



Vacuum Insulated Tubing

Oil Tech Services has acquired and is committed to extending and enhancing the technology originally developed by General Electric in 1969 to insulate permafrost production zones in wells at Alaska North Slope. The original concepts and insulations systems have advanced and High Vacuum, High Performance insulated tubulars are manufactured for steam injection wells.

Our mission is to be a reliable source of Vacuum Insulated Tubing, progressively improving the technology, performance and reliability. Our manufacturing is in Houston Texas. We provide the high quality Vacuum Insulated Tubulars enabling injection of high quality steam into deep heavy oil bearing zones. Strings can be customized for size, thermal performance and thread connection system.

Oil Tech Services, Inc. Industrial Technology Management

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Thermal Tube 1, 1-H, and 2 (Inert Gas Backfilled)

For Intermediate Insulating Capacity at Temperatures Below 400°F.

Thermal Tube 2-H (Inert Gas Backfilled)

For Intermediate Insulating Capacity at High Temperatures up to 670°F.

Thermal Tube 2-H is an inert gas backfilled tubular product. Mechanically it is the same as the higher performance 3-H (High Vacuum, Getter tubing)

Thermal Tube 3-H (High Vacuum, Getter™ maintained)

For Maximum Insulating Capacity at High Temperatures up to 670°F, and depths to 5000 feet.

- Thermal Protection of Well Casing
- Limits Well Bore Heat Loss to a Few Percent
- Delivers high Quality Steam to oil producing zone
- Available with Premium Threaded & Coupled Connection
- Available with Integral Premium Connection on Inner Pipe
- Insulated insert for Connection is provided
- 20 to 30 Plus Run/Pull Cycles
- Rugged Oil Field Tubulars
- Extended Life: 10 Years Plus of Continuous Service
- Available in Chrome Steels

Vacuum, Gettered, Pre-Stressed Insulated Tubulars with Maximum Insulating Capacity for High Temperature Applications up to 670° F

General Information **A Wide Size Range**

○ Range II Standard Length	2-3/8" x 1.66"	5.00" x 3.5"
○ API, 5CT Tubulars and Couplings	2-7/8" x 1.9"	5.00" x 4.00"
○ Modified Buttress Couplings (standard)	3-1/2" x 2-3/8"	5-1/2" x 4.50"
○ Premium Connections Available	4-1/2" x 2-7/8"	6-5/8" x 5.5"
	4-1/2" x 3-1/2"	8-5/8" x 6-5/8"

Typical Specifications

Physical Data 2.375 x 1.66 2.875 x 1.90 3.50 x 2.375 4.50 x 2.875 4.50 x 3.50 5.00 x 3.50

Total Weight (#/ft) 8.0 9.5 14.5 18.5 21.5 28.0

Outer Casing **J-55 Grade Standard**

--O.D. (in.)	2.375	2.875	3.50	4.50	4.50	5.00
--Wall Thickness (in.)	0.190	0.217	0.254	0.250	0.250	0.362
--I.D. (in.)	1.995	2.441	2.992	4.000	4.000	4.276
--Weight (#/ft.)	4.50	6.50	9.50	11.60	11.60	18.00

Inner Tubular **L-80 Grade Standard**

--O.D. (in.)	1.660	1.900	2.375	2.875	3.500	3.500
--Wall Thickness (in.)	0.140	0.145	0.190	0.217	0.254	0.254
--I.D. (in.)	1.380	1.161	1.995	2.441	2.992	2.992
--Weight (#/ft.)	2.90	2.90	4.50	6.50	9.50	9.50

Operational Data

	Nominal Conductivity BTU/HR-FT-°F at 670° F	Typical Application	
Body	0.0025 - 0.003	Operating Temperature	650° F
Coupling with Insulator	0.150 - 0.250	Operating Pressure (Wellhead)	2600 psi
Full Joint (Range II)	0.010 - 0.015	Operating Pressure (Downhole)	2600 psi
		Start-Up Pressure	3000 psi

Other Sizes and Configurations are Available

Thermal Tube 3	Maximum insulating capacity at temperatures below 400° F
Thermal Tube 2-H	Intermediate insulating capacity at high temperatures up to 670° F
Thermal Tube 2	Intermediate insulating capacity at temperatures below 400° F
Thermal Tube 1-H	Moderate insulating capacity at high temperatures up to 670° F
Thermal Tube 1	Moderate insulating capacity at temperatures below 400° F