

## Vacuum Insulated Tubing ("VIT")



- **VIT** dramatically reduces heat flow from the inner surface of the inner tube to the outer surface of the outer tube.
- **VIT** is designed to address all three methods of heat transfer: radiation, conduction, and convection.
- **VIT** is composed of outer pipe, inner pipe, insulation, coupling, seal ring and insulated liner. The insulation applies multilayer aluminum foil and glass fiber.
- **VIT** Getter: Long-life vacuum integrity ensured through the use of getters inside the vacuum. It is a metal alloy, which absorbs molecular gases, primarily hydrogen.
- **VIT** is composed of an outer threaded tube, with an inner tube welded inside.
- **VIT** annulus space vacuum is known as "super insulated technology" by many countries all over the world.

## The VIT Advantage



### Reduce:

- SOR – Steam to Oil ratio
- steam rate, energy costs, and operating temperature
- heat stress on casing and deformation
- circulation period for production
- greenhouse emissions
- casing diameter and need for premium connections in certain applications
- workouts to remove blockage wax (paraffin)

### Improve:

- steam control at the toe of well and heat loss to surroundings
- protection for cementing

**ROI and ROE** is tangible and positive

## VIT Technical Parameters

**Grades:** J/K55, L80, 80SS, P110, IRP, D10

**Range:** 2 or 3

**Threading:** Inner tube and outer tube threading

**Connections:** Semi-premium and premium available

**Normal operating temperature:** 350 Celsius

**Conductivity (k) of inner pipe:** 0.002 - 0.08 W/m°C

**Custom manufacturing**

**Insulation grades available:**

### Specifications: All pipe API 5CT

Outer pipe ODxWT (mm)	Inner pipe ODxWT (mm)	Coupling OD (mm)	Cementing Casing (in)
88.9*6.45	60.3*4.83	108	5"
114.3*6.88	73.02*5.51	132	7"
114.3*6.88	88.9*6.45	132	7"
127.0*9.19	88.9*6.45	141.3	9 5/8"
139.7*7.72	114.3*6.35	154	
177.8*9.19	139.7*7.72	154	

Grade/Conductivity	A	B	C	D	E
K =Watt/Meter°C	0.06 – 0.08	0.04-0.06	0.02-0.04	0.006-0.02	0.002-0.006