Title (en)

Device for inductively heating a workpiece by multiple inductors.

Title (de)

Einrichtung zur induktiven Erwärmung eines Werkstückes mittels mehrerer Induktoren.

Title (fr)

Dispositif pour le chauffage à induction d'une pièce usinée au moyen d'inducteurs multiples.

Publication

EP 0100441 A1 19840215 (DE)

Application

EP 83106406 A 19830701

Priority

DE 3224738 A 19820702

Abstract (en)

1. Apparatus for inductivity heating of a work-piece comprising - a number n of parallel-resonant circuits each consisting of a condenser (C1 , C2) and an inductor (L1 , L2), with n>1, - a corresponding number of inverted converters (W1 , W2) correlated to each of the parallel-resonant circuits for separately feeding the individual parallel-resonant circuits with alternating current, - a controlled rotary current rectifier arrangement (D) for feeding said inverted converters with direct current, - a throttle device (L) located between the rotary current rectifier arrangement and said inverted converters, - a clearing condition regulator (CR) for charging the inverted converter valve elements with equal frequency igniting pulses determining the clearing time or clearing angle of said elements, characterized in that - said rotary current rectifier arrangement consists of a single fully controlled bridge circuit common to all of said inverted converters (W1 , W2) - all of said inverted converters (W1 , W2) parallely connected to said bridge circuit are connected by means of a throttle device comprising a smoothing reactor (D) to said bridge circuit, - and that the clearing condition regulator (CR) comprises means for causing a phase displacement between the igniting pulses for the various inverted converters causing a size pi/n phase displacement between the alternating currents passing said inductors.

Abstract (de)

Die Erfindung bezieht sich auf eine Einrichtung zur induktiven Erwärmung eines Werkstückes mittels mehrerer Induktoren. Um die von den Wechselrichtern (W1, W2) ausgehende Rückwirkung auf das Netz bei niedrigen Frequenzen, insbesondere unter 0,15 kHz zu vermindern, werden die verschiedenen Wechselrichterstromquellen mit umπ/n phasenversetzten Zündimpulsen derselben Frequenz bei n-Wechselrichterstromquellen betrieben.

IPC 1-7

H05B 6/10; H05B 6/02

IPC 8 full level

H05B 6/02 (2006.01); **H05B 6/06** (2006.01); **H05B 6/10** (2006.01)

CPC (source: EP)

H05B 6/06 (2013.01)

Citation (search report)

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Designated contracting state (EPC)

AT BE FR GB IT LU NL SE

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EP 0100441 A1 19840215; **EP 0100441 B1 19860917**; AT E22382 T1 19861015; DE 3224738 C1 19840209; JP S5968193 A 19840418

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EP 83106406 A 19830701; AT 83106406 T 19830701; DE 3224738 A 19820702; JP 11839183 A 19830701