

Title (en)  
DEVICE AND METHOD FOR THE GENERATIVE MANUFACTURE OF A THREE-DIMENSIONAL OBJECT

Title (de)  
VORRICHTUNG UND VERFAHREN ZUM GENERATIVEN HERSTELLEN EINES DREIDIMENSIONALEN OBJEKTS

Title (fr)  
DISPOSITIF ET PROCÉDÉ DE FABRICATION ADDITIVE D'UN OBJET TRIDIMENSIONNEL

Publication  
**EP 3758917 A1 20210106 (DE)**

Application  
**EP 19732997 A 20190621**

Priority  
• DE 102018210260 A 20180622  
• EP 2019066440 W 20190621

Abstract (en)  
[origin: WO2019243559A1] The invention relates to a flow device for a device (1) for manufacturing a three-dimensional object (2) by selectively solidifying construction material (15) in layers at the cross-section of the object (2) to be produced in locations corresponding to each layer by means of irradiation using an energy beam (22, 22'). The device comprises a gas conveying device for generating a gas flow (50, 51, 52, 53, 54, 55) and a process chamber (3) with a construction field (8) for constructing the object (2). The process chamber (3) has at least one first gas inlet (31, 32) for introducing a gas flow into the process chamber (3) and a first gas outlet (34) and a second gas outlet (33) arranged at a distance from the first gas outlet (34) for discharging a gas flow out of the process chamber (3). The first gas outlet (34) is arranged closer to the construction field (8) than the second gas outlet (33) in a direction perpendicular to the construction field (8). The extension of the first gas outlet in a direction perpendicular to the construction field (8) is provided substantially within a first vertical range of the process chamber (3), and the extension of the second gas outlet in a direction perpendicular to the construction field (8) is provided substantially within a second vertical range of the process chamber (3), wherein the first vertical range of the process chamber corresponds to the lower third of the distance from the construction field (8) to a process chamber cover (4a), and the second vertical range of the process chamber (3) corresponds to the upper four fifths of the distance from the construction field (8) to the process chamber cover (4a).

IPC 8 full level  
**B29C 64/153** (2017.01); **B22F 3/105** (2006.01); **B29C 64/364** (2017.01); **B29C 64/393** (2017.01); **B33Y 10/00** (2015.01); **B33Y 30/00** (2015.01); **B33Y 40/00** (2020.01); **B33Y 50/02** (2015.01)

CPC (source: EP US)  
**B22F 10/28** (2021.01 - EP US); **B22F 10/32** (2021.01 - EP US); **B22F 10/322** (2021.01 - US); **B22F 12/41** (2021.01 - US); **B22F 12/70** (2021.01 - EP US); **B29C 64/153** (2017.07 - EP US); **B29C 64/364** (2017.07 - EP); **B29C 64/393** (2017.07 - EP); **B33Y 10/00** (2014.12 - EP US); **B33Y 30/00** (2014.12 - EP US); **B33Y 40/00** (2014.12 - EP US); **B33Y 50/02** (2014.12 - EP); **B22F 12/224** (2021.01 - EP US); **B22F 12/44** (2021.01 - EP US); **B22F 12/49** (2021.01 - EP US); **Y02P 10/25** (2015.11 - EP)

Citation (search report)  
See references of WO 2019243559A1

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)  
**DE 102018210260 A1 20191224**; CN 112334294 A 20210205; CN 112334294 B 20230414; EP 3758917 A1 20210106; US 2021252601 A1 20210819; WO 2019243559 A1 20191226

DOCDB simple family (application)  
**DE 102018210260 A 20180622**; CN 201980042447 A 20190621; EP 19732997 A 20190621; EP 2019066440 W 20190621; US 201917252478 A 20190621