Labour protection laws obligate

Use and maintenance of insulating rods

Entrepreneurs are responsible for the safety and health protection in their companies. Labour protection laws oblige entrepreneurs to ensure that all necessary protective measures are taken and observed when working at electrical systems.

Therefore the relevant parts of the installation are disconnected from power supply when working at electrical systems. However, simply tripping a switch to disconnect from supply is by far not enough. This does not allow for a secure statement on the de-energised state and thus the potential hazards of the electric energy can not be excluded. Between the disconnection from supply and the access release of the work site furthermore reliable information and measures are indispensable. For this purpose the five safety rules were drawn up:

- *Disconnecting from supply*
- *Safeguard against reconnection*
- *Verifying of the de-energised state*
- *Earthing and short-circuiting*
- *Cover or barrier neighbouring live parts*

Qualified electricians are familiar with these live assurance rules. But what about the safety and reliability of the devices and tools by which vital information is gained or work sequences are safeguarded? Every measure is only as safe as the applied technologies.

For establishing of the de-energised state the "hot stick working" method with insulating rods is employed in medium and high voltage installations. "Hot stick working" with insulating rods allows performance of the work (such as disconnecting from supply, verifying of the de-energised state, earthing and short-circuiting) by staying in a certain distance from live system parts. But even this safety measure is only as good as the used means. This means that devices have to meet the purpose of application, have to be dimensioned correctly, have to be attached according to the instructions for use and have to be in a proper state.

A damaged insulating part or a wrongly chosen insulating rod can give rise to increased discharge currents when immerging it into the hazardous zone or when touching live system parts. In the worst case the body throughflow can be fatal. A faulty extension piece or metal parts in the area of the operating head of insulating rods can cause sparkover and tripping of arcing faults of serious consequences when immerging into narrow-sized installation areas.

Protective devices and facilities have to be provided with a standard conform type label. They may only be used for installations they are designed for according to the type label. Devices and tools without type label, manufacturer's name, specification of nominal voltage range, double triangle with standard reference or double isolator have to be withdrawn from further use. Inspection periods and terms are specified for insulating rods as protective devices and tools.

The in-service inspection intervals depend on the ambient conditions as there are:

- *Frequency of application*
- *Stressing by ambient conditions and transport*

At least every 6 years there has to be an in-service inspection of capacitve voltage detectors as required by the BGV A3 (Accident Prevention & Insurance Association regulation A3).

The employer has to make sure that protective devices and tools are inspected for their proper state before every use, and within determined intervals, for their keeping of the limit values specified in the electrotechnical regulations. The set terms shall allow for any faults that may arise to be realised duly.

For in-service inspections at voltage detectors, switching rods, fuse tongs, insulating rods, and earthing rods we are always at your disposal.

DANGER

Old fuse tongs – hazard of electric shock

DANGER

Old voltage detectors without red ring, without extension part – hazarad by wrong indication, electric shock or arcing faults

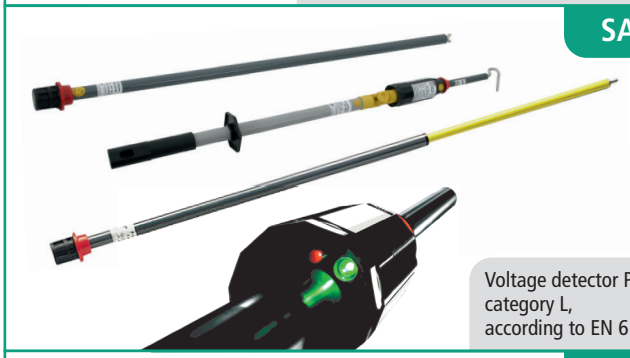
DANGER

Old switching rods – hazard by electric shock or arcing faults

SAFE

Fuse tongs according to DIN VDE 0681 Part 1/3

SAFE



Voltage detector PHE III, category L, according to EN 61243-1

SAFE

Switching rod acc. to DIN VDE 0681 Part 1/2

DEHN + SÖHNE
GmbH + Co.KG.
Postfach 1640
92306 Neumarkt
Germany
Tel: +49 9181 906 0
Fax: +49 9181 906 100
info@dehn.de
www.dehn.de

DEHN + SÖHNE