

Electrolyser Test Station

CAPABILITY SHEET - ELECTROLYSER STACK CHARACTERISATION RIG - ENGINEERED TO ORDER

THE TEST STATION

WHAT	A test station that proves an electrolyser stack cell by cell - controlled power, water, heat and back-pressure in; hydrogen, oxygen, voltage and efficiency measured out.
OUR ROLE	Neometrix builds and integrates the rig - frame, water/thermal skid, back-pressure, gas and safety handling, controls; DC supply, analysers and workstation are bought in.
STATUS	Engineered to order; sized to the stack under test - power, flow, temperature and pressure. No delivered station is claimed on this sheet.

CONTROLLED INPUTS

PROGRAMMABLE DC	A programmable DC supply drives the stack through set currents and voltages - steady points, ramps and load cycles - for polarisation (I-V) and durability runs.
WATER + THERMAL	Deionised feed water and a thermal loop hold the stack at set temperature; impurities poison membranes, so water quality and conductivity are controlled and logged.
BACK-PRESSURE	Independent back-pressure on the hydrogen and oxygen sides sets the operating pressure and reveals its effect on efficiency and gas crossover.

MEASURED OUTPUTS

FLOW + CROSSOVER	Mass-flow meters and gas analysers measure hydrogen and oxygen output and the crossover of hydrogen into oxygen - the key safety and efficiency signal.
PER-CELL VOLTAGE	A voltage-sense harness reads every cell, so a weak or failing cell is found early - not after it has dragged the whole stack down.
I-V + EIS	An electrochemical workstation records the I-V polarisation curve and impedance (EIS) - the resistances and losses behind the numbers - plus efficiency and grade.

DISTINCTNESS & ENGAGEMENT

NOT COMPONENT TEST	Distinct from a component test system (mechanical burst and leak of valves and cylinders) and from a power-to-power energy system; this characterises the stack itself.
NOT A PLANT	Distinct from a generation plant, which produces hydrogen for use. The test station's product is data - proven performance, efficiency and durability of the stack.
ENGAGEMENT	Send stack type (PEM, AEM or alkaline), cell count, area, power and pressure to sales@neometrixgroup.com for a clause-by-clause compliance matrix in two working days.

PROJECTS DESK

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