PROTECTIVE EQUIPMENT

In order to protect the organism or certain parts of the body, employees (working on the construction, operation and maintenance of high and low voltage power plants from electric shock, weather, falling on the head and other hazards and dangers) use personal and collective protection at work.

According to the degree of security provided by the means of protection, they are divided into BASIC and ADDITIONAL.

Basic means of protection at work are those that provide sufficient safety to perform work tasks. Basic means of protection are dimensioned according to the nominal voltage of the plant. In plants with a nominal voltage above 1000 V to ground, the basic protective equipment includes: *INSULATING HELMET, INSULATING ROD* with a test light for testing the voltage-free stateand *INSULATING PLIERS* for removing high-voltage fuses.

Additional protective equipment serves as a supplement for the individual action of basic protective equipment or other technical safety measures at work. Additional protective equipment is dimensioned according to the nominal voltage of the basic protective equipment with which it is applied together. Additional protective equipment includes: *INSULATING PROTECTIVE GLOVES, INSULATING RUBBER FOOTWEAR AND INSULATING RUBBER MAT.*

* Protective insulating helmet is intended to protect the head from falling objects, from hitting the head in other objects, from electric shock, as well as from the impact of the head during the appearance of an electric arch. The helmet is made of a material that is resistant to shocks, water, acids and does not conduct electricity, and it is necessary that it is not easily flammable.
* The safest way to check the voltage-free state is with a voltage inductor. The voltage inductor determines the voltage-free state of the plant by touching the metal spike of the inductor head. The voltage indicator consists of the insulating rod and the head of the inductor which is attached to the upper part of the insulating rod. The pole is made of quality round insulation material.Switching rods are intended for switching on and off disconnectors intended for manual operation.
* Insulation pliers serve as the basic protective device for the replacement of high-voltage fuses, taking appropriate protective measures and the use of appropriate protective tools.
* The protective belt is intended for the protection of workers working at height, and there is no other way to protect against falling from a height. In electric power companies, the protective belt is mostly used by workers on overhead line maintenance, as well as workers on maintenance of switchyards in substations.
* One of the protective equipment used when working live are protective gloves for electricians, having in mind fact that gloves should never be considered a sufficient protective device for live workers, but other protective measures must be taken with their use.
* Rubber footwear for electricians belongs to group protective equipment. It is used as an auxiliary protective device against various operating manipulations and works in high voltage plants.

Protective goggles, leather gloves, gas masks and safety reins are also used in power plants.

* Goggles or eye and face protection are used in work where there is a risk of electric arc, usually when removing live and loaded fuses or when operating a disconnector with handles.
* Leather protective gloves are used as protection against mechanical injuries to the hands
* Gas masks are a necessary means of protection in the event of fires in electrical installations in the event of fires in electrical installations and indoors.
* The securing rope must be very flexible and made of thin wires(0.1 mm). The rope must be protected by a colorless insulating cover.

Answer the following questions(protective equipment)

1. How can we divide protective equipment?
2. What does basic equipment serve for?
3. What’s additional protective equipment and what does it include?
4. Explain the purpose of insulating helmet and insulating pliers.
5. What do the workers use protective belt and gloves for?

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