Table 1.

	n	DR_{sp}	DR_{ag}	Air-gap	DR_{fluid}	DR_{solid}	$DR_{overall}$	TS	Modulus	eab
				(mm)				(GPa)	(GPa)	(%)
Ex 1	24	9	40.0	15	360	4	1440	5.2	202	
Ex 2	24	9	40.0	15	360	5	1800	5.3	208	
comp A	24	9	15.0	15	135	5	675	3.2	140	
Ex 3	24	225	1.01	5	225	5	1125	5.6	203	
comp B	195	9	4.4	15	40	34	1346	3.6	128	2.86
comp C	195	9	12	20	108	20	2160	3.7	126	3.27
Ex 4	195	12.25	25.2	45	309	24.4	7532	4.3	168	3.01
Ex 5	195	12.25	33.5	50	410	25.2	10341	4.8	182	2.96
Ex 6	195	12.25	25.2	45	309	25.2	7779	4,5	170	3.04
comp D	390	9	4.4	15	40	32	1267	3.4	126	2.82
comp E	390	9	10.2	20	92	33.6	3084	3.4	114	2.97
comp F	390	9	12	20	108	20	2160	3.6	121	3.24
Ex 7	390	12.25	14.6	35	179	24.4	4364	3.9	162	3.07
Ex 8	390	12.25	19.4	40	238	18.9	4492	4.0	136	3,12
Ex 9	390	12.25	20.0	40	245	21.6	5292	4.1	157	3.07
Ex 10	390	12.25	25,2	45	309	24.4	7532	4.2	166	2.98
comp G	390	12.25	2.2	10	27	28	755	2.7	84	2.86
Ex 11	588	19.1	16.2	25	309	25.2	7797	4.2	155	2.98
Ex 12	588	19.1	18,1	25	346	25.2	8712	4.3	153	3.05
comp H	780	9	12	20	108	20	2160	3.4	114	3.23
Ex 13	1176	19.1	16.2	25	309	25.2	7797	4.1	151	3.02
Ex 14	195	12.25	25.2	45	309	25.2	7779	4.6	175	3.03
Ex 15	390	12.25	20.1	40	246	25.2	6205	4.3	154	3.05
Ex 16	390	12.25	25.2	45	309	25.2	7779	4.5	171	3.02
Ex17	390	12.25	14.6	40	179	16.2	2897	3.9	150	3.23
Ex18	390	12.25	33.5	50	410	27.6	11326	4.7	178	2.91
Ex19	390	12.25	23.2	45	284	27.6	7844	4.3	173	2.94
Ex20	390	12.25	22.6	45	277	26.8	7420	4.1	160	2.88
comp I	390	12.25	8.8	20	108	20	2156	3.5	118	3.07
comp J	390	12.25	2.2	10	27	28.1	757	2.8	96	2.74

Table 2

Creep test at 70°C/600MPa	*Creep rate* (s^{-1})	*Creep life time* (s)
Comp. Ex. H	$9.36 * 10^{-6}$	$37.8 * 10^{3}$
Ex. 16	$2.93 * 10^{-6}$	$80.0 * 10^{3}$
Ex. 20	$0.91 * 10^{-6}$	$205.4 * 10^{3}$

5

Table 3

	TMDSC non-reversible heat flow			*TMDSC reversible heat flow*			
	Peak 144°C (J/g)	*Peak 152°C* (J/g)	*Total Enthalpy* (J/g)	*Peak <140°C* (J/g)	*Peak 144°C* (J/g)	*Peak 152°C* (J/g)	*Total Enthalpy* (J/g)
Spectra 900	190.8	0	190.8	16.6	52.5	6.4	72.6
Spectra 1000	159.9	31.0	191.0	29.7	31.7	10.0	71.4
Comp. F	164.3	28.7	193.0	16.2	50.1	13.9	80.2
Comp. H	162.6	30.5	193.1	17.2	39.5	9.9	66.6
Ex. 10	167.6	44.2	211.8	9.3	40.3	14.0	63.6
Ex. 13	170.3	45.6	215.9	10.9	35.9	11.6	58.4
Ex 19	155.2	46.9	202.1	9.8	49.2	16.8	75.8
Ex. 20	152.1	52.3	204.4	10.4	44.7	19.3	74.5

Table 4

	Preformed sheet		*Assembled sheets*			
	number of mono-layers	*AD*	*number of sheets*	*AD*	*ballistic results*	
					V50	*SEA*
		(g/m²)		*(kg/m²)*	*(m/s)*	*(J.m²/kg)*
Ex. 21	4	103	20	2.0	407	322
			27	2.8	456	300
			33	3.4	487	280
Ex. 22	4	94	21	2.0	425	365
			30	2.8	466	307
			36	3.4	489	280
Ex. 23	4	86	23	2.0	441	391
			33	2.8	482	324
			40	3.4	496	288
Comp. K	4	145	18	2.6	415	265
			24	3.4	468	258
			30	4.3	493	226
Ex. 24	2	89	22	2.0	322	211
			31	2.6	435	272
			38	3.4	466	245
Ex. 25	2	95	21	2,0	333	201
			29	2.6	426	263
			36	3.4	458	245
Ex. 26	4	176	11	2.0	375	291
			16	2.6	455	296
			19	3.4	501	310
Comp. L	2	131	23	3.0	392	236
			26	3.5	417	205
			30	4.0	460	213

Table 5

	Moulded panel	*Ballistic performance*		
	Areal density	*Projectile*	*V50*	*SEA*
	(kg/m^2)		*(m/s)*	*(J.m^2/kg)*
Ex. 27	2.0	Parabellum	485	479
	3.0	Parabellum	502	336
	3.0	FSP	583	62
	4.0	FSP	615	53
	16.0	AK-47	843	180
Ex. 28	2.0	Parabellum	469	442
	3.0	Parabellum	509	345
	3.0	FSP	502	44
	4.0	FSP	569	45
	16.0	AK-47	809	165
Comp.M	2.6	Parabellum	395	240
	4.0	FSP	482	32
	19.0	AK-47	810	140

CLAIMS

1. Process for making high-performance polyethylene multifilament yarn comprising the steps of

a) making a 3-25 mass% solution of ultra-high molar mass polyethylene having an intrinsic viscosity as measured on solutions in decalin at 135°C of between about 8 and 40 dl/g, in a solvent;

b) spinning of the solution through a spinplate containing at least 5 spinholes into an air-gap to form fluid filaments, while applying a fluid draw ratio DR_{fluid};

c) cooling the fluid filaments to form solvent-containing gel filaments;

d) removing at least partly the solvent from the filaments; and

e) drawing the filaments in at least one step before, during and/or after said solvent removing, while applying a draw ratio DR_{solid} of at least 4,

characterized in that

in step b) each spinhole comprises a contraction zone with a gradual decrease in diameter from D_0 to D_n with a cone angle in the range 8-75°, and wherein the spinhole comprises a zone downstream of the contraction zone of constant diameter D_n with a length/diameter ratio L_n/D_n of from 0 to at most 25, to result in a fluid draw ratio $DR_{fluid} = DR_{sp} * DR_{ag}$ of at least 150; wherein DR_{sp} is the draw ratio in the spinholes and DR_{ag} is the draw ratio in the air-gap, with DR_{sp} being greater than 1 and DR_{ag} at least 1.

2. Process according to claim 1, wherein the cone angle is from 10 to 60°.

3. Process according to any one of claims 1-2, wherein the draw ratio in the spinholes is at least 2.

4. Process according to any one of claims 1-2, wherein the draw ratio in the spinholes is at least 5.

5. Process according to any one of claims 1-2, wherein the draw ratio in the spinholes is at least 10.

6. Process according to any one of claims 1-5, wherein the ratio L_n/D_n is at most 20.

7. Process according to any one of claims 1-5, wherein the ratio L_n/D_n is at most 15.

8. Process according to any one of claims 1-7, wherein the spinhole further comprises an inflow zone of constant diameter of at least D_0, with a ratio L_0/D_0 of at least 5.

9. Process according to any one of claims 1-7, wherein the ratio L_0/D_0 is at least 10.

10. Process according to claim 1, wherein a spinplate comprising at least 10 cylindrical spinholes having a inflow zone of constant diameter D_0 with L_0/D_0 at least 10, a contraction zone with cone angle in the range 10-60°, a downstream zone of constant diameter D_n with L_n/D_n at most 15, and $(D_0/D_n)^2$ of at least 5 is applied.

11. Process according to any one of claims 1-10, wherein the draw ratio DR_{fluid} applied to fluid filaments is at least 250.

12. Process according to any one of claims 1-11, wherein a 3-15 mass% solution of linear UHPE of IV 15-25 dl/g is spun through a spinplate containing at least 10 spinholes into an air-gap, the spinholes comprising a contraction zone with a cone angle in the range 10-60° and comprising a zone of constant diameter D_n with a length/diameter ratio L_n / D_n smaller than 10 downstream of a contraction zone, while applying a fluid draw ratio $DR_{fluid} = DR_{sp} * DR_{ag}$ of at least 200 and a draw ratio DR_{solid} of between 5 and 30.

13. High-performance polyethylene multifilament yarn made from linear ultra-high molar mass polyethylene of IV 8-40 dl/g, containing n filaments and having a tensile strength of at least $f * (n^{-0.065})$ GPa, wherein factor f is at least 5.8 and n is at least 5.

14. High-performance polyethylene multifilament yarn according to claim 13 wherein f has a value from 6.0 to 10.

15. High-performance polyethylene multifilament yarn according to claim 13 or 14, showing a non-reversible peak, as measured by temperature-modulated differential scanning calorimetry, with a maximum at about 152°C and having an enthalpy of at least 35 J/g.

16. High-performance polyethylene multifilament yarn according to any one of claims 13-15, having a creep rate as determined on yarn at 70 °C with a load of 600 MPa of at most $5 * 10^{-6}$ s^{-1}

17. High-performance polyethylene multifilament yarn according to any one of claims 13-16, containing at least 200 filaments.

18. High-performance polyethylene multifilament yarn according to any one of claims 13-16, containing less than 150 ppm of residual solvent having a boiling point at atmospheric conditions of less than 275°C.

19. Semi-finished and end-use articles containing the high-performance polyethylene multi-filament yarn according to any one of claims 13 - 18.
20. Medical implant containing the yarn according to claim 18.
21. Ballistic-resistant assembly comprising a plurality of mono-layers consisting essentially of high-performance polyethylene multifilament yarn, the assembly having an areal density of at least 1.5 kg/m^2 and a specific energy absorption of at least 300 J.m^2/kg as measured against a 9 * 19 mm FMJ Parabellum bullet according to a test procedure based on Stanag 2920.
22. Ballistic-resistant assembly according to claim 21, wherein the mono-layers contain uni-directionally oriented filaments, with the fibre direction in each mono-layer being rotated with respect to the fibre direction in an adjacent mono-layer.
23. Ballistic-resistant assembly according to any one of claims 21-22, wherein the specific energy absorption of the panel is at least 325 J.m^2/kg.
24. Ballistic-resistant moulded panel comprising a plurality of mono-layers consisting essentially of high-performance polyethylene multifilament yarn, the panel having a specific energy absorption of at least 165 J.m^2/kg as measured against an AK-47 bullet according to a test procedure based on Stanag 2920.
25. Ballistic-resistant panel according to claim 24, wherein the mono-layers contain uni-directionally oriented filaments, with the fibre direction in each mono-layer being rotated with respect to the fibre direction in an adjacent mono-layer.

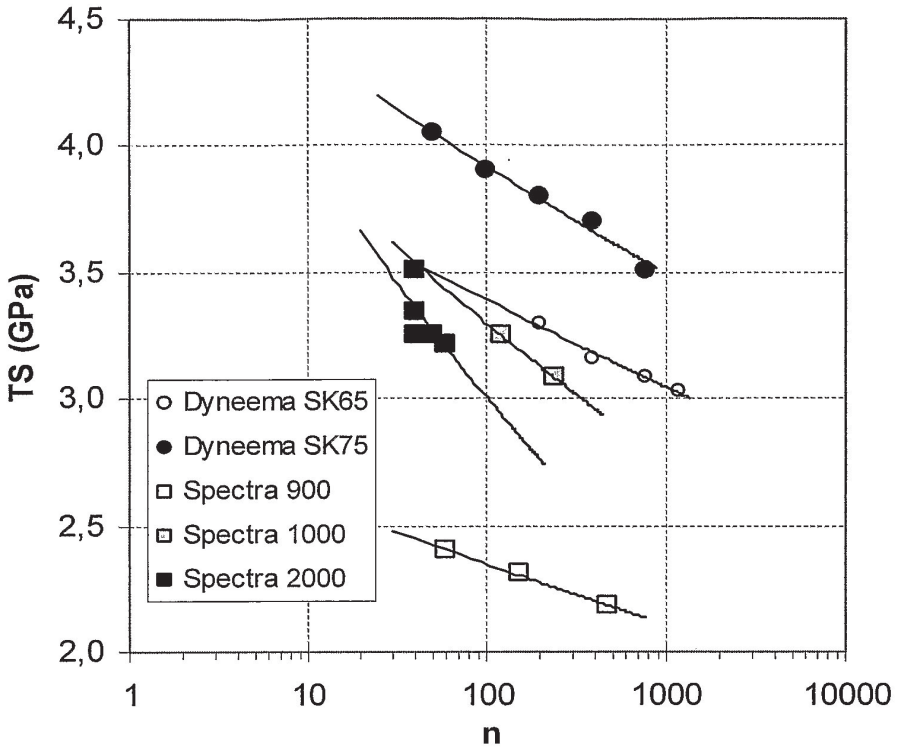

4,5
4,0
3,5
3,0
2,5
2,0
TS (GPa)
1
10
100
1000
10000
n
Dyneema SK65
Dyneema SK75
Spectra 900
Spectra 1000
Spectra 2000

Fig. 1

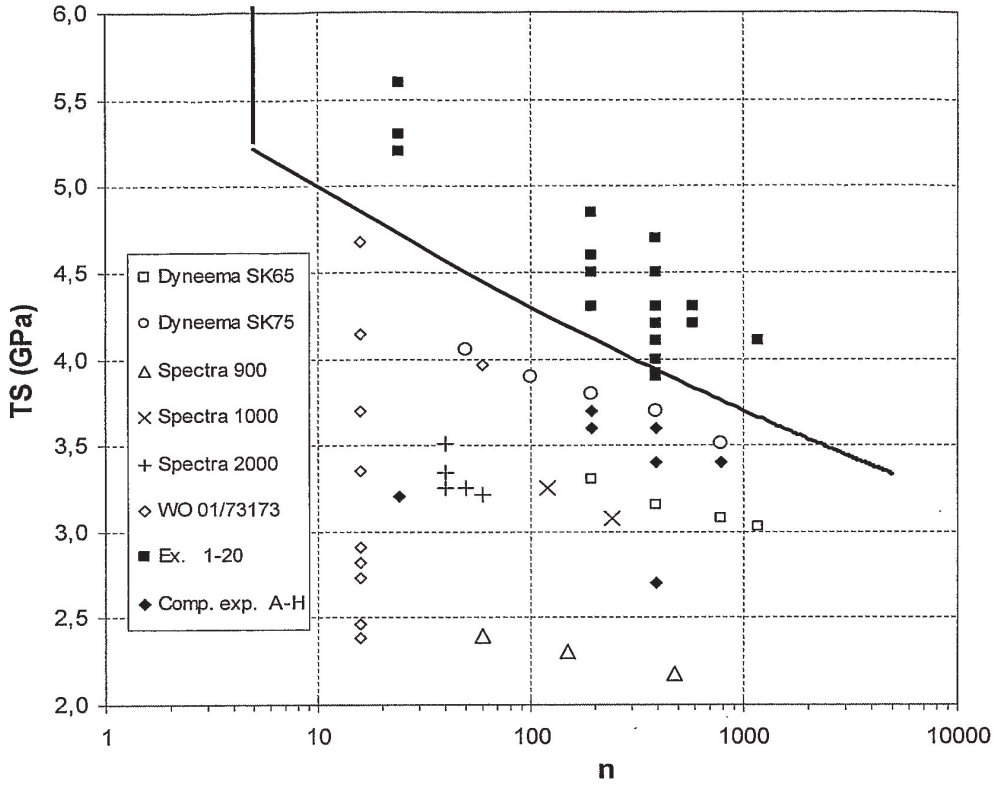

6,0
5,5
5,0
4,5
4,0
3,5
3,0
2,5
2,0
TS (GPa)
1
10
100
1000
10000
n
Dyneema SK65
Dyneema SK75
Spectra 900
Spectra 1000
Spectra 2000
WO 01/73173
Ex. 1-20
Comp. exp. A-H

Fig. 2

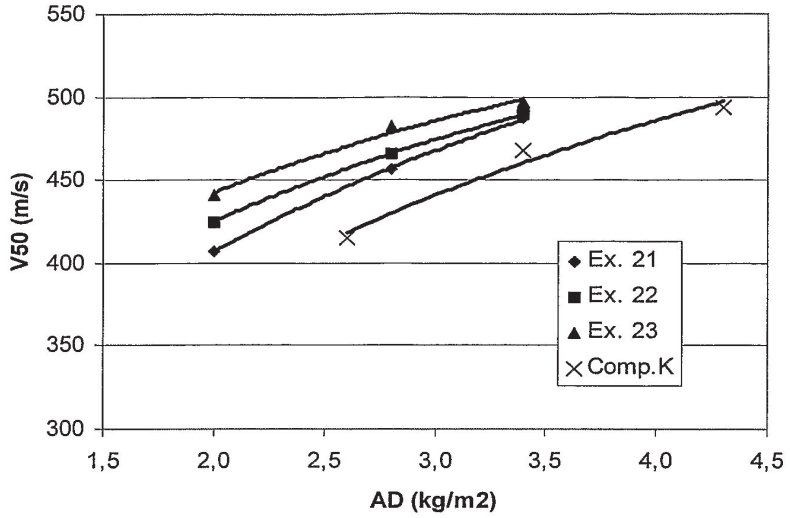

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500
450
400
350
300
V50 (m/s)
1,5
2,0
2,5
3,0
3,5
4,0
4,5
AD (kg/m2)
Ex. 21
Ex. 22
Ex. 23
Comp.K

Fig. 3

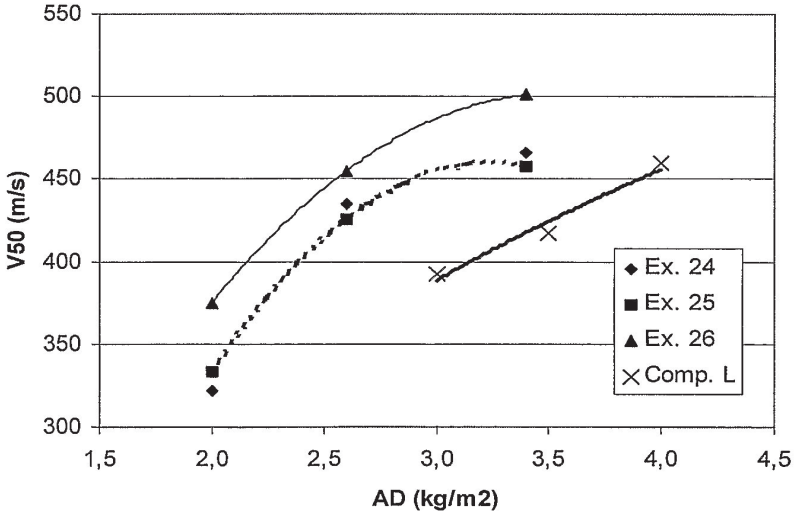

550
500
450
400
350
300
V50 (m/s)
1,5
2,0
2,5
3,0
3,5
4,0
4,5
AD (kg/m2)
Ex. 24
Ex. 25
Ex. 26
Comp. L

Fig. 4

INTERNATIONAL SEARCH REPORT

Interi al Application No
PCT/NL2004/000903

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 D01F6/04 D01D4/02 A61L17/10 A61L17/04 F41H5/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 D01F D01D A61L F41H

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 practical, search terms used)
EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	EP 0 064 167 A (ALLIED CORPORATION) 10 November 1982 (1982-11-10) cited in the application examples 487-583	1-5, 8-17,19 18
X	WO 01/73173 A (HONEYWELL INTERNATIONAL INC) 4 October 2001 (2001-10-04) cited in the application examples figure 2	1,3-5,8, 9,11, 13-17, 19,21-25
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-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
13 May 2005	30/05/2005

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Fiocco, M

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HONEYWELL INTERNATIONAL INC. v. DSM IP ASSETS B.V.
IPR2024-00493

INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/NL2004/000903

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	page 5, line 10 - line 18	18
A	EP 0 110 021 A (ALLIED CORPORATION; ALLIED-SIGNAL INC) 13 June 1984 (1984-06-13) examples	1-19
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A	PATENT ABSTRACTS OF JAPAN vol. 005, no. 128 (C-067), 18 August 1981 (1981-08-18) -& JP 56 063004 A (SHOWA DENKO KK), 29 May 1981 (1981-05-29) abstract	1-18

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HONEYWELL INTERNATIONAL INC. v. DSM IP ASSETS B.V.
IPR2024-00493

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter Application No
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Form PCT/ISA/210 (patent family annex) (January 2004)

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12599869	SIMMELINK ET AL.
	Examiner	Art Unit
	SON DANG	3773

CPC- SEARCHED		
Symbol	Date	Examiner
A61L17/04	4/6/2015	SD
D01F1/04	4/6/2015	SD
D01F6/04	4/6/2015	SD
D07B1/025	4/6/2015	SD
A61L17/04	4/6/2015	SD
C08L23/06	4/6/2015	SD
D07B2205/2014	4/6/2015	SD
D07B2801/10	4/6/2015	SD

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
606	228 with text search	7/2/2012	SD

SEARCH NOTES		
Search Notes	Date	Examiner
East Search History	7/2/2012	SD
forward and backward citations	7/2/2012	SD
PLUS SEARCH	7/2/2012	SD
INVENTOR SEARCH	7/2/2012	SD
Consult with SPE Corrine McDermott for rejection	7/2/2012	SD
Consult with Leo Tentoni, Erin Snelting and Jeffrey Wollschlager in class 264	7/2/2012	SD
Consult with Cachet Sellman in class 427	7/2/2012	SD
UPDATED SEARCH	5/23/2013	SD
Consult with SPE Corrine McDermott	5/23/2013	SD
Consult with Primary Julian Woo for Product by Process rejections	6/2/2014	SD
updated search	6/2/2014	SD

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
updated search	8/12/2014	SD
Consult with Primary Tuan Nguyen for rejections.	8/12/2014	SD
Updated search	9/11/2015	SD
Consult with Primary Greg Anderson for search and rejections	9/11/2015	SD

INTERFERENCE SEARCH			
US Class/ CPC Symbol	**US Subclass / CPC Group**	**Date**	**Examiner**

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2191	(suture or filament) and (chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:21
L2	14	(suture or filament) and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:21
L3	52	(suture or filament or fiber or yarn) and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:21
L4	23	(suture or filament) with (chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:23
L5	82	(pigment or color) and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:25
L6	25908	(pigment or color) and (chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:27
L7	12145	(pigment or color) with (chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:27
L8	4870	(suture or filament or fiber or yarn) and (pigment or color) with (chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:28
L9	359	(suture or filament or fiber or yarn) same (pigment or color) with (chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:28
L10	158	(suture or filament or fiber or yarn) with (pigment or color) with (chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:28
L11	229	(aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:32
L12	0	suture and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:32
L13	0	yarn and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:32
L14	41	fiber and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:33
L15	3	fiber with (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 12:33
L17	5	(aluminum adj chromium adj cobalt adj oxide)	US-PGPUB; USPAT;	OR	ON	2015/09/11 13:01

			USOCR			
L18	2	(("20110319932") or ("20100274282")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/11 13:02
L19	1	("20080027534").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/11 13:03
L20	113	chromium-cobalt-aluminum adj oxide	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 13:05
L21	13	("606".clas. or "623".clas.) and chromium-cobalt-aluminum adj oxide	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/11 13:07
S1	1	12/599869	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:50
S2	2	("20030050667" | "5613987").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:52
S3	824	606/228.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:52
S4	644	suture and ((ultra-high near3 polyethylene) or UHMwPE)	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:55
S5	202	suture same ((ultra-high near3 polyethylene) or UHMwPE)	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:55
S6	5	suture same ((ultra-high near3 polyethylene) or UHMwPE) same multi-filament	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:56
S7	12	suture same ((ultra-high near3 polyethylene) or UHMwPE) and dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:57
S8	1	suture same ((ultra-high near3 polyethylene) or UHMwPE) same dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:57
S9	12	suture same ((ultra-high near3 polyethylene) or UHMwPE) and dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:58
S10	12	suture same ((ultra-high near3 polyethylene) or UHMwPE) and dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 11:59
S11	1	suture same ((ultra-high near3 polyethylene) or UHMwPE) same dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 12:00
S12	32	Simmelink.inv.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 13:26
S13	14	Simmelink.inv. and suture	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 13:26
S14	65	S3 and suture and ((ultra-high near3 polyethylene) or UHMwPE)	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/02 13:27
S15	33	UHMwPE and spinning and solvent and pigment	US-PGPUB; USPAT;	OR	OFF	2013/05/22 14:08

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			USOCR			
S16	26	(suture or filament) and UHMwPE and spinning and solvent and pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 14:08
S17	2	(suture or filament) and UHMwPE same spinning same solvent same pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 14:08
S18	10	(suture or filament) and UHMwPE and spinning with solvent and pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 14:11
S19	404	spinning same solvent same pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:00
S20	1	suture same spinning same solvent same pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:01
S21	343	UHMwPE and pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:19
S22	49	(suture or filament) and UHMwPE and solvent and pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:19
S23	2	(suture or filament) and UHMwPE same solvent same pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:21
S24	3	(suture or filament) same UHMwPE same pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:22
S25	2	suture same UHMwPE same pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:26
S26	2	suture and UHMwPE same pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:27
S27	25	suture and UHMwPE and pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:27
S28	74	suture and UHMwPE and pigment	US-PGPUB; USPAT; USOCR	OR	ON	2013/05/22 15:27
S29	9	suture and multi-filament and UHMwPE and pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:28
S30	6	(US-20080004702-$ or US-20030050667-$ or US-20080287990-$ or US-20090048628-$ or US-20070154707-$).did. or (US-5370911-$).did.	US-PGPUB; USPAT	OR	ON	2013/05/22 15:34
S31	1	S30 and pigment	US-PGPUB; USPAT; USOCR	OR	ON	2013/05/22 15:35
S32	2	suture same UHMwPE same pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:35
S33	117	suture with pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:36

S34	1	suture and multi-filament with pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:36
S35	9	multi-filament and UHMwPE and pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:37
S36	2	multi-filament same UHMwPE and pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:37
S37	2	multi-filament and suture with pigment	US-PGPUB; USPAT; USOCR	OR	OFF	2013/05/22 15:43
S38	966	606/228.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2014/06/02 14:49
S39	9	(US-20080004702-$ or US-20030050667-$ or US-20080287990-$ or US-20090048628-$ or US-20070154707-$).did. or (US-5370911-$ or US-4008303-$ or US-5651377-$ or US-6060007-$).did.	US-PGPUB; USPAT	OR	ON	2014/07/09 13:15
S40	4	S39 and gel	US-PGPUB; USPAT; USOCR	OR	ON	2014/07/09 13:15
S41	1	"05076531.2"	US-PGPUB; USPAT; USOCR	OR	ON	2014/07/09 13:17
S42	1	"05076531.2"	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2014/07/09 13:17
S43	1	"05076531.2"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/07/09 13:17
S44	4	S39 and intrinsic	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/07/09 13:19
S45	3835	suture and pigment and (weight or wt)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 16:47
S46	576	suture and pigment same (weight or wt)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 16:47
S47	84	suture same pigment same (weight or wt)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 16:47
S48	2	"11069705"	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 16:53
S49	415801	suture same pigment same inorganic	US-PGPUB;	OR	ON	2014/08/12

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		pigment	USPAT; USOCR			17:08
S50	24	suture same pigment same inorganic	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:09
S51	17	suture same pigment with inorganic	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:13
S52	1	suture same pigment with chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:31
S53	4	suture same pigment same chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:32
S54	4	suture same pigment same chromium same oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:33
S55	46	suture same chromium same oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:33
S56	31	suture same chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:33
S57	6	suture with chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:33
S58	16242	pigment same chromium same oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:35
S59	13398	pigment with chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:36
S60	1	suture same pigment with chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:36
S61	59	suture and pigment with chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:36
S62	31	filament same pigment with chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:46
S63	3	filament with pigment with chromium with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 17:48
S64	6	aluminum-chromium-cobalt	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:08
S65	4	aluminum-chromium-cobalt with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:08
S66	9584	aluminum with chromium with cobalt with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:13
S67	83	(suture or filament) same aluminum with chromium with cobalt with oxide	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:13
S68	15	(suture or filament) with aluminum with	US-PGPUB;	OR	ON	2014/08/12

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		chromium with cobalt with oxide	USPAT; USOCR			18:14
S69	253	UHMWPE and intrinsic and viscosity and dl/g	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:30
S70	132	UHMWPE same intrinsic same viscosity same dl/g	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:30
S71	132	UHMWPE same intrinsic with viscosity same dl/g	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:30
S72	88	UHMWPE same intrinsic with viscosity with dl/g	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:30
S73	70	UHMWPE with intrinsic with viscosity with dl/g	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:30
S74	24	suture and (UHMWPE with intrinsic with viscosity with dl/g)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:30
S75	1	suture same (UHMWPE with intrinsic with viscosity with dl/g)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:31
S76	29	multifilament and (UHMWPE with intrinsic with viscosity with dl/g)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/12 18:34
S77	4	2004/0267313	US-PGPUB; USPAT; USOCR	OR	OFF	2014/08/14 14:45
S78	1	"20040267313"	US-PGPUB; USPAT; USOCR	OR	OFF	2014/08/14 14:46
S79	1	"5,665,062".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/14 15:09
S80	183	A61L17/04.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:45
S81	339	D01F1/04.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:45
S82	777	D01F6/04.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:45
S83	250	D07B1/025.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:45
S84	183	A61L17/04.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:46
S85	5436	C08L23/06.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:46
S86	163	D07B2205/2014.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:46
S87	163	D07B2205/2014.cpc.	US-PGPUB;	OR	OFF	2015/03/23

			USPAT; USOCR			12:46
S88	539	D07B2801/10.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:46
S89	7175	S80 S81 S82 S83 S84 S85 S86 S87 S88	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:46
S90	114	S89 and suture and ((ultra-high near3 polyethylene) or UHMwPE)	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:47
S91	15	S89 and suture same ((ultra-high near3 polyethylene) or UHMwPE) and dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/23 12:47
S92	20	(US-20080004702-$ or US-20030050667-$ or US-20080287990-$ or US-20090048628-$ or US-20070154707-$ or US-20080124368-$ or US-20060045899-$ or US-20050208096-$ or US-20060263432-$ or US-20060084745-$ or US-20090012251-$ or US-20040267313-$).did. or (US-5370911-$ or US-4008303-$ or US-5651377-$ or US-6060007-$).did. or (US-3698853-$ or US-3166073-$ or US-3565652-$ or US-3057040-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2015/03/23 13:08
S93	8	S92 and mass	US-PGPUB; USPAT; USOCR	OR	ON	2015/03/23 13:08
S94	187	A61L17/04.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S95	344	D01F1/04.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S96	778	D01F6/04.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S97	259	D07B1/025.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S98	187	A61L17/04.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S99	5612	C08L23/06.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S100	172	D07B2205/2014.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S101	172	D07B2205/2014.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S102	556	D07B2801/10.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S103	7381	S94 S95 S96 S97 S98 S99 S100 S101	US-PGPUB;	OR	OFF	2015/09/09

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		S102	USPAT; USOCR			13:50
S104	17	S103 and suture same ((ultra-high near3 polyethylene) or UHMwPE) and dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 13:50
S105	3	S103 and suture same dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 15:00
S106	62	("2212772" | "2226529" | "3091015" | "3124632" | "3156750" | "3303169" | "3311691" | "3345445" | "3361859" | "3379810" | "3436450" | "3441642" | "3562382" | "3577500" | "3739055" | "3792010" | "4009511" | "4043344" | "4047533" | "4338277" | "4374797" | "4446299" | "4461740" | "4470941" | "4504432" | "4504545" | "4542063" | "4550730" | "4578451" | "4621021" | "4624816" | "4701377" | "4758472" | "4839132" | "4859389" | "5007922" | "5102419" | "5102420" | "5147382" | "5156788" | "5217485" | "5225485" | "5279783").PN. OR ("5349044").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/09 15:00
S107	0	S106 and suture same dl/g	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/09 15:01
S108	85	(gel adj spun) with (suture or filament)	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/10 13:12
S109	26	suture and (UHMWPE with intrinsic with viscosity with dl/g)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 13:15
S110	343	suture and (intrinsic with viscosity with dl/g)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 13:20
S111	317	S110 not S109	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 13:20
S112	464	(suture or filament) same (intrinsic with viscosity with dl/g)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 13:22
S113	3	wo-2005066401-$.did.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/10 13:47
S114	1913	polyethylene same (chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 15:02
S115	2	polyethylene same (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 15:02
S116	0	(suture or filament) same (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 15:02
S117	14	(suture or filament) and (aluminum adj	US-PGPUB;	OR	ON	2015/09/10

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		chromium adj oxide)	USPAT; USOCR			15:02
S118	11	(pigment or color) and (suture or filament) and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 15:03
S119	1	(pigment or coloring) and (suture or filament) and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 15:03
S120	51	(pigment or coloring) and (aluminum adj chromium adj oxide)	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/10 15:04

EAST Search History (Interference)

<This search history is empty>

9/11/2015 1:55:16 PM
C:\Users\sdang\Documents\EAST\Workspaces\12599869.wsp

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/599,869	01/14/2010	Joseph Arnold Paul Maria J.A.P.M Simmelink	BHD-4662-1326	3921

23117 7590 11/05/2015

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EXAMINER	
DANG, PHONG SON H	

ART UNIT	PAPER NUMBER
3773	

NOTIFICATION DATE	DELIVERY MODE
11/05/2015	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOMAIL@nixonvan.com
pair_nixon@firsttofile.com

Office Action Summary	Application No. 12/599,869	Applicant(s) SIMMELINK ET AL.	
	Examiner SON DANG	Art Unit 3773	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/15/2015*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *16-18 and 20-31* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *16-18 and 20-31* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *10292015* .

4) ☐ Other: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 October 2015 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 16-18 and 20-31 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over WO 2005/066401 A1 to Simmelink in view of US 2008/0027534 to Edwin et al. (Edwin).

Simmelink teaches:

> Process for making high-performance polyethylene multi-filament yarn, at least 50 mass% of the yarn consist of gel-spun filaments consisting of ultra-high molecular weight polyethylene (page 8, lines 28-33), having an intrinsic viscosity (IV) of between about 8 and 40 dl/g (page 1, lines 6-10), less than 3% of customary additives (page 8, lines 28-33) and a residual less than 50 ppm of solvents (page 12, lines 1-12).

Simmelink fails to teach:

> The inorganic pigment is aluminum-chromium-cobalt oxide.

Edwin teaches:

> A self-sealing PTFE graft with kink resistance comprising a coating of pigments or dyes of Chromium-cobalt-aluminum oxide (para. 88).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ pigments containing chromium-cobalt-aluminum oxide as taught by Edwin into the multi yarn of Simmelink as a substitute one known method of dying for another. With regards to the percentage of inorganic pigment used, Edwin discloses the claimed invention except for percentage of inorganic pigment used, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the percentage of inorganic pigment used, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

In regards to the limitation of the percentages of the yarn consisting of gel-spun filaments and the suture consists of gel-spun filaments, it would have been obvious to

one of ordinary skill in the art at the time of the invention was made to have an UHMWPE suture containing the amount of 60 or 90 mass% of yarn consisting of gel-spun filaments and at most 10 or 5 mass% of other components or consist of gel-spun filaments since the more pure the material, UHMWPE, and the less of other constituent or other materials, the stronger the strength for the suture.

Response to Arguments

4. The applicant did not provide have any arguments to the previous Final-Rejection mailed on 10/23/2015.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SON DANG whose telephone number is (571)270-5809. The examiner can normally be reached on Monday-Friday 10:00 AM - 6:00 PM EDT.

If attempts to reach the examiner by telephone are unsuccessful, ***please contact the examiner's supervisor, Elizabeth Houston, at* (571) 272-7134**. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If there are any inquiries that are not being addressed by first contacting the Examiner or the Supervisor, you may send an email inquiry to

TC3700_Workgroup_D_Inquiries@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. D./
Examiner, Art Unit 3773

/GREGORY ANDERSON/

Primary Examiner, Art Unit 3773

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	12/599,869	SIMMELINK ET AL.	
	Examiner	Art Unit	
	SON DANG	3773	

All participants (applicant, applicant's representative, PTO personnel):

(1) *SON DANG*. (3)_____.

(2) *Bryan Davidson*. (4)_____.

Date of Interview: *29 October 2015*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: _____.

Identification of prior art discussed: _____.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The examiner called the applicant's representative to explain that because of the crossing in the mail between the filling of the RCE and the Final Office Action which was send out on 10/23/2015, the applicant needs to respond to the Final Office action that mailed on 10/23/2015 since the filling of the RCE on 10/15/2015 did not accompany by any response or amendment to the Final-Rejection. This is to give the applicant a chance to respond with arguments so that the first action that the examiner send out after the RCE would have to respond to the argument made by the applicant instead of the examiner send out a Non-Final Rejection which would have the exact rejections as the Final Office action mailed on 10/23/2015. The applicant's representative stated that he would like it to be clear on record since it is showing that the Final Rejection is the first action after the filling of the RCE, therefore, he would like the examiner to send out a Non-Final Office Action even though it would have the exact rejections as the latest Final. The examiner will send out a Non-Final as requested .

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/GREGORY ANDERSON/ Primary Examiner, Art Unit 3773	/S. D./ Examiner, Art Unit 3773

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