TEST STANDS FOR ELECTROTECHNICAL, ELECTRONIC, MECHANICAL AND PNEUMATIC PRODUCTS

ICMET Craiova has a rich experience in designing, manufacturing, modernizing and accrediting test stands.

ICMET Craiova has built test stands for:

- transformers
- electric motors
- low and high voltage apparatus
- gear wheels
- electric drives
- insulators
- pneumatic equipment

ICMET Craiova offers turnkey solutions for the configurations required by customers.

So, for achieving the stands, ICMET provides services as overall supplier (turnkey stand) or certain partial services:

- Specifications (technical prescription)
- Design
- Fabrication
- Installation/Commissioning
- Consulting for accreditation

-**Specifications, containing:**

- sizing of the stands and components
- interfaces
- placement of the equipment within the test cell
- list of the equipment necessary to perform the desired tests
- detailed drawings of the mechanical, electronic and instrumentation capabilities

- **Design** – complete drawing package and documentation necessary for stand execution

- **Fabrication** – ICMET provides services including all aspect which appear when carrying out a stand (mechanical, electric, pneumatic, auxiliary systems, control, environment, data analysis and reports)

- **Installation/Commissioning** – includes equipment verification and personnel training

- **Consulting for accreditation** -

Examples of stands carried out by ICMET Craiova:

STAND FOR MECHANICAL TESTS ON POST INSULATORS

Purpose

The stand for mechanical tests on insulators is designed to perform mechanical tests according to SR EN 61952 – Insulators for Overhead Lines - Composite Line Post Insulators for Alternative Current with a Nominal Voltage Greater Than 1 000 V ; SR EN 1109-Composite Insulators for Alternative Current Overhead Lines with a Nominal Voltage Greater Than 1000 V

Technical characteristics:

- Maximum test limit 50 kN
- Measurement uncertainty (maximum) 0.563
- Supply voltage:
  - 380 V ; 50 Hz for hydraulic pump
  - 220 V ; 50 Hz for force measuring system

Structure

- Stress frame 50 kN
- Hydraulic system for force generation and adjustment
- Force measuring system, composed of :
  - Load cell
  - Control unit
  - Application software–ICMET
- Testing devices
- Power supply box

Stress frame 50 kN

Hydraulic system for force generation and adjustment

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Calea Bucureşti 144, 200515 CRAIOVA
Tel: +40 351 404 888; +40 351 404 889; Fax: +40 351 404 890; +40 251 415 482; www.icmet.ro; E-mail: market@icmet.ro

Load cell

Testing device

Control unit

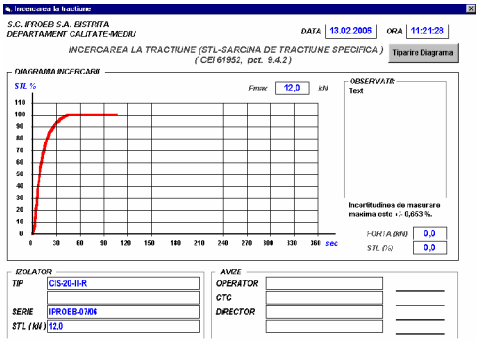

Diagram of tensile test

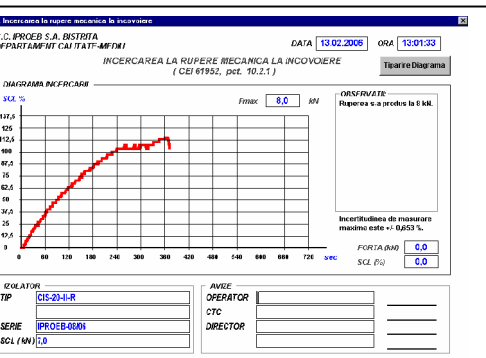

Diagram of mechanical breaking test

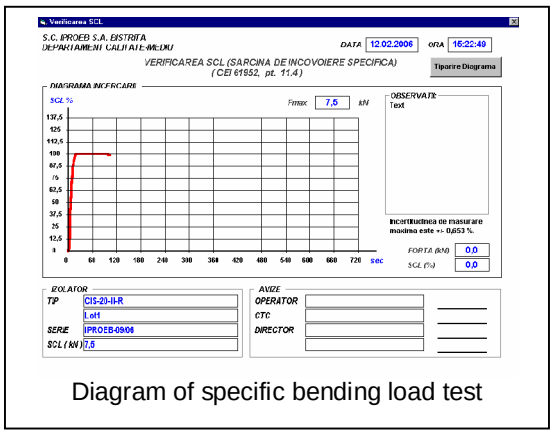

Diagram of specific bending load test

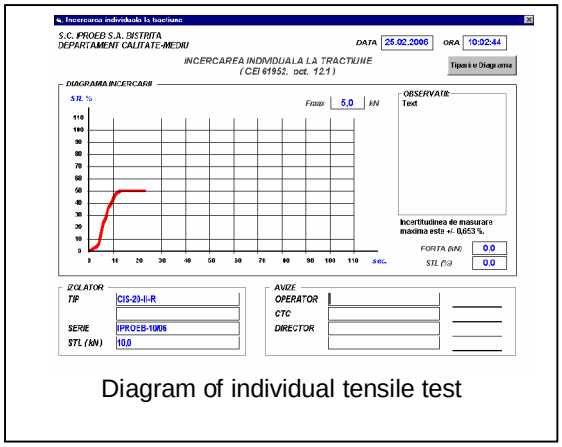

Diagram of individual tensile test

PNEUMATIC STANDS

Purpose

The stand is intended to check and test the air-cannon, micro-air cannon and pneumatic gun equipment, the apparatus and afferent pneumatic devices.

Technical characteristics

1. Pressure steps: 4; 6; 8; 10 bar
2. Rated flow related to the intake conditions: max. 120 Nm^3/h
3. Supply voltage for electro-pneumatic equipment: 24V / 220V / 380V / 50Hz

Stand structure:

a) Air generating module
b) Air storage tank
c) Air preparation and distribution subassembly
d) Control and supply cubicle
e) Manual control module
f) Working and checking station

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TRANSFORMER TEST STAND

The stand is intended to test the distribution transformers with power ≤ 40 MVA.

In principle, the stand design contains an electric diagram of the circuits for performing measurements, recording and processing the data, editing the Test reports inclusively.

The stand for testing the distribution transformers is carried out using a test diagram which could contain the following components:

- Induction regulator, driven by means of a motor reducer with two working directions. It provides a three phase controllable voltage between 20 and 750 V a.c.
- Three phase measuring current transformer with tappings
- Rotating frequency converter, 50/150Hz, 750V;
- Step up transformer 0.4/70kV
- Measuring device set:
- Set of data recording and processing equipment;

Groups of machines from the transformer

1. Induction regulator with remote control
2. Generator with 150 Hz frequency

Kit DELTA 2000, measuring:
- tan δ of transformer insulation
- capacity of transformer windings

Measuring device board

Electric switch box for instrument

INFORMATIZED STAND FOR TESTING THE ELECTRIC MACHINES WITH POWER BETWEEN 7.5 - 132KW

The electric machine test stand contains:

- DC source, able to operate in inverter mode.
- DC source, locally or remotely operated
- DC motor used as load for the motors to be tested
- Three phase autotransformer used for starting the synchronous and asynchronous motors
- Soft starter for synchronous and asynchronous motors
- Measuring current and voltage transformers

The main measured and processes quantities are: voltages, currents, speeds

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