WELLHEAD BYPASS TOOL

YOUR TRUSTED PARTNER IN UPSTREAM ENGINEERING

Wellhead Bypass tool

Keep production equipment safe from high-pressure and abrasive fluids

Overview

Well-stimulation techniques often require high pressures, large volumes of strong acid, and large amounts of sand for formation treatments. The operators must replace the original wellhead and the production valves before any high-pressure well-stimulation operations.

The Anvey wellhead bypass tool allows operators to protect their original wellheads & production valves designed for everyday operating conditions rather than for the infrequently encountered extremes during stimulation operations. This enables operators to have the ability to improve well stimulation and increase production rates while protecting the production tree and wellhead from damage caused by high pressures, corrosive fluids, and abrasive wear.

Anvey wellhead bypass tools are uniquely designed to fit customer requirements and operate in various conditions. The application is rational and flexible. The wellhead isolation tool can be installed with the well dead or pressurized well without the aid of a workover rig. The tool can be quickly rented, deployed and used with less downtime at the rig site.

The Anvey's wellhead bypass tool are manufactured under a quality program that meets all relevant industry standards.

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Applications

- Hydro fracturing
- Conventional & unconventional completions
- Suitable for sweet & sour services

Benefits

- Reducing completion costs and tree damage caused by acids, pressures, and erosion
- High pressure well-stimulation operations can be performed with the low pressure x-mass tree.
- Stimulates without upgrading the wellhead.
- Increases production equipment's lifespan.
- Enhances efficiency and operational uptime.
- Works without a workover rig.
- Reduces capital expenditures.
- Eliminates opex time and costs
- This system doesn't require any well killing operation. It can be installed on a well under pressure.

Features

- Rated working pressure is (15,000 Psi or 103.42 MPA)
- Isolation of X-mass tree or any production facility from treating pressure and abrasive fluids.
- During stimulation, a dual-barrier seal is maintained, with the option of adding a third barrier at any time.
- Hydraulically operated system.
- Stroke length of 120" & extensions for extra reach out.
- Anvey pack-off nipples incorporate major improvements in design and materials to provide maximum seal reliability and strength.
- Installation and removal of the wellhead bypass tool can be performed while the well is under pressures up to 15,000 psi. It is not necessary to kill the well to install the tool.
- Mandrel is designed with erosion resistant & high-strength mandrel. our mandrel comes in various lengths based on customer requirements.

Technical Specifications

- Material of Construction SS 3 16 Mandrels, AISI 4 140 body works and plug valves of RDI Canada.
- Tubing size 2 7/8" to 4 1/2" all weight ranges.
- Hydraulic Cylinders Stroke of 120"
- Insertion Pressure up to 15000 psi
- Flow Rate 26—40 BPM
- 3"/4" 15000 PSI lock down Hammer Union
- Plug Valve Manual4"/3" 15000 PSI
- Plug Valve Hydraulic4"/3" 15000 15000 PSI
- Flange Changeovers
  1. To fit to 2 9/16", 5 1/8" and 7 1/16" flanged trees/ BOPs
- Mandrel nominal diameters
  1. Size: 2 7/8", 3 1/2" and4 1/2"
- Pack-off Nipples
  1. Suitable to all tubing sizes above.
- Hydraulic Power Unit, Diesel Engine, Hose Reels 75 ft per line, Quick Connect Ends, Max WP of 2,250 psi

Anvey Pressure Equalization System

- The Anvey pressure equalization system allows operators to have precise control over the flow and pressure in the wellhead bypass tool during insertion and retraction of the high pressure mandrel into the production tubing.
- During insertion, pressure can be equalized below and above the wellhead master valve without opening the master valve. This gives operators additional flexibility during installation of the wellhead bypass tool on the wellhead.
- When retracting the mandrel, a pressure differential is created between the interior of the mandrel that is open to the production tubing and its exterior facing the wellhead walls. Using the system operators can equalize this differential pressure in order to safely unseal the pack-off nipples from the production tubing thereby protecting the wellhead and tree saver from dangerous hydraulic shock loading.