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SF₆-GAS INSULATION FACTORY-ASSEMBLED SWITCH-GEAR

The SF₆ factory-assembled switch-gear is the electric apparatuses, placed indoor as well as outdoor. They are used when you need to save place and to locate devices compactly. The factory-assembled switch-gears are used in electrical stations and substations, on the plants and also for ship power supply. It is called SF₆, because main devices of the factory-assembled switch-gear are placed inside the case, filled by SF₆.

SF₆ factory-assembled switch-gear are used for receiving and distribution voltages of 110-750 kV. They are assembled from separate modules, which are connected together in needed electrical circuit. Nowadays they are used all over the world. They need much less area than open switch gears for the same class of voltage.

Merits of SF₆ factory-assembled switch-gear:

1. compact placement (they use 5% of territory, which is used for outdoor switch-gear);

2. all elements of the device are made of aluminum, that decreases mass, that's why you may reject to use expensive fundaments and heavy mechanisms;

3. such device almost doesn't need technical service and there are low expenses on it;

4. high reliability;

5. long tenure of employment.

Demerits of SF₆ factory-assembled switch-gear are the following.

Nowadays SF₆ factory-assembled switch-gear (SF₆ FASG) is produced by national companies as well as by foreign ones. There will be examined 4 types of SF₆FASG: ЯЭ-110, ЯГК-110, 8DN8 (Siemens), B65 (AREVA).

These cells can be made as one of the next types: voltage-transformer, sectional, connecting bus and linear cell.

Disconnecting and earthing switches.

The functions of disconnecting and earthing switches are combined in a three-position unit. The moving contact either closes the isolating gap or connects the high-voltage conductor to the fixed contact of the earthing switch. This design ensures natural mechanical interlocking of the two functions in relation to one another, which subsequently no longer need be taken into account the electrical interlocking of the bay. The fixed contact of the earthing switch is brought out of the enclosure for test purposes. In a third neutral position, neither the disconnecter nor the earthing switch contact is closed. The three poles of a bay are mechanically interconnected; thus all three poles are operated jointly with a single motor-operated mechanism.