

## EUR21\_02 - INNOVATIVE STRATEGIES FOR INTERNAL ARC-FLASH RISK MITIGATION IN LV SWITCHGEARS

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**Abstract:** Internal Arc Classification (IAC) of Low Voltageswitchgear according to IEC and IEEE standards is one of the most important requirements to guarantee personal safety in case of internal arc faults. One of the challenges is to find innovative strategies to reduce damages of arc triggering utilizing more specific solutions inside the switchgear. As known, there are three mains philosophies of Arc Fault Management: Active protection, based on monitoring of electrical devices; Passive protection, obtained using structural reinforcements and insulations, Avoidance philosophy, where the assembly guarantees a reduced risk of arc fault (e.g. the arc ignition protected zone). What this research is going to explore is the Passive protection and the Avoidance philosophy with the introduction of new approach for internal arc-flash risk mitigation. The paper presents an innovative validation procedure in order to improve the IAC.