

Title (en)
Process for degaussing using alternating current pulses in a conductive loop

Title (de)
Entmagnetisierungsverfahren durch Wechselstromimpulse in einer in Schlaufen gelegten Leiterschleife

Title (fr)
Procédé de démagnétisation utilisant des impulsions de courant dans une boucle conductrice

Publication
EP 1791138 B1 20100804 (DE)

Application
EP 06405403 A 20060926

Priority
CH 18752005 A 20051124

Abstract (en)
[origin: EP1791138A1] Reproducible, capacitor-free demagnetization of ferromagnetic objects (30) involves using a low-frequency and frequency-modulated alternating current impulse produced by a current control (24), of variable amplitude and alternating current impulse width, in a conductor which may be connected in a capacitor-free manner between the input (27) and an output (28) of the current control. Reproducible, capacitor-free demagnetization of objects with a residual magnetism involves: (1) using a low-frequency and frequency-modulated alternating current impulse produced by a current control, of variable amplitude and alternating current impulse width, in a conductor which may be connected in a capacitor-free manner between the input and an output of the current control; and (2) producing a magnetic field impulse in the conductor which is flexible, completely insulated, unshielded and plastically deformable, and while forming a conductor loop (29) in any shape, is applied around an object to be demagnetized. The ends of the conductor loop are connected to the input and the output of the current control in a capacitor-free. The alternating current impulse of individual, alternately poled and symmetrical demagnetization impulses with controlled demagnetization impulse amplitude and alternating current impulse frequency of greater than 1 Hz is fed in, where the temporal course of the demagnetization impulse amplitudes is emulated by a demagnetization curve decaying in a non-exponential manner. The ratio of the smallest demagnetization impulse amplitude to the alternating current impulse amplitude maximum lies $\geq 1:1000$, and the conductor loop is removed after completion of the demagnetization of an object. An independent claim is included for a device for the reproducible, capacitor-free demagnetization of object with a residual magnetism.

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Cited by
EP2851911A1; CH717381A1; EP2974820A1; US11127519B2; EP2755217A3; DE102018108037A1; US11611300B2; US11887763B2; WO2020142157A1; EP2974820B1

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