

Title (en)  
CARBURIZING AND QUENCHING FACILITY

Title (de)  
AUFKOHLUNGS- UND ABSCHRECKUNGSANLAGE

Title (fr)  
INSTALLATION DE CARBURISATION ET DE TREMPÉ

Publication  
**EP 2915888 A1 20150909 (EN)**

Application  
**EP 15000648 A 20150305**

Priority  
JP 2014043824 A 20140306

Abstract (en)  
To shorten the time taken for a carburizing and quenching treatment of an object to be treated, a carburizing and quenching facility 1 is provided that includes: a treatment chamber where at least one treatment related to a carburizing and quenching treatment is performed on an object to be treated W; a transfer apparatus to transfer an object to be treated W; a mounting table 30 that is provided in the treatment chamber and on which an object to be treated W transferred into the treatment chamber is mounted; and a lifting and lowering device that lifts and lowers the mounting table 30 and in which a transfer arm 40 to transfer an object to be treated W into the treatment chamber and outside the treatment chamber is provided in the transfer apparatus, the carburizing and quenching facility 1 includes: a turntable 60 that is disposed in the treatment chamber and performs deliveries of an object to be treated W to and from the mounting table 30 and the transfer arm 40; and a turntable drive device that rotates the turntable 60, in which the turntable 60 includes: a first support part 63 that supports an object to be treated W that has already undergone a treatment; and a second support part 64 that supports an object to be treated to undergo a treatment next, and in plan view, the turntable 60 is provided in a positional relationship such that the first support part 63, a support post 62 of the turntable 60, and the second support part 64 are disposed in a linear arrangement so as to sandwich a rotation axis R of the turntable 60 by the first support part 63 and the second support part 64.

IPC 8 full level  
**C21D 1/773** (2006.01); **C21D 1/62** (2006.01); **C21D 1/78** (2006.01); **C21D 9/00** (2006.01); **C23C 8/20** (2006.01); **C23C 8/22** (2006.01); **F27B 9/02** (2006.01); **F27B 9/04** (2006.01); **F27D 3/00** (2006.01)

CPC (source: EP)  
**C21D 1/62** (2013.01); **C21D 1/773** (2013.01); **C21D 1/78** (2013.01); **C21D 9/0018** (2013.01); **C21D 9/0025** (2013.01); **C23C 8/22** (2013.01); **C23C 8/80** (2013.01); **F27B 17/0016** (2013.01)

Citation (applicant)  
• JP H1053809 A 19980224 - DOWA MINING CO  
• JP 2002294429 A 20021009 - DOWA MINING CO

Citation (search report)  
• [X] DE 10359458 A1 20050728 - ALD VACUUM TECHN AG [DE]  
• [A] US 5997290 A 19991207 - HILLINGRATHNER FRANZ [ES]  
• [A] US 2003113186 A1 20030619 - HIRAMOTO NOBORU [JP]  
• [A] US 6065964 A 20000523 - PELISSIER LAURENT [FR]

Cited by  
WO2018028776A1

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 2915888 A1 20150909; EP 2915888 B1 20181205**; JP 2015168842 A 20150928; JP 6403959 B2 20181010

DOCDB simple family (application)  
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