OIL & GAS – PDT – PRYSMIAN DOWNHOLE TECHNOLOGY

Exploration & Production

Control Lines & Flatpacks

Control Line

CONTROL LINE MANUFACTURING

This range includes control lines (hydraulic tubing) designed for use in harsh environments such as those created by chemical injection or well monitoring and other applications where strength, corrosion resistance and reliability are essential. PDT's control lines are manufactured and tested to meet or exceed ASTM requirements. Prysmian Downhole Technology offers four types of control lines. Each manufacturing process has it's own merits based on cost effectiveness vs. technical requirements.

MANUFACTURING METHODS

Outer Tube Materials

A flat strip is formed into a tube through a series of rollers to a round shape and longitudinally welded at size with no additional work.

Welded & Drawn

After welding, the tube is drawn through a reduction die to homogenize the seam weld. The weld seam is reworked externally by the die. By drawing through a die, the tube has an improved sealing surface, and a truly round OD and an improved external surface finish.

Welded & Floated Plug Drawn

After welding, the tube is drawn through a die with a floating plug in the bore to rework the weld seam. The plug is not attached to a rod or mandrel, but "floating" inside the tube surrounded by lubricant. The weld seam is reworked internally and externally by the die. By drawing through a die, the tube has an improved sealing surface, and a truly round OD and a better internal and external surface finish. This tubing is referred to as "smooth" bore.

Seamless

A billet of metal is extruded into a tube and drawn to final size. There is a longitudinal weld with seamless tube although orbital welds are used to manufacture long lengths. The manufacturing process for the seamless tube limits the maximum continuous length, therefore orbital welds are required to join lengths of seamless coil together to achieve lengths that are suitable for well applications.

DESIGN & CONSTRUCTION

Outer Tube Materials

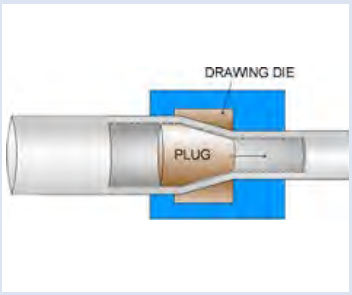
- 316L Stainless Steel
- A825 Alloy
- A825 Alloy Enhanced Properties
- Duplex 2205/2507
- Alloy 625

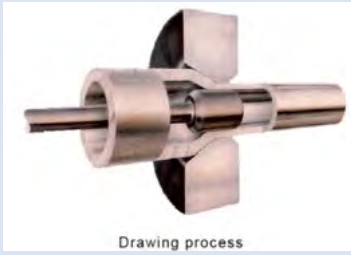
Standard Sizes

- 1/8" x 0.028" & 0.035"
- 1/4" x 0.035", 0.049" & 0.065"
- 3/8" x 0.035", 0.049" & 0.065"
- 1/2" x 0.049", 0.065" & 0.083"
- 5/8" x 0.049", 0.065" & 0.083"

Non Destructive Testing

Eddy current testing (ECT) is performed on the longitudinally seam welded tubing and strip splice welds at intermediate size in the as-heat treated condition. Radiographic testing is performed on all orbital welds and strip splice welds are detected by ECT at intermediate size in the as-heat treated condition. Yield pressure hydro static testing is performed on the cold worked tubing at final size.




Drawing process


Pilgering process

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