

Instruments for Physical Testing of Iron Ore

Reduction Under Load - RUL Test System



The **RUL Test System** is an automated instrument able to perform the Reduction Under Load test on iron ore and iron ore pellets according to standards **ISO 7992** and **ISO 11256**.

Determination of Reduction Under Load (RUL) is an iron ore testing method where a sample is isothermally reduced in a fixed bed, at 1050 °C, under static load, using a reducing gas consisting of CO, H₂ and N₂ (flow rate: 83 nl/min), until a degree of reduction of 80 % is obtained. The differential gas pressure across the bed and the change in the test bed height are measured at 80 % reduction.

The equipment consists of a **Control Cabinet** connected to a **vertical oven** capable to heat the reaction tube at test temperatures (up to 1050 °C) controlled by thermocouples placed in the oven wall and inside the reaction tube.

The test process is driven by a **PAC unit** (**P**rogrammable **A**utomation **C**ontroller) with an I/O unit dedicated to the handle inputs and outputs from the probes and transducers of the system.

A **Touch Screen User Interface** provides user-friendly instructions before starting the test and gives on-screen information about the status of the system as well the main test parameters during the test run.

The test results are available On-Screen and also on a external memory unit (**USB**) for storage, print and post processing purpose.

The printing feature of the provided PC Software allows to print out the test results as prescribed in the ISO Standards.

The same Vertical Oven and Control cabinet can be equipped with a specific software to comply with the requirements of both test procedures prescribed in **ISO 7992** (determination of Reduction under Load) and **ISO 11256** (determination of Clustering Index).

From R.B. Automazione - Italy

Available through - LECO Australia Pty Ltd

4/10 Salisbury Road Castle Hill NSW 2154

PO Box 6006 Baulkham Hills BC NSW 2153

Ph: +61 2 9849 5900 Fx: +61 2 9894 5247

Email: australia@leco.com Web: www.leco.com.au