

HYDRAULIC BOLT TENSIONING

Reactor Pressure Vessel Cover

The Application

- Assembly of nuclear power plant reactor pressure vessel stud bolts
- Large thread diameter - 6" 8UN thread size
- Very high required tensioner load – 12,000 kN
- 54 bolts on a 4.8m PCD
- Safety critical application demanding high accuracy
- Time saving and ease of operation critical

The Solution

- Special spring return tensioners
- 2350 bar operating pressure
- Spring loaded piston return
- Positive stop
- Adaptable puller to suit different stud protrusions
- Integral turning wheel for quick assembly
- Electronic load cell for calibration
- On-site training and commissioning

The Benefits

- High load, low diameter tensioners solution for a space restricted application plus lower tool weight
- Solution provides high and accurate preloads
- Calibration carried out using 13,000 kN electronic load cell with easy-to-read display to verify and calibrate tensioner load
- Test rig set up to simulate the application and calibrate the load transfer profile
- Easy calculation of tensioner operating pressures for given residual loads in the test environment saves time (when used with the complementary high pressure pumps and hoses) and ensures a complete solution
- All items CE marked and calibrated



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