

Title (en)

METHOD AND DEVICE FOR LIMITING THE CURRENT IN A LIQUID METAL CURRENT LIMITER

Title (de)

VERFAHREN UND VORRICHTUNG ZUR STROMBEGRENZUNG MIT EINEM FLÜSSIGMETALL-STROMBEGRENZER

Title (fr)

PROCEDE ET DISPOSITIF PERMETTANT DE LIMITER LE COURANT AU MOYEN D'UN LIMITEUR DE COURANT A METAL LIQUIDE

Publication

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Application

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Abstract (en)

[origin: WO2005006375A2] The invention relates to a current limiting method, a current limiting device (1), and a switchgear comprising such a device (1). According to the invention, liquid metal (3) is directed along a resistor element (5) for the current limiting path (31) so as to obtain arc-free current limitation for mains-related fault currents (i(t)). Examples of embodiments include, among other things: an electrical resistance (Rx) that increases in a non-linear manner in the direction of movement (x) of the liquid metal (3) for a smooth current limiting characteristic; a resistor element (5) in the form of a dielectric matrix (5) comprising channels (3a) for the liquid metal (3), and a combined current limiter-circuit breaker (1). Advantages include, among other things: arc-free, reversible current limitation and optional power shutdown; suitable also for high voltages and currents; fast reaction times; reduced wear; and maintenance-friendly.

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