-Mac® product has led to worldwide customer Satisfaction.

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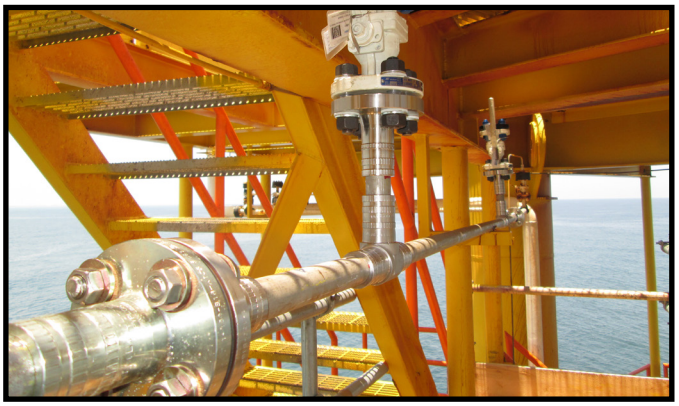
Cleanliness

For effecient hydraulic/lube system start-ups and longevity, it is essential to insist upon ***CLEANLINESS.*** Tube-Mac® Keeps cleanliness at the forefront of all hydraulic/lube piping installations. Today's equipment increases the demand for extremely clean piping. Sensitive piston pumps, servo and proportional valves as well as bearings require the cleanest oil because of tight tolerances. Tube-Mac provides the piping that will meet these demands.

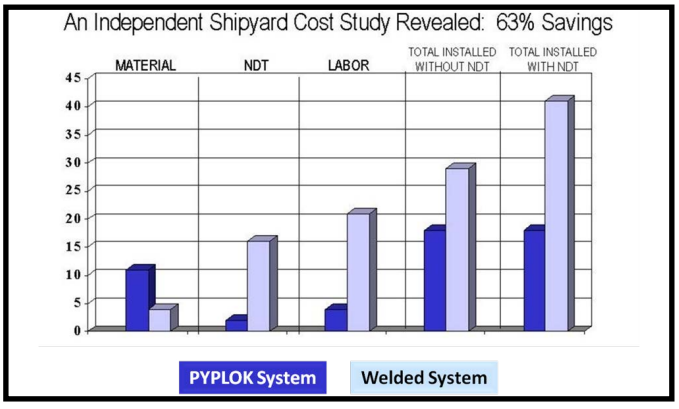
The key to Tube-Mac®'s superior hydraulic cleanliness is our pipe. Our tube quality piping used for working pressure lines is cold drawn during the manufacturing process leaving it internally and externally free of scale. To protect all hydraulic/lube piping, Tube-Mac® has standardized on phosphating. This surface conditioning procedure inhibits rusting, this maintaining the pipe cleanliness both during storage and installation.

Tube-Mac®'s mechanical joint system eliminates all the contamination pitfalls of typical welded system. The fear of pipe or weld particle migration is no longer a concern with Tube-Mac® hydraulic piping system. Expensive pump groups and sensitive servo systems are now more likely to avoid internal failure.



Because of scale-free, weld-free field installation of the Tube-Mac® piping system, the need for costly internal chemical flushing is a thing of the past.
With Tube-Mac® piping, all that is necessary is an independent filtering unit utilizing system fluid for removal of loose contaminants. This method of oil flushing not only removes loose contaminants but at the same time polishes the system fluid. Now, instead of chemical disposal, the customer has a hydraulic system full of clean fluid that is ready for commissioning.

When considering a hydraulic/lube piping installation it is important to think in terms of overall installed economics. Keeping in mind the significant labour savings, the greatly reduced flushing time, and the elimination of hazardous chemical disposal, it is easy to see why a Tube-Mac® piping system installs with an overall cost savings.



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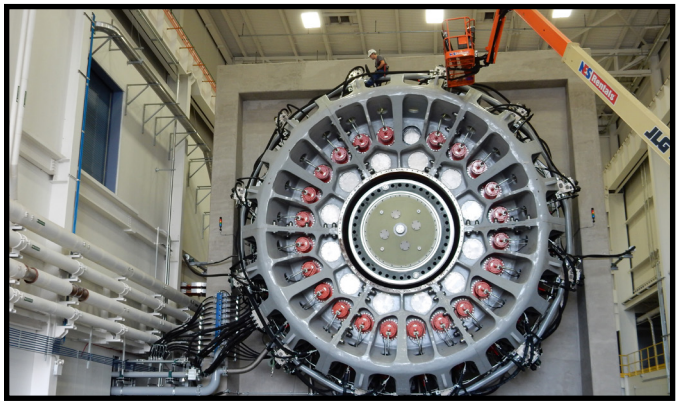
Quality

In order to stand the test of time in today's industrial market, the corner stone of a company must be ***QUALITY.***

Tube-Mac®'s uncompromising commitment to quality had led to the assembly of the most sound, cost effective hydraulic/lube piping system available.

Material

For high pressure hydraulic applications it is important to realize the need for strong components.
All Tube-Mac® supplied flanges are manufactured from steel to ensure the ability to withstand the shock and dynamics inherent to hydraulic systems.



Preparation

All Tube-Mac® components are conditioned with zinc nickel plating to ensure the longest life before and after installation.

Components

In order to complete the total hydraulic/lube piping system, it is important to have quality accessories. For example Tube-Mac® has standardized on a vibration dampening clamping system. To minimize noise and fatigue due to hydraulic shock, proper support is essential.

Tube-Mac® also supplies and uses only the finest hydraulic hoses and couplings which meet and exceed SAE standards. Also, with our trained personnel manufacturing hose assemblies, the results are reliable, safe and with quality products you can depend on.

The heavy duty hydraulic hose couplings supplied by Tube-Mac® are the industry's finest and feature a tapered flange head, thicker tube walls and a solid one-piece design with NO brazed/weld joints.

Top quality piping components promote expedited installations for which Tube-Mac® has become internationally renowned. With locations in Canada, the USA, Spain and Austria, Tube-Mac® provides customers with the assurance of dealing with an organization that can fulfill their technical needs, and also deliver quality products supported by friendly service in a timely manner.

Notes