NEOMETRIX DEFENCE NMX-HCTS-3K5

Hydrogen Component Test System

CAPABILITY SHEET · ISO 12619 · UN ECE R134 · AIS 157 · UNDER CONTRACT - IN EXECUTION

THE FACILITY

WHAT	Turnkey certification facility for compressed-hydrogen vehicle fuel-system components: all 11 mandatory test methods of ISO 12619 (Parts 1-16), UN ECE R134 and AIS 157, across 15 component families - regulators to TPRDs, lines, filters, fittings.
STATUS	Under contract for a Government of India automotive testing & certification centre, won in open national competition; detailed engineering and long-lead procurement in progress at Neometrix Noida.
ENVELOPE	Hydrostatic strength & burst to 3500 bar (hydraulic intensifier); gaseous hydrogen from sub-atmospheric to 1050 bar; hydrogen pre-cooled to -40 degC; blends >=5% H2 in N2/He mixed to +/-1% of full scale.

TEST FLOOR

CHAMBERS	Nine multi-DUT chambers - blast-rated, gas-tight, SS316, fabricated in-house - each with independent control and monitoring, so nine test programmes run simultaneously.
METHODS	Continued operation to 100,000 cycles; burst at 2.5x-4x working pressure with ramps to 1.4 MPa/s; leakage <10 Ncm3/h hydrogen-equivalent from -40 to +120 degC; impulse, pre-cooled exposure, pneumatic strength, accelerated life.
SPECIALIST	Dedicated burst bay (one of the nine); pneumatic-strength bench; slow-strain-rate SCC rig in hydrogen atmosphere; extreme-temperature pressure cycling -40 to +85 degC; permeability cells; accelerated-life stations at +/-0.7 MPa, +/-1 degC.

GAS TRAIN & SAFETY

GAS TRAIN	Automatic MFC blending at supply pressure; compressor + booster station; pre-cooling stage; closed-loop gas recovery and recycling; three skid-mounted make-up cylinders >=50 L / >=200 bar (H2, H2+N2, H2+He) with COA; dedicated N2 purge system.
SAFETY	ATEX/IECEx zoned electricals; 16-point hydrogen detection with ESD; fan-proven dilution <25% LEL; blast-relief panels; vent stacks with flame arrestors; NFPA 2 and PESO practice; HAZOP-led safety case.
DATA	PLC/SCADA with distributed I/O; timestamped, digitally signed records; PDF/Excel/CSV reporting; >=10-year archive; role-based access; NABL / ISO 17025-traceable calibration certificates.

DELIVERY & ENGAGEMENT

ROUTE	Design -> factory acceptance at Neometrix works (customer-witnessed) -> installation -> site acceptance demonstrating all 11 methods -> operator & maintenance training -> documentation handover.
SUPPORT	24-month comprehensive warranty; 10-year spares and service support with an India-based team; recommended consumables list per test method.
ENGAGEMENT	Send your specification to sales@neometrixgroup.com - clause-by-clause response and budgetary quotation within two working days. Single-method benches, other gas regimes (CNG / ISO 15500) and R&D configurations engineered to order.

DEFENCE PROGRAMMES DESK

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