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High Voltage Testing Microlaboratory MILYA-3

MILYA-3 intended for carrying out of following works:

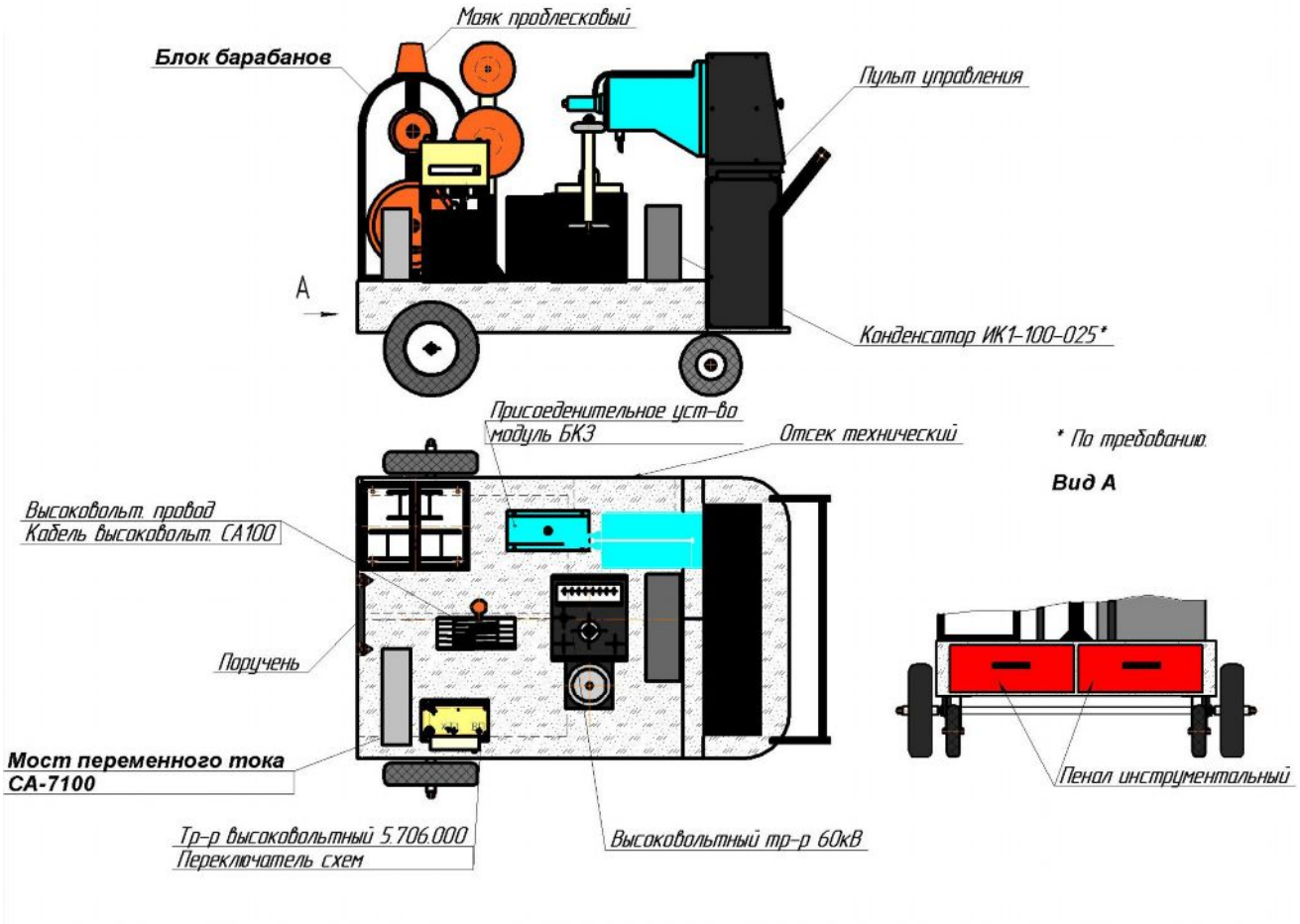
- the electric power substation's equipment and distribution devices testing with the operating voltage 25 kV;
- test power cables with paper-oil insulation with operating voltage up to 10kV;
- high voltage and low voltage measurements.

MILYA-3 offers the following services:

1.High voltage AC testing of paper-oil isolated cables.
2.High voltage DC testing with leakage control.
3. Measurement of the isolation's resistance and dielectric loss tangent.
4.Low voltage measurement of the power transformers and DC resistance.

The equipment of laboratory is mounted on the open mobile wheel platform. The platform conditionally divided on the two parts: the high-voltage part with located there equipment and control part – the part where taking place the management of testing. The Microlaboratory can be moved on a wheel platform, carry by road and also lift up and down by the hoisting device on various marks in power stations for electrical equipment test, etc. For lifting the Microlaboratory on the height has provided special cabling devices.

High -Voltage Testing Microlab MILYA-3 (frontal projection)



Pic.1 Planning of Microlaboratory MILYA-3

Technical specification:

Parameters	Level
Supply voltage frequency 50(60)Hz, V	230V, 50(60)Hz
Power-supply voltage, kVA	3
Peak value of AC testing voltage, kV at the maximum current,mA	50 40
Fundamental error of DC voltage measurement, %, no more	
Measuring range of leakage, μkA: - duringAC voltage - during rectified voltage Fundamental error of leakage measuring range, %, no less	 2; 20; 200 0,2; 2; 20 5
Capacity of a smooth capacitor, uF	0,25
IDP-10M module: capacitance measuring range Cx: with build-in calibrating capacitor, with external calibrating capacitor Fundamental error of measurements, %, no more Cx tgδ Uраб	 10 …100000 pF 1pF…10μF ±0,05 $\pm(2\cdot10^{-4}+0,01\cdot tg\delta)$ 1,5
Dimensional specifications, L ×W× H, mm	1850x1200x1460
Weight, kg	400

1. **Equipment configuration**:

– Control panel;
– High-voltage switch HVS-60/1;
– Rectified voltage of testing source;
– High Voltage Divider
– Voltage regulator
– Smoothing capacitor 100кВ 0,25uF
– The auto AC bridge with calibrating capacitor
– Grounding control module;
– High-voltage shielded cable reel;
– Power cable reel;
– Protective earth cable reel;
– Drum with the cable measuring tg δ
– Low voltage measuring cable drum

2. Microlab personnel safety maintenance system

– Potential monitoring on the platform (Disconnection during potential occurrence from above 24V);
– Monitoring of grounding resistance (disconnection during resistance occurrence more than 25 Ohm);
– Manual emergency disconnect;
– Automatic compulsory grounding of high-voltage testing Units and connected to them objects after test ending and in emergency cases;
– There is device of visual break of decreasing voltage;
– Emission of light and sound signals during turn-on the laboratory.

The laboratory is completed with protection equipment, safety symbols and signs according to the instruction of the protection equipment, traffic rules and the operational documentation which using in the electroinstallations

Advantages of Microlaboratory:

Universality – Supposes transportation on the self platform and also on the car or trailer body with corresponding dimensions;

Mobility - Provided short range entrance to the testing objects;

Simplicity of operation and service – Microlaboratory have easy and safety control; there is good access to all equipment elements;

Safety - Microlaboratory meet standard safety requirements of Standards;

Availability – testing during the AC and DC connection of high-voltage sources and measuring devices (for example, megaohmmeter) to the object is carried out distant with the aid of main switch; connecting cables are reeled on the special reels.

Low cost – The user pays only equipment cost.

Cost effectiveness – cumulative cost of the Microlaboratory equipment is lower than the Microlaboratory equipment which you can purchase separately.

Fast recoupment – provided at the expense of essential decrease in initial capital investments during the rate factor of utility and use

3. Warranty period 12 months.

Please send your requests by e-mail: sales@emzlvi.ru ; lvi@emzlvi.ru

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