PLOT NO. 1131 HARI ENCLAVE KIRARI SLEMAN NAGAR NEW DELHI-110086
2ND PLANT H-936 RIICO CHOPANKI INDUSTRIAL AREA ALWAR RAJSTHAN-301707

RESOTECH- FLEXURE TESTING MACHINE

Professional Manufacturer of Test Equipment

MAKE :- RESOTECH

MODEL NO. :- RESOTECH FLEXURE-2608

RESONANCE AUTOMATION AND MACHINES

MANUFACTURERS & SUPPLERS

SPECIAL PURPOSE MACHINE, MATERIAL TESTING MACHINE, LEAKAGE TESTING MACHINE, PACKIGING TESTING MACHINE, ENVIRONMENTAL TEST CHAMBER, ASSY. LINE EQUIPMENT, SOLUTION FOR ELECTRONIC AUTOMATION AND PRODUCT DEVELOPMENT, COMPUTERIZED CONTROL MACHINE , PLC HMI SCADA VISUAL BASIC SOFTWARE DEVELOPMENT SOLUTION AND OTHER SERVICES.

FLEXURE TESTING MACHINE DIGITAL

MAKE: RESOTECH

MODEL: RESOTECH FLEXURE-2607

ORIGIN: INDIA

Load range of 450 N to 550 N minute capacity flexure testing machines have been designed to meet the need for reliable and consistent testing of flexural test on standard concrete beams, transverse test on kebs and flagstones, indirect tensile tests on concrete and interlocking pavers. All test international machines feature the complete automatic test cycle with a closed loop digital readout. Once the specimen parameter have been introduced, it is sufficient to press the START button to complete the test.

The key characteristics of the flexural test machines are:

- Automatic test cycle with standard Rapid Approach
- Graphical – LCD Data Acquisition and Control System
- Menu Driven Software for easy operation
- Load vs time plot and instantaneous load rate displayed
- Accurate load rate control within ±2 from 1 kN/sec to 20 kN /sec
- Class 1 starting from % 10 of the full range
- SI, Metric, Imperial Units
- Data storage up to 256 tests

Frame The versatile load frame is designed for minimum deflection at maximum load resulting in very high accuracy. The load frame is welded steel fabrication carrying the ram fitted to the upper crosshead. All frames have a single acting down-stroking ram with over travel switch protection to shut the machine down should maximum ram travel be reached. The return of the ram is done by dead weight to get maximum accuracy on the load measurement. The load cell is used for load measurements. All flexural frames have been designed to accept all the accessories for flexural and transverse tests. Flexural 100kN capacity and 200kN capacity. Both frames can be connected to any Test International compression machine as a second frame. 2

The main characteristics are:

- Two capacity High stability welded assembly
- 75 and 100 mm piston stroke with safety limit switch
- Piston return by dead weight
- Can accept all required accessories for mentioned standards

Power Pack The dual stage power pack which is controlled by BC 100 is designed to supply required oil to the frames. Very silent power pack can load a specimen between 1 kN/ sec to 20 kN/sec. On the dual stage pump high delivery low pressure pump is used for rapid approach and low delivery high pressure radial piston pump is used for test execution. On all power packs maximum pressure valve is used to avoid machine overloading.

The main characteristics are

- Dual stage pump
- 750 W power
- 25 litre oil capacity
- 60-100 mm/min fast approach speed

Safety Features: All Test International compression machines are fitted with:

- Max pressure valve to avoid machine overloading
- Ram travel switch to prevent excessive piston travel
- Front and rear gates with transparent durable flexi-glass

FLEXURE TESTING MACHINE MANUAL

MAKE: RESOTECH

MODEL: RESOTECH FLEXURE-2608

ORIGIN: INDIA

It is used for testing 40mm x 40mm x 160mm mortar specimens for flexural strength. (rilem cembureau test) by single point loading.

Specifications : It is a motorized, mechanical unit. The speed is adjusted so that the load increase on the specimen is between 4 to 6 kg/sec. A flexure test attachment for keeping the specimen in position is also supplied. This consists of two rollers 10mm. diameter and spaced 100mm apart, and a third roller of the same diameter equidistant from the first two and for transmitting the applied load to the opposite face of the prism. The unit is for operation on 230 Volts, single phase, 50 cycles A.C.supply. Loads are measured on a proving ring fitted with a sensitive dial gauge. Supplied without proving ring.

Accessories: Proving ring, capacity 100 Kn.

TECHNICAL SPECIFICATION

MAXIMUM CAPACITY : 1KN Maximum weight : 800 Kg
DISPLAY : LED/LCD DISPLAY WITH PEAK HOLD FACILITY
DIMENSIONS : 15CM X 15CM X 70CM
MATERIAL : METAL
POWER HYDRAULIC : 0.75 Kw
VOLTAGE : 380V
WARRANTY : 2 YEARS

➢ 100 kN Flexure Testing Machine (Hand Operated)

This model is hand version model comprising of a four pillar loading unit with a jack at the base. The top of the jack carries the table for the beam and has two rollers whose center distance can be adjusted to suit cross sectional area of sample beam.

Top plate has an adjustable seating and a member with two rollers.

➢ 100 KN Flexure Testing Machine with Auto Pacing System

It is a state-of-the-art machine. Total control of the machine is through the key board. Entry of the pace rate either on stress or strain basis is programmed through the touch panel display. In the process of the test, readings are displayed on the digital display along with pace rate indication. Once the specimen brakes the ram

retracts to its original position. The accuracy of the displayed reading is as per IS 1828 Grade I or BS 1610 Grade 'A'. Machines can also be supplied to meet the norms of BS 1881.The system operates on 220 volts, single phase supply.

➢ Servo Controlled Compression Testing Machine with Digital readout unit along with Flexure Attachment for Testing of Cement Samples As per EN 196.

The system is totally servo controlled with the facility of running one unit at a time either compression unit for testing 40mm cubes or flexure unit for testing specimen size 40 x 40x 160mm.

Principle of operation is based on Closed loop Principle.

The Close loop Principle is : –

A signal is generated on the ramp generator. Feed back signal is generated by the system. Both the Signals are processed at a speed of 10kHz in P.I.D. controller.

Resultant Signal is passed on to the Servo Valve keeping the system within + 2% of the Programmed value.

Loading Frame

Load frame is steel welded. It is designed to withstand a few million times of full cycles of loading without any sign of distortion or fatigue. These frames are light in weight. The base carries a fine finished hydraulic ram and the lower platen.

The top plate has a spherical seating to take care of any irregularity of the specimen surface or slight misplacement of the specimen from the central axis. Front cover is made of expanded sheet, which is provided as a protection to the operator while at the same time giving an unobstructed view of the specimen under test. An

additional frame is provided by the side of the main unit for testing of samples in flexure as per EN 196 is fixed on the left hand side of the main loading unit.

Power Pack

Power pack is placed by the side of the loading unit and is connected to the main unit through quick-couplings.

It is powered by a single phase motor to load the unit to its maximum capacity. It has provision for fast lift and also for the selection between compression unit or flexure unit.

Fixture for Testing Small Cubes

Fixture is made as per EN-196, for the testing of small cubes. It has a free moving spring loaded spherical seating. Bottom part of the fixture can accommodate cubes upto 50 mm.