

Tubing (Casing) Helium Testing Technique

The tubing (casing)heliumtesting technique is a technique of air tightness testing by helium via the tubing (casing) connection threads and oil and gas pipeline joints before site downhole or operation. It is the most advanced leakage inspection method and also a key approach to ensure the air tightness of shaft tubular columns and transmission pipelines. It has effectively solved the worldwide different problem arising from natural gas well Annulus pressure production. Currently, the technique has become an essential procedure for development of gas storage and the gas fields that are rich in H₂S, highly sensitive and of CO₂ high-risk category. Anton Inspection Company is the initiator, founder and standard drafter for China' s helium testing, with key proprietary intellectual property rights.

Technical Characteristics

- Helium testing under the pressure of 120MPa ensures conformity with high standards;
- More accurate description of air tightness by small-molecule helium seepage discharge in a quantitative manner;
- Up to 1.5min single-point testing duration, with fast testing speed;
- Testing of tubing (casing) coupling factory end and field connection end, proving to be more reliable.

Scope of services

- Natural gas wells, gas injection wells, gas storage and shale gas wells;
- Air-tight thread tubing (casing), short sections and columns of $\Phi 60.3\text{mm}$ ~ $\Phi 339.7\text{mm}$, transmission pipelines of $\Phi 60.3\text{mm}$ ~ $\Phi 244.5\text{mm}$;
- Drilling rigs, workover rigs, offshore platforms and other operating conditions;
- Adverse operating environments such as desert, ocean and hilly area.

Qualifications

- Complete sets of super high pressure vessel design and manufacture certificates, ensuring intrinsic safety of equipment;
- Storage type digital monitoring system, which can monitor synchronous leakage rate and trace testing quality under testing pressure;
- Passed the equipment process safety evaluation of DNV.GL;
- 23 sets of equipment and 12 professional teams offer services for 600 wells each year.

Performance

- Chinese clients served include: Dzungaria, Tarim, Sichuan, Songliao, Bohai Gulf and Ordos Basin oilfields, CNPC, Sinopec and Shenhua Group;
- Construction well types: natural gas well, gas injection well, coal-bed gas well, gas storage well, shale gas well, high-risk oil and gas well;
- Inspected over 1,500 wells and 440,000 threads.

