



RESEARCH, DEVELOPMENT
AND TESTING
NATIONAL INSTITUTE FOR
ELECTRICAL ENGINEERING



MEDIUM VOLTAGE AUTOMATIC INSTALLATION FOR POWER FACTOR COMPENSATION

ICMET Craiova has the **Quality Management System** implemented according to the **Standard ISO 9001:2000**, the **Environment Management System** implemented according to the **Standard 14001:2004** and **Occupational Safety and Health Management System** according to the **Standard OHSAS 18001:2007**



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The capacitor banks manufactured by ICMET Company from Craiova are used in transformer and distribution substations of medium voltage for the compensation of reactive energy consumed by inductive receivers with a view to obtaining a power factor $\cos\varphi > 0.92$.

Besides ICMET Craiova provides:

- analysis and measurements of the network
- design and dimensioning of capacitor banks
- technical assistance at putting into service



CONSTRUCTIVE DATA

- the installations are of modular type (one cell for each compensation step) with acces on one side;
- metallic prefabricated, partitioned, closed, indoor type cubicles, simple system of bars, equipped as follows:
 - » Short-circuit protection of steps: by medium voltage fuses;
 - » Capacitor units: three-phase with reactive power according to the necessary steps, manufactured in "all film" technology with impregnation in environmentally safe liquid, with internal fuses and discharge resistances;
 - » Switching elements: vacuum contactors;
 - » Controller (varmetric regulator): with microprocessor, especially for medium voltage applications, with inputs from voltage and current instrument transformers;
 - » Control, protection and signaling apparatus: protection at door opening, electric arc, anti - condensation, internal lighting of cell;.
- supply: in cable
- the connection at the instrument transformers: in cable;
- earthing installation: continuous, with the bar which traverses each step cell and which is connected at both ends of the row of cells at the neutral bar of the station;
- overall dimensions: the step 800 mm/step cell;
- the cells are foreseen with anticondensation system and with natural ventilation;
- the casing: for indoor use, protection degree IP 2X.

The parameters of the installation are adapted to the client's supply network and needs.