



vetcogray[™]

a GE Oil & Gas business

High Pressure / High Temperature Tree

15,000 psi Surface Wellhead and Production Tree Assembly

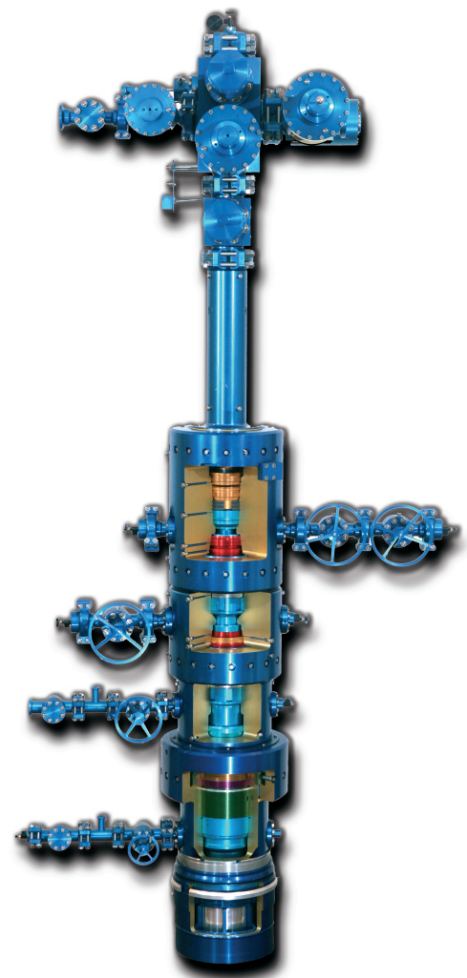
Wellhead Configuration

The wellhead configuration of 30" x 20" x 13 3/8" x 10 3/4" x 7 5/8" utilizes a mandrel hanger arrangement with the 13 5/8" hanger being adjustable, to interface with a mudline system. All wellhead connections are VetcoGray NT-2 quick make-up connectors for safe, and efficient make up. The wellhead system incorporates full metal to metal sealing in both primary and emergency systems.

Xmas Tree Configuration

- Lower master
- Upper master
- Swab
- Production wing
- Kill and service wings

These are all hydraulically actuated and meet API 6A PSL3 PR2 qualification with extra gas testing requirements. Tree valves are fully clad HH trim with fire resistant lower master valve and kill wing valve. All xmas tree connections have dual metal-to-metal Grayloc seals.



1954	South Louisiana	1st metal sealing 15,000 psi completion system
1972	Ventura, California	1st 20,000 psi system
1974	Thomasville, Mississippi	1st 30,000 psi system
1976	Arun Field, Indonesia	1st 6-3/8" 10,000 psi (400°F) system
1979	Lake Ponchartrain	1st Dual 20,000 psi system
1980	Thomasville, Mississippi	4-1/16", 30,000 psi system
1984	Brazos Area, GoM	1st 20,000 psi system
1990	Destin Dome, GoM	1st 15,000 psi HP/HT (350°F) jackup drilling system with HP/HT mudline
1992	Central Graben, UK North Sea	1st 20,000 psi (450°F) system
1995	Norphlet Development, GoM	15,000 and 20,000 psi (350°F) systems
1997	Erskine, UK North Sea	15,000 psi (400°F) system
1999	Elgin/Franklin, UK North Sea	15,000 psi (400°F) offshore drilling & completion system & HP/HT clad production trees
2000	Jade, UK North Sea	12,000 psi system
2001	Conger Field Dev. GoM	4" x 2" - 15,000 psi subsea systems (4) with 15,000 psi well intervention system
2002	North Dome, Qatar	9" - 6,500 psi large bore clad systems
2004	Green Canyon, GoM	5" x 2" 15,000 psi guidelinless horizontal trees (3)
2005	Genghis Khan, GoM	5" x 2" 15,000 psi horizontal trees (2)
2006	Tiger, GoM	5" x 2" 15,000 psi horizontal tree (1)
2007	Wrigley, GoM	5" x 2" 15,000 psi horizontal tree (1)

Technical Information

Working pressure	15,000 psi
Temperature rating	-20°F to 400°F
Hanging capacity	30": 3.1 mm lbs 20": 3.9 mm lbs 13 ^{3/8} ": 2.8 mm lbs 10 ^{3/4} ": 2.56 mm lbs
Annulus seals	Metal-to-metal



GE imagination at work