

HP Air Bottle Test Facility

CAPABILITY SHEET · GCR 2014 · 600 BAR CLASS · ENGINEERED TO ORDER

THE FACILITY

WHAT

THE CORE IDEA

A cylinder does not pass by surviving test pressure. In the water-jacket method the verdict is measured PERMANENT volumetric expansion after release - the signature of steel that has stopped behaving elastically. Every other station exists to keep that number honest.

STATUS

Engineered to order. Reference configuration, not yet built - quoted against repeated Indian naval requirements (the same complete-line requirement floated twice, two years apart); no delivered facility is claimed.

THE LINE

PREPARE

PLC-controlled shot blasting strips the exterior to bare metal - scale hides cracks and stamps must be struck on clean steel. A screwing/un-screwing machine removes and refits valves at repeatable torque, protecting neck threads that must seal at service pressure for years.

TEST

Hydraulic test bed and power pack perform the periodic water-jacket test per GCR 2014; 600 bar-class valves, gauges scaled in bar and psi. Displaced jacket water reads total expansion; the residue after release decides pass or condemn.

RETURN

Dry, revalve, recharge through the booster train, stamp on bare metal, rack. A test line without recharge relocates the queue; with it, a bottle arrives from a ship and returns finished.

THE RECHARGE TRAIN

DRIVE

Feed compressors of 415 and 20 CFM drive an air-operated liquid pump/booster through a 5 micron filter-regulator (1-16 bar operating, 0.5-12 bar regulation, +/-0.2 bar hysteresis).

DISCIPLINE

Outlet check valve at 3 bar, automatic pilot cutoff set at 605 bar, and 600 bar-rated needle valves on distribution - the fill terminates by design, not by an operator watching a gauge.

ALSO SERVES

The facility's own nitrogen bottle sets, kept for line operations, charge through the same train.

SCOPE & ENGAGEMENT

INSTALLED COMPLETE

Foundations to 5 t/m2 with approved design, foundation bolts, underground and tray cabling, erection, alignment, earthing; O&M manuals, test certificates, GA and as-fitted drawings; joint acceptance trials with deficiencies rectified at no cost.

THE STATUTE

Gas Cylinder Rules 2014 govern periodicity, method and records - and the station itself must be recognised. Technical support and consultancy for CCOE approval is carried in the scope of supply; approval is never claimed in advance.

ENGAGEMENT

Send the bottle population, its test calendar and the site to sales@neometrixgroup.com - compliance matrix within two working days.

DEFENCE PROGRAMMES DESK

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