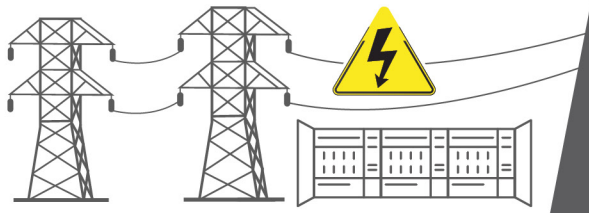
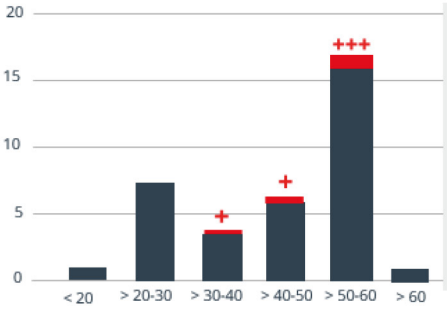
System mix-up

The danger of routine in electrical engineering

Safe working in medium and high-voltage



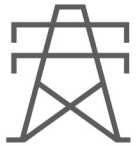
Electrocution fatalities recorded by BG ETEM 2015-2023



work experience	number	
> 20 years	15	+++
> 10 to 20 years	4	+
> 5 to 10 years	3	
to 5 years	7	+
N/A	6	+

Human error: An underestimated danger

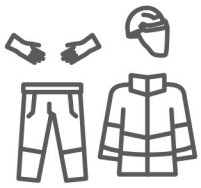
- "I went into the wrong switchboard by mistake"
- "I climbed up the wrong side of the overhead line tower"



In the words of an experienced electrician: "I thought it was disconnected from the power, but I was wrong. It could have cost me my life."

Optimally equipped: protective measures for electricians

- Safety helmet, face shield
- Protective clothing (PPE against arc faults) in the right protection class
- Protective gloves tested at working distance of hands (test principle GS-ET 42)
- Tested safety devices for compliance with the 5 safety rules
- Hazard warning device: alarm when approaching specific voltage



German Occupational Health and Safety Act

- § 4 No. 1 'TOP Principle' First take technical, then organisational and finally personal protective measures to minimise hazards
- § 4 No. 3 'State of the art' Protection measures must correspond to the state of the art

Typical injuries: possible consequences of an electrical accident

- Physiological: tinnitus, cardiac arrhythmias, respiratory arrest, nerve damage
- Thermal: burns, tissue necrosis, organ damage
- Mechanical: muscle cramps, falls
- High voltage: electric arcs, explosions, secondary injuries
- Psychological: Anxiety, PTSD
- Risk of fatality in case of currents 30-50 mA!