



Internal view of the instrument, with evidence of the two lines connected to the reference and to the measure chambers

STATUS

 TRL 6 - technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)

Isochoric Differential Apparatus

DESCRIPTION

IDA, Isochoric Differential Apparatus is a volumetric instrument for the characterization of solid material versus gas sorption (e.g. hydrogen, methane, CO2). Two pressure chambers take into direct comparison the sorption phenomena with a reference test.

The istrument gives advantages in terms of higher accuracy on gas uptake/release, reducing errors caused by gas expansion.

SPECIFICATIONS

- High accuracy: less than 10-5 moles;
- Fast sorption during start up;
- Extended measure ranges: from vacuum to 100 Bar, RT to 650 K.
- Possibility to perform surface study, as BET, at cryogenic temperatures
- Possibility to perform adsorption and physisorption tests

ADVANTAGES & APPLICATIONS

MATERIAL CHARACTERIZATION LABS:

• Patent pending

RIFERIMENTI E LINK

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IDA is the best performing volumentric instrument to study gas soprtion phenomena in solid materials, in general for hydrogen. Its high accuracy allows to characterize small scale sample, typical in lab scale.

MEASURES:

thermodynamic and kinetic properties of materials in physisorption and chemisorption, BET.