

Title (en)
INDUCTION HEATED ROLL APPARATUS

Title (de)
INDUKTIONSERWÄRMTE WALZENVORRICHTUNG

Title (fr)
APPAREIL DE ROULEAU CHAUFFÉ PAR INDUCTION

Publication
EP 3934381 A1 20220105 (EN)

Application
EP 21182691 A 20210630

Priority
JP 2020115647 A 20200703

Abstract (en)
The present invention, for simplifying a piping structure of a cooling pipe for cooling a cylindrical iron core, includes: a roller main body (2) that is rotatably supported; a cylindrical iron core (31) provided inside the roller main body (2); an induction coil (32) wound around an outer peripheral surface of the cylindrical iron core (31); and a cooling pipe (7) welded to an inner peripheral surface of the cylindrical iron core (31). The cooling pipe (7) includes an outward pipe (71) and a return pipe (72) spirally wound in a same winding direction along the inner peripheral surface of the cylindrical iron core (31), the outward pipe (71) and the return pipe (72) communicate with each other at one end side, a cooling medium inlet (P1) is formed at another end of the outward pipe (71), and a cooling medium outlet (P2) is formed at another end of the return pipe (72).

IPC 8 full level
H05B 6/14 (2006.01)

CPC (source: EP)
H05B 6/145 (2013.01)

Citation (applicant)
JP 3756261 B2 20060315

Citation (search report)
• [A] JP H1055881 A 19980224 - TOKUDEN KK
• [A] CN 103108424 A 20130515 - TOKUDEN KK
• [A] JP 2001210459 A 20010803 - TOKUDEN KK
• [A] CN 102811519 A 20121205 - SHANGHAI LEGION ELECTRONIC TECHNOLOGIES CO LTD

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3934381 A1 20220105; EP 3934381 B1 20220810; JP 2022013229 A 20220118; JP 7437762 B2 20240226

DOCDB simple family (application)
EP 21182691 A 20210630; JP 2020115647 A 20200703