

Hydrogen Fuel-System Component Test System

CAPABILITY SHEET · HYDROGEN COMPONENT TYPE-QUALIFICATION · UNDER CONTRACT

THE SYSTEM

WHAT	A test system that type-qualifies hydrogen (and H2/CNG) vehicle fuel-system components to ISO 12619, UN-ECE R134 and AIS-157: 15 component families, 11 protocols, across -40 to +120 degC and to 2x working pressure at the 350 and 700 bar classes.
STATUS	Under contract - design approved and acceptance-test procedure prepared, in build for a national heavy-engineering enterprise; configurable to customer specification and certification regime. Not a delivered claim.
BASIS	Established high-pressure hydrogen and pressure-cycle test-equipment engineering: gas boosting, environmental conditioning, a sealed ATEX cell, high-sensitivity leak/permeation measurement and PLC/SCADA control.

COMPONENTS & ENVELOPE

COMPONENTS	15 families: pressure regulator, check & cylinder valves, automatic valve, gas injector, pressure indicator, PRV, PRD & thermally-activated PRD (TPRD), excess-flow valve, hoses, rigid & flexible fuel line, filter, fittings, HFCV components.
PRESSURE	H2 service 350 & 700 bar classes; tested to 2x working pressure with high-pressure gas boosters; hydrostatic-strength, burst and pressure-impulse testing.
TEMPERATURE	-40/-20 degC to +85/+120 degC in environmental conditioning chambers; pre-cooled H2 (-40 degC) fuelling per the UN-ECE R134 protocol.

PROTOCOLS, MEDIA & CONTROL

PROTOCOLS	11 protocols spanning strength/burst (2x WP), continued-operation cycling, external leak (-40/+120 degC), pressure impulse, pre-cooled-H2 exposure, pneumatic strength, accelerated life, permeability, extreme-temp cycling and stress-corrosion cracking.
MEDIA & DETECTION	Hydrogen where the standard requires it; inert gas for destructive strength tests. High-sensitivity H2/helium leak and permeation measurement resolves the small rates the standards set.
CONTROL & SAFETY	PLC/SCADA data acquisition with programmed cycle profiles for unmanned/remote runs; ATEX-zoned sealed high-pressure cell, H2 gas detection, forced ventilation, fail-safe isolation, remote vent/purge.

VARIANTS & ENGAGEMENT

VARIANTS	Single-component benches (TPRD burst/cycle, regulator durability, injector endurance); CNG and H2/CNG components at their service pressures and standards; full-suite systems to the 350/700 bar classes.
HYDROGEN LINE	Sits alongside our hydrogen gas boosting/compression stations, hydrogen engine and power-to-power test benches, and refuelling systems - one supplier across the hydrogen test and infrastructure chain.
ENGAGEMENT	Send your specification to sales@neometrixgroup.com - clause-by-clause compliance matrix and budgetary quotation within two working days. Export subject to GoI authorisation.

DEFENCE PROGRAMMES DESK

sales@neometrixgroup.com · +91 7777 876 876 · neometrixgroup.com

Neometrix Defence Limited · E-148, Sector 63, Noida, Uttar Pradesh, India

Reference configuration reflects the system under contract for a national heavy-engineering enterprise. Component set, pressures, temperatures and instrumentation are re-scoped against the customer's specification and standards.