

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. claims: 1-11, 14, 15(all in part)

Invention A.1.1: continuous transfer of the granular material with agents for polymer treatment

2. claims: 1-11, 14, 16(all in part)

Invention A.1.2: continuous transfer of the granular material with agents for aerogel treatment

3. claims: 1-16(in part)

Invention A.2: batchwise transfer of the granular material with agents

4. claims: 1-11, 14-16(all in part)

Invention A.3: gravity-driven transfer without agents

5. claims: 1-16(in part)

Invention B - impregnation as a high-pressure treatment method

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.: **1-11, 14-16(all in part)**
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

- Remark on Protest**
- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
  - The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
  - No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2019/086552

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
<i>B01D 11/02(2006.01)j; B01J 3/00(2006.01)i; B01J 13/00(2006.01)n; C08J 11/08(2006.01)n</i>		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) B01D; B01J; C09J; C08J		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 19946146 A1 (KEHLER DIRK [DE]; HALLENSLEBEN MANFRED LUDWIG [DE] ET AL.) 19 April 2001 (2001-04-19)	1-8,10,11,14,15
Y	claims; figures paragraphs [0008], [0015], [0017], [0018], [0021], [0022], [0030], [0031] - [0034]	9
X	US 5290959 A (RICE WAYNE K [US]) 01 March 1994 (1994-03-01)	1-5,7,8,10,11
Y	claims; figures column 5, line 60 - column 7, line 19 column 7, line 20 - column 8, line 7	9
X	US 7897050 B2 (ACCUADYNE SYSTEMS INC [US]) 01 March 2011 (2011-03-01)	1-11,14,15
Y	claims; figures column 4, lines 35-41 column 14, lines 11-26 column 15, line 57 - column 16, line 10 column 16, lines 31-45 column 17, lines 18-20	9
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search <b>07 July 2020</b>		Date of mailing of the international search report <b>20 July 2020</b>
Name and mailing address of the ISA/EP <b>European Patent Office p.b. 5818, Patentlaan 2, 2280 HV Rijswijk Netherlands</b> Telephone No. (+31-70)340-2040 Facsimile No. (+31-70)340-3016		Authorized officer <b>Kleiminger, Lisa</b>  Telephone No.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2019/086552

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 20100086297 A (ENEN CO LTD [KR]; JO HYUN SOO [KR]) 30 July 2010 (2010-07-30)	1-8,10,11,14,16
Y	claims; figure 1 paragraphs [0036], [0041], [0051]	9
X,P	WO 2019122387 A1 (UHDE HIGH PRESSURE TECH GMBH [DE]; THYSSENKRUPP AG [DE]) 27 June 2019 (2019-06-27) claims; figures	1-11,14-16

**INTERNATIONAL SEARCH REPORT**  
**Information on patent family members**

International application No.

**PCT/EP2019/086552**

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
DE	19946146	A1	19 April 2001	NONE			
US	5290959	A	01 March 1994	NONE			
US	7897050	B2	01 March 2011	AU	2008239456	A1	23 October 2008
				BR	PI0810724	A2	14 October 2014
				CA	2682404	A1	23 October 2008
				CL	2009001962	A1	25 June 2010
				EP	2146807	A1	27 January 2010
				IL	201149	A	31 July 2014
				US	2008251454	A1	16 October 2008
				WO	2008127842	A1	23 October 2008
KR	20100086297	A	30 July 2010	NONE			
WO	2019122387	A1	27 June 2019	DE	102018222874	A1	27 June 2019
				DE	102018222881	A1	27 June 2019
				DE	102018222882	A1	27 June 2019
				DE	102018222883	A1	27 June 2019
				WO	2019122387	A1	27 June 2019
				WO	2020127889	A2	25 June 2020
				WO	2020127957	A2	25 June 2020