COSSD PRODUCT CATALOGUE

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Facilities Global Tubing Headquarters

Global Tubing's state-of-the-art coiled tubing manufacturing and service complex is like no other in the tubing industry. Designed by highly experienced tubing manufacturing professionals using a "blank sheet" approach, the new facility incorporates industry best practices and advanced technologies to deliver the highest quality products, superior customer service, improved HSE and enhanced manufacturing efficiency.

Situated on 61 acres only 45 minutes from central Houston, Global Tubing's five-building campus includes corporate headquarters, two mill operations buildings with laboratory facilities to ensure product quality and promote continued innovation, and two service operations and training facilities. The mill and service buildings are equipped with overhead bridge cranes. The use of bridge cranes significantly reduces reliance on forklifts and improves personnel safety.

Global Tubing's own electrical substation provides clean, uninterruptable power supply directly from primary transmission lines. The facility features nearby rail access and is convenient to major highways and the Port of Houston.

Global Tubing Service Center

Red Deer, Canada

Global Tubing has opened a Service Center in Red Deer, Alberta. The four-acre complex features an 18,400 square foot facility with two service lines. The Center offers a complete range of services to customers throughout the region.

- New coiled tubing inventory maintenance
- Spooling
- Welding
- Hydro-testing
- Preventative
- Asset management
- Fabrication and repair
- Wireline injection

Technology

Global Tubing is a leading innovator in coiled tubing technology. From its patent-pending friction stir welding process to its variable frequency seam welder, in-line inspection capability and solid-state annealing systems, Global Tubing's commitment to technology is readily apparent throughout its facility. The manufacturing process is semi-automated for improved productivity, production repeatability and personnel safety.

Bias Welding

Global Tubing is the only coiled tubing manufacturer to offer two methods of strip-end welding. Our standard in-line plasma arc

welding system is ideal for most tubing strings. Global Tubing also offers our patent-pending friction stir welding process. Friction stir welding softens the metal by frictional heat and pressure and stirs the strip edges together without the necessity for dissimilar filler material. The result is a reliable weld that may reduce susceptibility to galvanic corrosion at the strip end due to the elimination of weld filler metal.

Inspection

While virtually all steel used in coiled tubing begins as low-alloy carbon-steel sheet, the final tubing geometry and steel properties are crucial for optimum mechanical performance.

Global Tubing performs a series of inspections to ensure that each coiled tubing string will perform as designed. Inspections include:

Flat Strip Inspection

Steel grade verification Verification of strip dimensions and mechanical properties Laser width measurement Visual surface inspection Third-party verification of steel chemistry

Strip Bias Weld Inspection

Digital computed radiography X-ray inspection of each weld Confirmation of mechanical properties at each strip-end Complete dimensional inspection Surface hardness tests Destructive bend testing on removed tab from strip splice weld

Tubing Processing Inspection

Real-time monitoring and infrared recording of seam welding Continuous inline inspection by full-body eddy current Monitoring and digital recording of heat-treating temperatures Recorded wall thickness measurements with inline laser micrometers

Indication Prove-Ups

Hand-held ultrasonic Radiographic x-ray Magnetic particle Liquid penetrant

Finished Product Testing

Yield strength, tensile strength, tubing elongation, steel grain size, micro-hardness, crush and flare tests Hydrotest of finished strings Gauge ball I.D. confirmation

Metallurgy

The flat-strip steel is manufactured using a continuous-cast hot rolling process. Proprietary steel chemistry and rolling practices ensure final mechanical properties. Parent strip tests are used to confirm specifications.

Steel chemistry is confirmed on each "heat" of incoming steel through the utilization of mass spectroscopy.

Coiled Tubing Material Grades

GT-80 (80,000 psi) Workstrings Secondary Recovery GT-90 (90,000 psi) Workstrings Secondary Recovery GT-80 GT-90 GT-100 (100,000 psi) Workstrings GT-110 (110,000 psi) Workstrings GT-100 GT-110 Metric pdf File

SMARTaper™

Revolutionary, patent pending coiled tubing design

Allows optimization of string design based on well characteristics Maximizes coiled tubing fatigue life Enables extended horizontal reach Effectively eliminates bias weld de-rating factors

While unconventional plays worldwide have created a boom in oil and gas activity, they present numerous challenges for the coiled tubing industry. Thanks to Global Tubing's new SMARTaper[™], customers have unprecedented opportunity to improve performance while conducting coiled tubing drillouts and other activities in extended-reach horizontal wells.

What makes SMARTaper[™] Special?

In order to manage risk, operators force early string retirement due to fatigue spikes at bias welds. This means unrealized base material life. SMARTaper™ gives a thicker wall at the bias weld while tapering to lighter wall in less crucial areas. This allows for increased life without unnecessary weight. SMARTaper™ is thick where it counts.

Cerberus[™] modeling and field tests prove that this unique design consistently eliminates bias weld fatigue spikes for superior running footage and improved reach. The result: You can make longer horizontal runs and more of them with a single string.

Sizes and grades are available to handle the higher pressures and demands of extended-reach horizontal wells.

Tubing Sizes

Outside Diameter 0.750 in. (19.1 mm) to 5.000 in. (127 mm) Wall Thickness 0.087 in. (2.00 mm) to 0.337 in. (8.60 mm)

Tubing Grades (Tubing Yield Strength)

GT-90 (90,000 psi yield) GT-100 (100,000 psi yield) GT-110 (110,000 psi yield)

Coiled tubing is essential for many downhole applications. Global Tubing offers the widest range selection of coiled tubing in the industry. Sizes range from 3/4-inch to 5-inch OD with wall thicknesses ranging from 0.087 to 0.337 inches. Applications include a variety of temporary and permanent downhole operations.

Products

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Workstrings

Well servicing (high pressure) Stimulation Fishing Cementing Logging

Coiled Tubing Drill Strings

Heavy-wall Large outside diameter (OD) tubing Special spools

Permanent Installations

Production tubing Velocity strings Hang-off tubing

Coiled Tubing Material Grades

GT-80 (80,000 psi) Workstrings Secondary Recovery GT-90 (90,000 psi) Workstrings Secondary Recovery GT-80 GT-90 GT-100 (100,000 psi) Workstrings GT-110 (110,000 psi) Workstrings

Services

Revolutionary, patent pending coiled tubing design

Global Tubing provides the most comprehensive range of coiled tubing services in the industry. Performed by dedicated, experienced professionals, these services are designed to ensure that you get the maximum value from your coiled tubing investment. Services are available for all customer-owned coiled tubing assets.

Spooling

Capacity to 140,000 lbs, 135,000 ft/lb torque Double-respooling to reverse tubing on reels Removal of heavily cycled or damaged sections Scrapping partial or full-length sections of depleted tubing Respool to straighten tubing wraps

Welding

Factory or field Tube-to-tube welds Flag welds Socket, end nipples and crossovers Tube welds other than HSLA

Hydrotesting

Standard to 15,000 psi (higher on request) Nitrogen purge (99% pure) Special ID drift Dewatering ID corrosion inhibitors Test water screened and treated for bacteria and harmful contaminates

Installation

Standard EM cables, installation or removal Horizontal installation of ESP cables Horizontal installation of capillary tubes/bundles

Preventative Maintenance

Internal/external tube cleaning, chemical and mechanical Internal/external corrosion inhibitors

Support

As a Global Tubing customer, you get 24/7/365 access to a complete range of support services. Global Tubing maintains a 24-hour manned toll-free number.

Asset Management

Additionally, Global Tubing offers the coiled tubing industry's only Customer Asset Management Service. This comprehensive service promotes optimum coiled tubing condition and utilization while lowering total cost of ownership. Specially trained personnel inventory, maintain and store (weather protected) customer assets to ensure they are ready for shipment when required.