Instruments for Physical Testing of Iron Ore

Pellet Crushing Strength Determinator - RB 1000



The RB 1000 Iron Ore Pellet Crushing Strength Determinator is an automated system for the determination of the crushing strength of fired iron ore pellets and reduced iron ore pellets, according to ISO 4700 Standard and ASTM E 382-83 Standard.

The equipment consists of a loading unit, with an automatic handler and feeder for the samples and an electronic unit for indication, printing and statistic calculation of crushing strength test data.

The loading device has a capacity of 1,000 daN (\approx 1,000 kg) and operates at constant compression speed (5, 10, 15 or 20 mm/min). The press rammer is specially designed to include a particular proximity sensor so that only during the compression phase the speed of the press is kept to the low desired value, while in the approach and in the return phases the speed is considerably higher.

The applied load is measured by means of interchangeable precision load cells.

The load measuring system is auto calibrating before each test. Optional calibration system is available for periodical calibration.

An automatic handler (fig. a) together with a feeder (fig. b), in which the pellets can be put in bulk, provides for the sequential insertion of samples between the compression plates.

The approximate capacity of the automatic feeder is about 1600 pellets (standard pellet size 10-12.5 mm). The electronic unit controls and drives the press, the sample handler, the feeder and performs the load cell signal processing and determines the crushing strength values obtained loading the sample and measuring the force necessary to obtain the sample crushing.

From R.B. Automazione - Italy

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