

Title (en)
INJECTION DEVICE FOR DISCHARGING A GAS, PROCESS GAS SYSTEM FOR SUPPLYING A PROCESS GAS, AND DEVICE AND METHOD FOR THE THERMAL OR THERMO-CHEMICAL TREATMENT OF MATERIAL

Title (de)
INJEKTIONSEINRICHTUNG ZUM ABGEBEN EINES GASES, PROZESSGASSYSTEM ZUM ZUFÜHREN EINES PROZESSGASES, SOWIE VORRICHTUNG UND VERFAHREN ZUM THERMISCHEN ODER THERMO-CHEMISCHEN BEHANDELN VON MATERIAL

Title (fr)
SYSTÈME D'INJECTION SERVANT À FOURNIR UN GAZ, SYSTÈME DE GAZ DE PROCESSUS SERVANT À AMENER UN GAZ DE PROCESSUS, AINSI QUE DISPOSITIF ET PROCÉDÉ DE TRAITEMENT THERMIQUE OU THERMOCHIMIQUE DE MATÉRIAU

Publication
EP 3897950 A1 20211027 (DE)

Application
EP 19828707 A 20191218

Priority
• DE 102018133362 A 20181221
• EP 2019085911 W 20191218

Abstract (en)
[origin: WO2020127460A1] Injection device (56) for discharging a gas (54), in particular a process gas (54), onto a material (12), in particular onto a battery cathode material (14) that is to be calcined, having at least one inlet (58) through which the gas (54) can be supplied to the injection device (56), and at least one outlet (60) through which the gas (54) can be discharged from the injection device (56), the inlet and outlet being connected to one another by a flow path (62) for the gas (54). According to the invention, the flow path (62) has a heat exchanger (64) with a heat exchanger housing (68) which is accessible from the outside for an ambient atmosphere (66) and in which a duct arrangement (70) is integrated. The duct arrangement (70) comprises a first flow duct (72.1) and a second flow duct (72.2) between which there is formed a redirection region (74.1) such that the gas (54) can flow through the first and second flow duct (72.1, 72.2) in different main flow directions. The invention further relates to a process gas system (52) for supplying a gas (54) and to a device (10) and a method for the thermal or thermo-chemical treatment of material.

IPC 8 full level
B01J 6/00 (2006.01); **B01J 4/00** (2006.01); **F26B 21/02** (2006.01)

CPC (source: EP KR US)
B01J 4/002 (2013.01 - EP KR); **B01J 6/001** (2013.01 - EP KR); **B01J 6/004** (2013.01 - US); **F27B 9/045** (2013.01 - US); **F27B 9/3005** (2013.01 - US); **B01J 2219/00119** (2013.01 - EP KR); **F27D 2007/023** (2013.01 - US); **Y02E 60/10** (2013.01 - EP)

Citation (search report)
See references of WO 2020127460A1

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)
WO 2020127460 A1 20200625; CN 113195089 A 20210730; CN 113195089 B 20240109; DE 102018133362 A1 20200625; EP 3897950 A1 20211027; JP 2022514366 A 20220210; KR 20210127134 A 20211021; US 2022072496 A1 20220310

DOCDB simple family (application)
EP 2019085911 W 20191218; CN 201980085072 A 20191218; DE 102018133362 A 20181221; EP 19828707 A 20191218; JP 2021535616 A 20191218; KR 20217020199 A 20191218; US 201917416373 A 20191218