



(51) International Patent Classification:

B28B 1/00 (2006.01) B29C 64/106 (2017.01)
B01F 27/00 (2022.01) B29C 64/336 (2017.01)
B28C 5/12 (2006.01) B29C 64/393 (2017.01)
B28C 7/02 (2006.01) B33Y 10/00 (2015.01)
B28C 7/04 (2006.01) B33Y 30/00 (2015.01)
B28C 7/16 (2006.01) B33Y 50/02 (2015.01)

(21) International Application Number:

PCT/EP2023/058666

(22) International Filing Date:

03 April 2023 (03.04.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

22167445.0 08 April 2022 (08.04.2022) EP

(71) Applicant: **SIKA TECHNOLOGY AG** [CH/CH]; Zuger-
strasse 50, 6340 Baar (CH).

(72) Inventors: **BOURQUIN, Raphael**; Im Heugarten 34, 8617
Mönchaltorf (CH). **KUHN, Patrik**; Zelgwiesenstrasse 19,
8046 Zürich (CH). **LOOTENS, Didier**; Fliederstrasse 1,
6010 Kriens (CH). **LIARD, Maxime**; Wallisellenstrasse
333, 8050 Zürich (CH).

(74) Agent: **SIKA PATENT ATTORNEYS**; c/o Sika Technol-
ogy AG, Corp. IP Dept., Tüffenwies 16, 8048 Zürich (CH).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG,
KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,
MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA,
NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO,
RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, CV,
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,
SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ,
RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,
LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,
SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: ONLINE RHEOLOGY DETERMINATION IN ADDITIVE MANUFACTURING PROCESSES

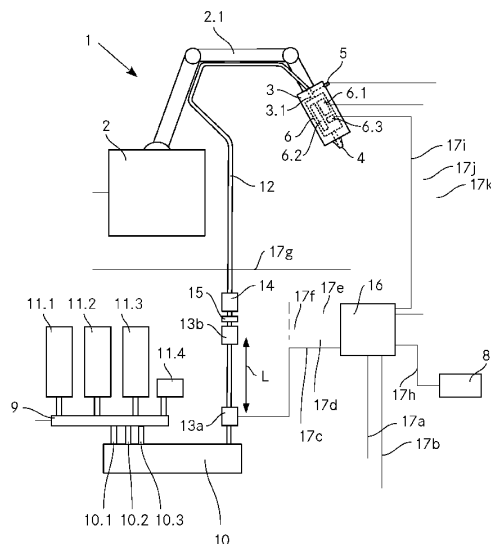


Fig. 1

(57) Abstract: A method for producing a three-dimensional object from a curable binder composition with an additive manufacturing process, the method comprises the steps of: - Producing the curable binder composition in the setting state, preferably by mixing the constituents of the curable binder composition in a mixing unit (10), - Conveying the curable binder composition in the setting state via a supply line (12) to a printing head (3) movable in at least one spatial direction, - Applying the curable binder composition in the setting state by means of the printing head (3), wherein the curable binder composition is preferably applied layer-by-layer, to form the three-dimensional object, - Determining a pressure drop over a length section (L) of the supply line (12) with at least two pressure measuring device(s) (13a, 13b), - Optionally, determining a flow rate of the curable binder composition in the supply line, - Optionally determining a temperature of the curable binder composition in the supply line.

Published:

— with international search report (Art. 21(3))