

Title (en)
HEAT TREATMENT APPARATUS

Title (de)
WÄRMEBEHANDLUNGSVORRICHTUNG

Title (fr)
APPAREIL DE TRAITEMENT THERMIQUE

Publication
EP 3249329 A4 20180404 (EN)

Application
EP 16740224 A 20160120

Priority
• JP 2015009100 A 20150121
• JP 2016051604 W 20160120

Abstract (en)
[origin: EP3249329A1] A heat treatment apparatus is provided that can control temperature distribution with good reproducibility. A heat treatment apparatus (1) includes: a tubular heater (20); a pair of troughs (30), (40) each constituted by a graphite pipe and connected to the corresponding end of the heater (20); and a pair of electrodes (31), (41) each provided on the corresponding trough (30), (40). The heater (20) includes: a first graphite pipe (21B); a second graphite pipe (21C) having one end side in contact with one end side of the first graphite pipe (21B) and having an electrical resistance higher than that of the first graphite pipe (21B); and a third graphite pipe (21D) having one end side in contact with the other end side of the second graphite pipe (21C) and having an electrical resistance lower than that of the second graphite pipe (21C).

IPC 8 full level
F27B 9/36 (2006.01); **F27B 9/06** (2006.01); **F27B 9/08** (2006.01); **F27B 9/20** (2006.01); **F27D 11/02** (2006.01); **F27D 99/00** (2010.01); **H05B 3/00** (2006.01)

CPC (source: EP)
F27B 9/062 (2013.01); **F27B 9/082** (2013.01); **F27B 9/20** (2013.01); **F27D 11/02** (2013.01); **F27D 99/0006** (2013.01); **H05B 3/00** (2013.01)

Citation (search report)
• [I] JP 2000211909 A 20000802 - SEC CORP
• [L] EP 3248938 A1 20171129 - SEC CARBON LTD [JP]
• [A] EP 2623460 A1 20130807 - IHI CORP [JP], et al
• [A] DE 3941465 A1 19910620 - FEIST HORST JULIUS [DE], et al
• See references of WO 2016117617A1

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 3249329 A1 20171129; **EP 3249329 A4 20180404**; **EP 3249329 B1 20191218**; CN 107208976 A 20170926; CN 107208976 B 20190423; JP 2016133277 A 20160725; JP 5778363 B1 20150916; PL 3249329 T3 20200601; WO 2016117617 A1 20160728

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