

EUROPEAN PATENT OFFICE  
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 844

DATE: MAY 1, 2020

PROJECT RP0027

The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
<b>SCHEME:</b>		
Symbols Deleted:	E21B	2003/05
	E21B	2010/225, 2010/243, 2010/425, 2010/545, 2010/561, 2010/562, 2010/563, 2010/564, 2010/565, 2010/566, 2010/607, 2010/622, 2010/624
	E21B	2021/005, 2021/006, 2021/007, 2021/008, 2021/061
	E21B	23/002, 2023/008
	E21B	2033/005, 2033/105
	E21B	2034/002, 2034/005, 2034/007
	E21B	2041/0028
	E21B	2043/0115, 2043/125
	E21B	47/0001, 47/0002, 47/0003, 47/0005, 47/0006, 47/0007, 47/0008, 47/011, 47/02208, 47/02216, 47/02224, 47/02232, 47/042, 47/044, 47/065, 47/082, 47/0905, 47/091, 47/0915, 47/1005, 47/101, 47/1015, 47/102, 47/1025, 47/121, 47/122, 47/123, 47/124, 47/182, 47/185, 47/187
	E21B	2049/085
	E21C	1/00, 1/10
	E21C	3/00, 3/02, 3/04, 3/06, 3/16, 3/18, 3/24, 3/26
	E21C	5/00, 5/08, 5/10
	E21C	7/00, 7/04, 7/08, 7/10, 7/12
	E21C	11/00
	E21C	43/00
Symbols Deleted Pending Reclassification: (frozen (F))	E21B	41/0092
Symbols New:	E21B	1/12, 1/14, 1/16, 1/18, 1/20, 1/22, 1/24, 1/26, 1/28, 1/30, 1/32, 1/34, 1/36, 1/38
	E21B	3/022
	E21B	7/267
	E21B	10/265, 10/5671
	E21B	11/04
	E21B	17/0283, 17/0285, 17/041, 17/0465, 17/0853
	E21B	19/102
	E21B	21/011, 21/013, 21/0135, 21/014, 21/019, 21/082, 21/085

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	E21B	23/001, 23/0411, 23/04115, 23/0412, 23/0413, 23/0414, 23/0415, 23/0416, 23/0417, 23/0418, 23/0419, 23/042, 23/0421, 23/0422, 23/0423, 23/12
	E21B	31/035, 31/08
	E21B	33/0353, 33/0387, 33/165, 33/167
	E21B	34/025, 34/142
	E21B	40/001
	E21B	41/0099
	E21B	43/0175, 43/1193, 43/1235, 43/13, 43/2605, 43/2607, 43/27, 43/35
	E21B	47/001, 47/002, 47/0025, 47/003, 47/005, 47/006, 47/007, 47/008, 47/009, 47/013, 47/017, 47/0175, 47/0224, 47/0228, 47/0232, 47/0236, 47/047, 47/053, 47/07, 47/085, 47/092, 47/095, 47/098, 47/103, 47/107, 47/11, 47/111, 47/113, 47/114, 47/117, 47/125, 47/13, 47/135, 47/138, 47/20, 47/22, 47/24, 47/26
	E21B	49/0813, 49/0815, 49/0875
	E21B	2200/00, 2200/01, 2200/02, 2200/03, 2200/04, 2200/05, 2200/06, 2200/08, 2200/09, 2200/20, 2200/22
Titles Changed:	E21B	1/00, 1/02, 1/04
	E21B	3/045
	E21B	4/00, 4/003, 4/006
	E21B	6/00
	E21B	7/003, 7/006, 7/007, 7/02, 7/021, 7/04, 7/06, 7/12, 7/128, 7/14, 7/18, 7/20, 7/201, 7/203, 7/206, 7/208, 7/26
	E21B	10/36, 10/42, 10/44, 10/445, 10/46, 10/48, 10/52, 10/55, 10/56, 10/573, 10/58, 10/60, 10/62
	E21B	11/00, 11/005
	E21B	12/00
	E21B	15/00, 15/003, 15/02, 15/04
	E21B	17/00, 17/01, 17/021, 17/026, 17/03, 17/042, 17/046, 17/07, 17/10, 17/1021, 17/18, 17/20, 17/206
	E21B	19/00, 19/002, 19/008, 19/06, 19/07, 19/10, 19/12, 19/14
	E21B	21/001, 21/01, 21/02, 21/10
	E21B	23/01, 23/08, 23/14
	E21B	27/04
	E21B	28/00
	E21B	29/02, 29/06, 29/08
	E21B	31/00, 31/002, 31/005, 31/03, 31/14
	E21B	33/0375, 33/0385, 33/0422, 33/06, 33/063, 33/064, 33/068, 33/12, 33/128, 33/13, 33/134, 33/138, 33/14, 33/16
	E21B	34/00, 34/10, 34/16
	E21B	37/10

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	E21B	41/0035, 41/005, 41/0078, 41/0085, 41/08
	E21B	43/003, 43/006, 43/02, 43/025, 43/08, 43/108, 43/116, 43/117, 43/121, 43/2403, 43/25, 43/2635, 43/28, 43/281, 43/32
	E21B	44/00, 44/02, 44/04, 44/10
	E21B	47/00, 47/01, 47/02, 47/022, 47/026, 47/04, 47/06, 47/08, 47/09, 47/10, 47/12
	E21B	49/005, 49/006, 49/008, 49/025, 49/04, 49/06, 49/08
Indents Changed:	E21B	21/012
Warnings New:	E21B	1/00, 1/02, 1/04, 1/12, 1/14, 1/22, 1/24, 1/36, 1/38
	E21B	3/00, 3/02, 3/022, 3/025, 3/03, 3/035, 3/04
	E21B	7/028, 7/26, 7/265, 7/267
	E21B	10/26, 10/265, 10/28, 10/30, 10/32, 10/322, 10/325, 10/327, 10/34, 10/345, 10/42, 10/43, 10/567, 10/5671, 10/5673, 10/62
	E21B	11/00, 11/005, 11/04
	E21B	17/02, 17/028, 17/0283, 17/0285, 17/04, 17/041, 17/046, 17/0465, 17/085, 17/0853
	E21B	19/08, 19/081, 19/083, 19/084, 19/086, 19/087, 19/089, 19/09, 19/10, 19/102
	E21B	21/00, 21/001, 21/002, 21/003, 21/01, 21/012, 21/015, 21/019, 21/02, 21/06, 21/08, 21/082, 21/085, 21/10, 21/12, 21/14, 21/16, 21/18
	E21B	23/03, 23/04, 23/0411, 23/04115, 23/0412, 23/0413, 23/0414, 23/0415, 23/0416, 23/0417, 23/0418, 23/0419, 23/042, 23/0421, 23/0422, 23/0423, 23/12
	E21B	27/00
	E21B	31/00, 31/03, 31/035, 31/08
	E21B	33/00, 33/035, 33/0353, 33/0355, 33/037, 33/0375, 33/038, 33/0385, 33/0387, 33/0422, 33/16, 33/165, 33/167
	E21B	34/02, 34/025, 34/04, 34/045, 34/14, 34/142
	E21B	40/00, 40/001
	E21B	41/00, 41/0092, 41/0099
	E21B	43/00, 43/017, 43/0175, 43/119, 43/1193, 43/121, 43/122, 43/123, 43/1235, 43/124, 43/126, 43/127, 43/128, 43/129, 43/13, 43/16, 43/26, 43/2605, 43/2607, 43/27, 43/34, 43/35, 43/36, 43/38, 43/385, 43/40
	E21B	47/00, 47/002, 47/0025, 47/006, 47/01, 47/013, 47/017, 47/0175, 47/10, 47/11, 47/111, 47/113, 47/114, 47/12, 47/138
	E21B	49/081, 49/0813, 49/0815, 49/083, 49/087, 49/0875

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	E21B	2200/00, 2200/01, 2200/02, 2200/03, 2200/04, 2200/05, 2200/06, 2200/08, 2200/09, 2200/20, 2200/22
	G06Q	10/06
Warnings Modified:	E21B	Subclass
Notes New:	E21B	1/00
Notes Modified:	E21B	47/01
Guidance Headings Deleted:	E21C	1/00
	E21C	5/00
<b>DEFINITIONS:</b>		
Definitions New:	E21B	3/045
	E21B	4/003, 4/006, 4/06
	E21B	7/006, 7/007, 7/021, 7/06, 7/128, 7/14, 7/18, 7/201, 7/203, 7/206, 7/208
	E21B	10/02, 10/445, 10/46, 10/48, 10/55, 10/60, 10/62, 10/64
	E21B	15/003, 15/02, 15/04
	E21B	17/021, 17/026, 17/042, 17/07, 17/1021, 17/18, 17/20, 17/206, 17/22
	E21B	19/008, 19/10, 19/12
	E21B	21/01, 21/02, 21/10, 21/12
	E21B	23/01, 23/08, 23/12, 23/14
	E21B	25/02
	E21B	29/06
	E21B	31/002, 31/005, 31/107
	E21B	33/0375, 33/0385, 33/0422, 33/06, 33/063, 33/134, 33/138, 33/14
	E21B	37/04, 37/10
	E21B	41/0035, 41/005, 41/0078, 41/0085, 41/02
	E21B	43/003, 43/006, 43/025, 43/08, 43/116, 43/1193, 43/24, 43/2403, 43/2635, 43/281
	E21B	44/10
	E21B	47/002, 47/003, 47/005, 47/01, 47/017, 47/0175, 47/02, 47/026, 47/04, 47/06, 47/08, 47/09, 47/092, 47/10, 47/117, 47/12, 47/125, 47/13, 47/135, 47/26
	E21B	49/005, 49/006, 49/008, 49/02, 49/025, 49/04, 49/08, 49/0875
Definitions Modified:	E21B	1/00
	E21B	3/00
	E21B	6/00
	E21B	7/00, 7/04, 7/20
	E21B	10/00
	E21B	12/00
	E21B	15/00
	E21B	17/00
	E21B	19/00, 19/002, 19/02, 19/08, 19/09, 19/14, 19/16
	E21B	21/00

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	E21B	25/00
	E21B	29/00
	E21B	31/00
	E21B	33/12, 33/13
	E21B	34/00
	E21B	35/00
	E21B	37/00
	E21B	40/00
	E21B	41/00
	E21B	43/00, 43/01, 43/02, 43/10, 43/12,43/16, 43/25, 43/28, 43/295,
	E21B	44/00
	E21B	47/00
	E21B	49/00

**The following subclasses/groups are also impacted by this Notice of Changes:**

B28D 1/00, B28D 1/14, E21C 25/64, E21C 35/22, E21F 5/20, G01F 17/00, G01F 23/00, G01K 11/00, G02B 6/00

**This Notice of Changes includes the following [Check the ones included]:**

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

3.  REVISION CONCORDANCE LIST (RCL)

4.  CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5.  CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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## 1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

**SUBCLASS E21B - EARTH DRILLING, e.g. DEEP DRILLING (mining, quarrying E21C; making shafts, driving galleries or tunnels E21D); OBTAINING OIL, GAS, WATER, SOLUBLE OR MELTABLE MATERIALS OR A SLURRY OF MINERALS FROM WELLS**

<u>Type</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title (new or modified) “CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to<sup>#</sup></u>
C	E21B 1/00	0	Percussion drilling (drives used in the borehole E21B 4/00)	E21B1/00, E21B1/12, E21B1/14, E21B1/16, E21B1/18, E21B1/20, E21B1/22, E21B1/24, E21B1/26, E21B1/28, E21B1/30, E21B1/32, E21B1/34, E21B1/36, E21B1/38
C	E21B 1/02	1	Surface drives for drop hammers {or percussion drilling}, e.g. with a cable	E21B1/02, E21B1/04, E21B1/36, E21B1/38
T	E21B 1/04	2	Devices for reversing the movement of the rod or cable at the surface	
Q	E21B1/12	1	with a reciprocating impulse member (E21B 1/02, E21B 1/38 take precedence)	E21B1/02, E21B1/04, E21B1/12, E21B1/14, E21B1/16, E21B1/18, E21B1/20, E21B1/22, E21B1/24, E21B1/26, E21B1/28, E21B1/30, E21B1/32, E21B1/34, E21B1/36, E21B1/38
N	E21B1/14	2	driven by a rotating mechanism	
N	E21B1/16	3	with spring-mounted reciprocating masses, e.g. with air cushion	
N	E21B1/18	4	with elastic joining of the drive to the push-rod by double buffer springs	
N	E21B1/20	3	formed as centrifugal hammers	
N	E21B1/22	2	driven by electromagnets	
N	E21B1/24	2	the impulse member being a piston driven directly by fluid pressure	

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N	E21B1/26	3	by liquid pressure	
N	E21B1/28	4	working with pulses	
N	E21B1/30	3	by air, steam or gas pressure	
N	E21B1/32	4	working with pulses	
N	E21B1/34	5	the impulse member being a piston of an internal-combustion engine	
N	E21B1/36	1	Tool-carrier piston type, i.e. in which the tool is connected to an impulse member	
N	E21B1/38	1	Hammer piston type, i.e. in which the tool bit or anvil is hit by an impulse member	
C	E21B 3/00	0	Rotary drilling (drives used in the borehole E21B 4/00; rotary drilling machines in general B23B)	E21B 3/00, E21B 3/02, E21B 3/022, E21B 3/025, E21B 3/03, E21B 3/035, E21B 3/04, E21B 3/045, E21B 3/06
C	E21B 3/02	1	Surface drives for rotary drilling	E21B3/02, E21B3/022
N	E21B 3/022	2	{Top drives}	
M	E21B 3/045	3	{movably mounted on the drilling structure or platform (derricks adapted to be moved on their substructure E21B 15/003)}	
D	E21B 2003/05	3	{with a to-and-fro rotation of the drill pipe or casing}	<Administrative transfer to E21B3/025 INV>
M	E21B 4/00	0	Drives for drilling, used in the borehole	
M	E21B 4/003	1	{Bearing, sealing, lubricating details (for roller bits E21B 10/22)}	
M	E21B 4/006	1	{Mechanical motion converting means, e.g. reduction gearings (E21B 4/10 takes precedence)}	

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M	E21B 6/00	0	Drives for drilling with combined rotary and percussive action (drives used in the borehole E21B 4/00; portable percussive machines with superimposed rotation B25D 16/00)	
M	E21B 7/003	1	{Drilling with mechanical conveying means (tunnelling E21D)}	
M	E21B 7/006	3	{combined with a bucket-type container}	
M	E21B 7/007	1	{Drilling by use of explosives (underwater drilling using explosives E21B 7/1245)}	
M	E21B 7/02	1	Drilling rigs characterized by means for land transport {with their own drive}, e.g. skid mounting or wheel mounting (portable drilling rigs for use on underwater floors E21B 7/124)	
M	E21B 7/021	2	{With a rotary table, i.e. a fixed rotary drive for a relatively advancing tool}	
M	E21B 7/04	1	Directional drilling {(derricks or masts specially adapted therefor E21B 15/04)}	
M	E21B 7/06	2	Deflecting the direction of boreholes	
M	E21B 7/12	1	Underwater drilling ( {derricks or masts specially adapted therefor E21B 15/02;} telescoping joints E21B 17/07; using heave compensators E21B 19/09; well heads specially adapted for underwater installations E21B 33/035)	
M	E21B 7/128	2	from floating support with independent underwater anchored guide base	
M	E21B 7/14	1	Drilling by use of heat, e.g. flame drilling	



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M	E21B 7/18	1	Drilling by liquid or gas jets, with or without entrained pellets (E21B 7/14 takes precedence; hydraulic monitors E21C 45/00)	
M	E21B 7/20	1	Driving or forcing casings or pipes into boreholes, e.g. sinking; Simultaneously drilling and casing boreholes (surface means for applying to-and-fro rotation movements to the casing E21B 3/025; placing piles E02D 7/00; sinking shafts while moving the lining downwards E21D 1/08 {; making galleries by forcing prefabricated elements through the ground E21D 9/005})	
M	E21B 7/201	2	{with helical conveying means}	
M	E21B 7/203	3	{using down-hole drives}	
M	E21B 7/206	3	{using down-hole drives}	
M	E21B 7/208	2	{using down-hole drives (E21B 7/203 and E21B 7/206 take precedence)}	
C	E21B 7/26	1	Drilling without earth removal, e.g. with self-propelled burrowing devices (E21B7/30 takes precedence; down-hole drives E21B4/00 {, e.g. self-propelled fluid-operated hammers E21B4/145})	E21B7/26, E21B7/267
C	E21B 7/265	2	{Combined with earth removal}	E21B7/265, E21B7/267
N	E21B 7/267	2	{Drilling devices with senders, e.g. radio-transmitters for position of drilling tool}	
D	E21B 2010/225	3	{sealing details}	<Administrative transfer to E21B10/25 INV>
D	E21B 2010/243	4	{with drilling fluid supply to the bearing}	<Administrative transfer to E21B10/23 INV>

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C	E21B 10/26	1	Drill bits with leading portion, i.e. drill bits with a pilot cutter; Drill bits for enlarging the borehole, e.g. reamers (percussion drill bits with leading portion E21B 10/40; augers with leading portion E21B 10/44)	E21B10/26, E21B10/265
N	E21B10/265	2	{Bi-center drill bits, i.e. an integral bit and eccentric reamer used to simultaneously drill and underream the hole}	
C	E21B 10/28	2	with non-expandible roller cutters	E21B10/28, E21B10/265
C	E21B 10/30	3	Longitudinal axis roller reamers, e.g. reamer stabilisers	E21B10/30, E21B10/265
C	E21B 10/32	2	with expandible cutting tools	E21B10/32, E21B10/265
C	E21B 10/322	3	{cutter shifted by fluid pressure (E21B 10/345 takes precedence)}	E21B10/322, E21B10/265
C	E21B 10/325	3	{the cutter being shifted by a spring mechanism}	E21B10/325, E21B10/265
C	E21B 10/327	3	{the cutter being pivoted about a longitudinal axis (E21B 10/34 takes precedence)}	E21B10/327, E21B10/265
C	E21B 10/34	3	of roller-cutter type	E21B10/34, E21B10/265
C	E21B 10/345	4	{cutter shifted by fluid pressure}	E21B10/345, E21B10/265
M	E21B 10/36	1	Percussion drill bits ({with helical conveying portion E21B 10/445;} characterised by wear resisting parts E21B 10/46)	
C	E21B 10/42	1	Rotary drag type drill bits with teeth, blades or like cutting elements, e.g. fork-type bits, fish tail bits (characterised by wear resisting parts {E21B 10/54}; by conduits or nozzles for drilling fluid E21B 10/60; by detachable or adjustable parts E21B 10/62)	E21B10/42, E21B10/62, E21B10/627, E21B10/633

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D	E21B 2010/425	2	{characterised by teeth or cutter arrangement}	<Administrative transfer to E21B10/43 INV>
C	E21B 10/43	2	characterised by the arrangement of teeth or other cutting elements	E21B10/43, E21B10/62, E21B10/627, E21B10/633
M	E21B 10/44	1	Bits with helical conveying portion, e.g. screw type bits; Augers with leading portion or with detachable parts (E21B 10/42 takes precedence; drilling rods with helical structure E21B 17/22)	
M	E21B 10/445	2	{percussion type, e.g. for masonry}	
M	E21B 10/46	1	characterised by wear resisting parts, e.g. diamond inserts	
M	E21B 10/48	2	the bit being of core type	
M	E21B 10/52	3	with chisel- or button-type inserts	
D	E21B 2010/545	3	{with blades having performed cutting elements mounted on a distinct support, e.g. polycrystalline inserts}	<Administrative transfer to E21B10/55 INV>
T	E21B 10/55	3	with preformed cutting elements (inserts per se E21B 10/56, E21B 10/58)	
M	E21B 10/56	2	Button-type inserts (E21B 10/52 takes precedence)	
D	E21B 2010/561	3	{Inserts with performed cutting elements mounted on a distinct support, e.g. polycrystalline inserts}	<administrative transfer to E21B10/567 INV>
D	E21B 2010/562	4	{having a non planar or non circular cutting face}	<administrative transfer to E21B10/5673 INV>
D	E21B 2010/563	4	{having a cutting face with different segments, e.g. mosaic-type inserts}	<administrative transfer to E21B10/5676 INV>
D	E21B 2010/564	4	{characterised by support details}	<administrative transfer to E21B10/573 INV>

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D	E21B 2010/565	5	{Interface between the substrate and the cutting element}	<administrative transfer to E21B10/5735 INV>
D	E21B 2010/566	4	{with chip breaking arrangements}	<administrative transfer to E21B10/5671 INV>
C	E21B 10/567	3	with preformed cutting elements mounted on a distinct support, e.g. polycrystalline inserts	E21B10/567, E21B10/5671
N	E21B10/5671	4	{with chip breaking arrangements}	
C	E21B 10/5673	4	{having a non planar or non circular cutting face}	E21B10/5673, E21B10/5671
T	E21B 10/573	4	characterised by support details, e.g. the substrate construction or the interface between the substrate and the cutting element	
M	E21B 10/58	2	Chisel-type inserts ({E21B 10/485,} E21B 10/52, E21B 10/54 take precedence)	
M	E21B 10/60	1	characterised by conduits or nozzles for drilling fluids (for roller bits E21B 10/18; for percussion drill bits E21B 10/38)	
D	E21B 2010/607	2	{characterised by the nozzle structure}	<administrative transfer to E21B10/61 INV>
T	E21B 10/62	1	characterised by parts, e.g. cutting elements, which are detachable or adjustable (E21B 10/64 takes precedence; for roller bits E21B 10/20; for augers E21B 10/44)	
D	E21B 2010/622	2	{with plural separable cutter elements}	<administrative transfer to E21B10/627 INV>
D	E21B 2010/624	3	{independently attachable}	<administrative transfer to E21B10/633 INV>
C	E21B 11/00	0	Other drilling tools	E21B 11/00, E21B 11/04

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C	E21B 11/005	1	{Hand operated drilling tools (hand portable tools detachable from portable drilling rigs E21B 7/028)}	E21B 11/005, E21B7/028
U	E21B 11/02	1	Boring rams (percussion drives used in the borehole E21B 4/06; percussion drill bits E21B 10/36)	
N	E21B 11/04	1	Boring grabs	
M	E21B 12/00	0	Accessories for drilling tools	
M	E21B 15/00	0	Supports for the drilling machine, e.g. derricks or masts	
M	E21B 15/003	1	{adapted to be moved on their substructure, e.g. with skidding means; adapted to drill a plurality of wells}	
M	E21B 15/02	1	pecially adapted for underwater drilling (E21B 15/04 takes precedence; floating drilling platforms B63B 35/44; drilling platforms on legs E02B 17/00)	
M	E21B 15/04	1	pecially adapted for directional drilling, e.g. slant hole rigs	
M	E21B 17/00	0	Drilling rods or pipes; Flexible drill strings; Kellies; Drill collars; Sucker rods; {Cables;} Casings; Tubings (rod couplings in general F16D; tubes or tube couplings in general F16L)	
M	E21B 17/01	1	Risers ({supporting a riser from a drilling or production platform E21B 19/004;} riser connectors {on well heads} E21B 33/038)	
C	E21B 17/02	1	Couplings; joints {(expandable couplings or joints E21B43/106)}	E21B17/02, E21B17/041
M	E21B 17/021	2	{Devices for subsurface connecting or disconnecting by rotation}	

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M	E21B 17/026	3	{Arrangements for fixing cables or wirelines to the outside of downhole devices}	
C	E21B 17/028	2	{Electrical or electro-magnetic connections}	E21B17/028, E21B17/0283, E21B17/0285
N	E21B 17/0283	3	{characterised by the coupling being contactless, e.g. inductive}	
N	E21B 17/0285	3	{characterised by electrically insulating elements}	
M	E21B 17/03	2	between drilling rod or pipe and drill motor {or surface drive}, e.g. between drilling rod and hammer	
C	E21B 17/04	2	between rod {or the like} and bit or between rod and rod {or the like}	E21B17/04, E21B17/041
N	E21B 17/041	3	{specially adapted for coiled tubing}	
M	E21B 17/042	3	Threaded	
C	E21B 17/046	3	with ribs, pins, or jaws, and complementary grooves or the like, e.g. bayonet catches	E21B17/046, E21B17/0465
N	E21B 17/0465	4	{characterised by radially inserted locking elements}	
M	E21B 17/07	3	Telescoping joints for varying drill string lengths; Shock absorbers (heave compensators in the derrick E21B 19/09; releasing-jars E21B 31/107)	
C	E21B 17/085	3	{Riser connections (connectors for wellhead E21B 33/038)}	E21B17/085, E21B17/0853
N	E21B 17/0853	4	{Connections between sections of riser provided with auxiliary lines, e.g. kill and choke lines}	

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M	E21B 17/10	1	Wear protectors; Centralising devices {, e.g. stabilisers} (drives used in the borehole with anchoring means E21B 4/18; guiding or centralising devices outside the borehole E21B 19/24)	
M	E21B 17/1021	3	{with articulated arms or arcuate springs}	
M	E21B 17/18	1	Pipes provided with plural fluid passages ({E21B 17/203 takes precedence; } circulation of drilling fluid by means of such pipes E21B 21/12)	
M	E21B 17/20	1	Flexible or articulated drilling pipes {, e.g. flexible or articulated rods, pipes or cables}	
M	E21B 17/206	2	{with conductors, e.g. electrical, optical}	
M	E21B 19/00	0	Handling rods, casings, tubes or the like outside the borehole, e.g. in the derrick; Apparatus for feeding the rods or cables (surface drives E21B 1/02, E21B 3/02)	
M	E21B 19/002	1	{specially adapted for underwater drilling (E21B 19/09, E21B 19/143 take precedence)}	
M	E21B 19/008	1	{Winding units, specially adapted for drilling operations}	
M	E21B 19/06	2	Elevators, i.e. rod- or tube-gripping devices	
M	E21B 19/07	3	Slip-type elevators (slips in rotary tables E21B 19/10)	

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C	E21B 19/08	1	Apparatus for feeding the rods or cables (E21B 19/22 takes precedence; automatic feed E21B 44/02; hoisting drums B66D); Apparatus for increasing or decreasing the pressure on the drilling tool; Apparatus for counterbalancing the weight of the rods	E21B19/08, E21B19/081, E21B19/083, E21B19/084, E21B19/086, E21B19/087, E21B19/089, E21B19/09
C	E21B 19/10	1	Slips; Spiders {; Catching devices (rotary tables with master bushing or kelly bushing E21B 3/04)}	E21B19/10, E21B19/102
N	E21B19/102	2	{using rollers or spherical balls as load gripping elements}	
M	E21B 19/12	1	Rope clamps {; Rod, casings or tube clamps not secured to elevators} (rope clamps in general F16G 11/00)	
M	E21B 19/14	1	Racks, ramps, troughs or bins, for holding the lengths of rod singly or connected; Handling between storage place and borehole (E21B 19/20, E21B 19/22 take precedence)	
C	E21B 21/00	0	Methods or apparatus for flushing boreholes, e.g. by use of exhaust air from motor (freeing objects stuck in boreholes by flushing E21B 31/03; well drilling compositions C09K 8/02)	E21B 21/00, E21B 21/001, E21B 21/002, E21B 21/003, E21B 21/01, E21B 21/012, E21B 21/015, E21B 21/019, E21B 21/02, E21B 21/06, E21B 21/062, E21B 21/063, E21B 21/065, E21B 21/066, E21B 21/067, E21B 21/068, E21B 21/07, E21B 21/08, E21B 21/082, E21B 21/085, E21B 21/10, E21B 21/103, E21B 21/106, E21B 21/12, E21B 21/14, E21B 21/16, E21B 21/18
C	E21B 21/001	1	{specially adapted for underwater drilling (dual gradient drilling E21B 21/082)}	E21B21/001, E21B21/082
D	E21B 2021/005	1	{using gaseous fluids}	<administrative transfer to E21B21/16 INV>



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D	E21B 2021/006	1	{Underbalanced techniques, i.e. where borehole fluid pressure is below formation pressure}	<administrative transfer to E21B21/085 INV>
D	E21B 2021/007	1	{Arrangements for handling drilling fluids or cuttings outside the borehole, e.g. mud boxes}	<administrative transfer to E21B21/01 INV>
D	E21B 2021/008	2	{Means engaging the bore entrance, e.g. hoods for collecting dust}	<administrative transfer to E21B21/015 INV>
C	E21B 21/01	1	Arrangements for handling drilling fluids or cuttings outside the borehole, e.g. mud boxes (arrangements for treating drilling fluids E21B 21/06 {; waste disposal systems E21B 41/005})	E21B21/01, E21B21/019
N	E21B 21/011	2	{Dust eliminating or dust removing while drilling}	
M	E21B 21/012	3	{using exhaust air from the drilling motor for blowing off the dust at the borehole entrance}	
N	E21B 21/013	3	{by liquids}	
N	E21B 21/0135	4	{Liquid flushing installations}	
N	E21B 21/014	3	{Preventing exhaust air from the drill motor from blowing-off towards the working face}	
C	E21B 21/015	2	Means engaging the bore entrance, e.g. hoods for collecting dust	E21B21/015, E21B21/019
N	E21B 21/019	2	{Arrangements for maintaining circulation of drilling fluid while connecting or disconnecting tubular joints}	
M	E21B 21/02	1	Swivel joints in hose-lines	
D	E21B 2021/061	2	{for treating dust-loaded gaseous fluids}	<administrative transfer to E21B21/07 INV>

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C	E21B 21/08	1	Controlling or monitoring pressure or flow of drilling fluid, e.g. automatic filling of boreholes, automatic control of bottom pressure (valve arrangements therefor E21B 21/10)	E21B21/08, E21B21/082, E21B21/085
N	E21B21/082	2	{Dual gradient systems, i.e. using two hydrostatic gradients or drilling fluid densities}	
N	E21B21/085	2	{Underbalanced techniques, i.e. where borehole fluid pressure is below formation pressure}	
M	E21B 21/10	1	Valve arrangements in drilling-fluid circulation systems (valves in general F16K)	
U	E21B 23/00	0	Apparatus for displacing, setting, locking, releasing, or removing tools, packers or the like in the boreholes or wells (setting of casings, screens or liners E21B 43/10)	
N	E21B23/001	1	{Self-propelling systems or apparatus, e.g. for moving tools within the horizontal portion of a borehole}	
D	E21B 23/002	1	{Tool diverters, e.g. for through-the-flow line tool systems or for wire-line tools (E21B 23/03 takes precedence; for drilling E21B 7/06)}	<administrative transfer to E21B23/12>
D	E21B 2023/008	1	{Self propelling system or apparatus, e.g. for moving tools within the horizontal portion of a borehole}	<administrative transfer to E21B23/001 INV>
M	E21B 23/01	1	for anchoring the tools or the like (E21B 23/02 - E21B 23/06 take precedence; anchoring of drives in the borehole E21B 4/18)	
C	E21B 23/03	1	for setting the tools into, or removing the tools from, laterally offset landing nipples or pockets	E21B23/03, E21B23/12

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C	E21B 23/04	1	operated by fluid means, e.g. actuated by explosion (E21B 23/06, E21B 23/08 take precedence)	E21B23/04, E21B23/0411, E21B23/04115, E21B23/0412, E21B23/0413, E21B23/0414, E21B23/0415, E21B23/0416, E21B23/0417, E21B23/0418, E21B23/0419, E21B23/042, E21B23/0421, E21B23/0422, E21B23/0423, E21B34/142
N	E21B23/0411	2	{specially adapted for anchoring tools or the like to the borehole wall or to well tube}	
N	E21B23/04115	3	{using radial pistons}	
N	E21B23/0412	2	{characterised by pressure chambers, e.g. vacuum chambers}	
N	E21B23/0413	2	{using means for blocking fluid flow, e.g. drop balls or darts (using balls or the like for actuating downhole valves E21B34/142)}	
N	E21B23/0414	2	{using explosives}	
N	E21B23/0415	2	{using particular fluids, e.g. electro-active liquids}	
N	E21B23/0416	2	{characterised by force amplification arrangements}	
N	E21B23/0417	2	{Down-hole non-explosive gas generating means, e.g. by chemical reaction}	
N	E21B23/0418	2	{specially adapted for locking the tools in landing nipples or recesses}	
N	E21B23/0419	2	{using down-hole motor and pump arrangements for generating hydraulic pressure}	

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N	E21B23/042	2	{using a single piston or multiple mechanically interconnected pistons}	
N	E21B23/0421	2	{using multiple hydraulically interconnected pistons}	
N	E21B23/0422	2	{characterised by radial pistons (using radial pistons for anchoring E21B23/04115)}	
N	E21B23/0423	2	{using step motors}	
M	E21B 23/08	1	Introducing or running tools by fluid pressure, e.g. through-the-flow-line tool systems (special provisions on heads therefor E21B 33/068; cementing plugs E21B 33/16; scrapers operated by fluid pressure E21B 37/04)	
U	E21B 23/10	2	Tools specially adapted therefor	
N	E21B 23/12	2	Tool diverters	
M	E21B 23/14	1	for displacing a cable or cable-operated tool, e.g. for logging or perforating operations in deviated wells (by fluid pressure E21B 23/08; provision on well heads for introducing or removing cable-operated tools E21B 33/072, E21B 33/076)	
C	E21B 27/00	0	Containers for collecting or depositing substances in boreholes or wells, e.g. bailers, {baskets or buckets} for collecting mud or sand; Drill bits with means for collecting substances, e.g. valve drill bits	E21B27/00, E21B11/04, E21B31/08
M	E21B 27/04	1	where the collecting or depositing means include helical conveying means {(drilling with helical conveying means combined with bucket-type container E21B 7/006)}	

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M	E21B 28/00	0	Vibration generating arrangements for boreholes or wells, e.g. for stimulating production (for drilling E21B 7/24; {for fishing for or freeing objects E21B 31/005; } for transmitting measuring-signals E21B 47/14; for geophysical measurements G01V 1/02)	
M	E21B 29/02	1	by explosives or by thermal or chemical means ({freeing stuck objects by explosives E21B 31/002; } destroying objects in boreholes or wells by explosives E21B 31/16)	
M	E21B 29/06	1	Cutting windows, e.g. directional window cutters for whipstock operations ({E21B 29/005 and } E21B 29/08 take precedence)	
M	E21B 29/08	1	Cutting or deforming pipes to control fluid flow {(shear type blow-out preventers E21B 33/063)}	
C	E21B 31/00	0	Fishing for or freeing objects in boreholes or wells (provisions on well heads for introducing or removing objects E21B 33/068; locating or determining the position of objects in boreholes or wells E21B 47/09)	E21B31/00, E21B31/08
M	E21B 31/002	1	{Destroying the objects to be fished, e.g. by explosive means}	
M	E21B 31/005	1	{using vibrating or oscillating means}	
C	E21B 31/03	1	Freeing by flushing	E21B31/03, E21B31/035
N	E21B31/035	1	{controlling differential pipe sticking}	
U	E21B 31/06	1	using magnetic means	
N	E21B31/08	1	using junk baskets or the like	

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M	E21B 31/14	2	with means deflecting the direction of the tool, e.g. by use of knuckle joints (apparatus for deflecting the boring {E21B 7/06})	
C	E21B 33/00	0	Sealing or packing boreholes or wells	E21B33/00, E21B2200/00, E21B2200/01, E21B2200/02, E21B2200/03, E21B2200/04, E21B2200/05, E21B2200/06, E21B2200/08, E21B2200/09, E21B2200/20, E21B2200/22
D	E21B 2033/005	1	{Sealings characterised by their shape}	<administrative transfer to E21B2200/01>
C	E21B 33/035	3	specially adapted for underwater installations (E21B 33/043, E21B 33/064, E21B 33/076 take precedence)	E21B33/035, E21B33/0353, E21B33/0387
N	E21B33/0353	4	{Horizontal or spool trees, i.e. without production valves in the vertical main bore}	
C	E21B 33/0355	4	{Control systems, e.g. hydraulic, pneumatic, electric, acoustic, for submerged well heads}	E21B33/0355, E21B33/0353
C	E21B 33/037	4	Protective housings therefor	E21B33/037, E21B33/0353
C	E21B 33/0375	5	{Corrosion protection means}	E21B33/0375, E21B33/0353
C	E21B 33/038	4	Connectors used on well heads, e.g. for connecting blow-out preventer and riser (connecting a production flow-line to an underwater well head E21B 43/013)	E21B33/038, E21B33/0353
C	E21B 33/0385	5	{electrical connectors}	E21B33/0385, E21B33/0353
N	E21B33/0387	4	{Hydraulic stab connectors}	

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C	E21B 33/0422	4	{a suspended tubing or casing being gripped by a slip or an internally serrated member}	E21B33/0422, E21B33/0353
M	E21B 33/06	3	Blow-out preventers {, i.e. apparatus closing around a drill pipe, e.g. annular blow-out preventers (rotating blow-out preventers E21B 33/085)}	
M	E21B 33/063	6	{for shearing drill pipes (cutting of wireline E21B 29/04)}	
M	E21B 33/064	4	pecially adapted for underwater well heads ({control systems for submerged well-heads E21B 33/0355;} connectors therefor E21B 33/038)	
M	E21B 33/068	3	having provision for introducing objects or fluids into, or removing objects from, wells (cementing heads E21B 33/05 {; wipers, oil savers E21B 33/08)}	
D	E21B 2033/105	2	{characterised by sealing the junction between a lateral and a main bore}	<administrative transfer to E21B 41/0042 INV>
M	E21B 33/12	2	Packers; Plugs (used for cementing E21B 33/134, E21B 33/16)	
M	E21B 33/128	3	with a member expanded radially by axial pressure (E21B 33/122, E21B 33/124 {, E21B 33/129} take precedence {; characterised by the construction of the sealing means E21B 33/1208)}	
M	E21B 33/13	2	Methods or devices for cementing, for plugging holes, crevices, or the like (dump bailers E21B 27/02; chemical compositions therefor C09K 8/00)	
M	E21B 33/134	3	Bridging plugs	
M	E21B 33/138	3	Plastering the borehole wall; Injecting into the formation {(packers E21B 33/12)}	

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M	E21B 33/14	3	for cementing casings into boreholes {( control of cementation quality or level E21B 47/005)}	
C	E21B 33/16	4	using plugs for isolating cement charge; Plugs therefor {( stage cementing E21B 33/146; spacer compositions C09K 8/424)}	E21B33/16, E21B33/165, E21B33/167
N	E21B33/165	5	{Cementing plugs specially adapted for being released down-hole (cementing heads E21B33/05)}	
N	E21B33/167	5	{Cementing plugs provided with anti-rotation mechanisms, e.g. for easier drill-out}	
M	E21B 34/00	0	Valve arrangements for boreholes or wells (in drilling fluid circulation systems E21B 21/10; blow-out preventers E21B 33/06; oil flow regulating apparatus E21B 43/12; valves in general F16K)	
D	E21B 2034/002	1	{Ball valves}	<administrative transfer to E21B2200/04>
D	E21B 2034/005	1	{Flapper valves}	<administrative transfer to E21B2200/05>
D	E21B 2034/007	1	{Sleeve valves}	<administrative transfer to E21B2200/06>
C	E21B 34/02	1	in well heads	E21B34/02, E21B34/025
N	E21B34/025	2	{Chokes or valves in wellheads and sub-sea wellheads for variably regulating fluid flow}	
C	E21B 34/04	2	in underwater well heads	E21B 34/04, E21B 34/025
C	E21B 34/045	3	{adapted to be lowered on a tubular string into position within a blow-out preventer stack, e.g. so-called test trees}	E21B 34/045, E21B 34/025



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<u>Type</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0, 1,</u> <u>2)</u>	<u>Title</u> <u>(new or modified)</u> <u>“CPC only” text should normally</u> <u>be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	E21B 34/10	2	operated by control fluid supplied from outside the borehole ({by a dropped ball or piston E21B 34/142;} control means being outside the borehole E21B 34/16)	
C	E21B 34/14	2	operated by movement of tools, e.g. sleeve valves operated by pistons or wire line tools {(E21B 34/066 takes precedence)}	E21B 34/14, E21B 34/142
N	E21B 34/142	3	{unsupported or free-falling elements, e.g. balls, plugs, darts or pistons}	
M	E21B 34/16	1	Control means therefor being outside the borehole {(control systems for submerged well heads E21B 33/0355)}	
M	E21B 37/10	1	Well swabs	
C	E21B 40/00	0	Tubing catchers, automatically arresting the fall of oil-well tubing {(preventing small objects from falling into the borehole E21B 41/0021)}	E21B40/00, E21B40/001
N	E21B40/001	1	{in the borehole (anchoring tools in the borehole E21B23/01)}	
C	E21B 41/00	0	Equipment or details not covered by groups E21B 15/00 - E21B 40/00	E21B41/00, E21B41/0099
D	E21B 2041/0028	1	{Fuzzy logic, artificial intelligence, neural networks, or the like}	<administrative transfer to E21B2200/22>
M	E21B 41/0035	1	{Apparatus or methods for multilateral well technology, e.g. for the completion of or workover on wells with one or more lateral branches}	
M	E21B 41/005	1	{Waste disposal systems}	

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M	E21B 41/0078	1	{Nozzles used in boreholes (drilling by liquid or gas jets E21B 7/18; drill bits with nozzles E21B 10/60; perforators using direct fluid action E21B 43/114; obtaining a slurry of minerals using nozzles E21B 43/29)}	
M	E21B 41/0085	1	{Adaptations of electric power generating means for use in boreholes}	
F	E21B 41/0092	1	{Methods relating to program engineering, design or optimisation}	E21B41/00, E21B43/00, E21B43/16, G06Q10/06
N	E21B41/0099	1	{specially adapted for drilling for or production of natural hydrate or clathrate gas reservoirs; Drilling through or monitoring of formations containing gas hydrates or clathrates}	
M	E21B 41/08	1	Underwater guide bases, e.g. drilling templates; Levelling thereof	
M	E21B 43/003	1	{Vibrating earth formations}	
M	E21B 43/006	1	{Production of coal-bed methane (E21B 43/243 takes precedence)}	
D	E21B 2043/0115	2	{Drilling for or production of natural gas hydrate reservoirs; Drilling through or monitoring of formations containing gas hydrates}	<administrative transfer to E21B41/0099 INV>
C	E21B 43/017	2	Production satellite stations, i.e. underwater installations comprising a plurality of satellite well heads connected to a central station (underwater separating arrangements E21B 43/36)	E21B43/017, E21B43/0175
N	E21B43/0175	3	{Hydraulic schemes for production manifolds}	
M	E21B 43/02	1	Subsoil filtering (E21B 43/11 takes precedence; chemical compositions for consolidating loose sand or the like around wells C09K 8/56)	

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M	E21B 43/025	2	{Consolidation of loose sand or the like round the wells without excessively decreasing the permeability thereof}	
M	E21B 43/08	2	Screens or liners {(expandable screens or liners E21B 43/108)}	
M	E21B 43/108	4	{Expandable screens or perforated liners}	
M	E21B 43/116	2	Gun or shaped-charge perforators	
M	E21B 43/117	3	Shaped-charge perforators (E21B 43/118 takes precedence)	
C	E21B 43/119	2	Details, e.g. for locating perforating place or direction	E21B43/119, E21B43/1193
N	E21B43/1193	3	{Dropping perforation guns after gun actuation}	
C	E21B 43/121	2	{Lifting well fluids (monitoring of down-hole pump systems E21B 47/008)}	E21B43/121, E21B43/13
C	E21B 43/122	3	{Gas lift}	E21B43/122, E21B43/13
C	E21B 43/123	4	{Gas lift valves}	E21B43/123, E21B43/1235, E21B 43/13
N	E21B 43/1235	5	{characterised by electromagnetic actuation}	
C	E21B 43/124	3	{Adaptation of jet-pump systems}	E21B43/124, E21B43/13
D	E21B 2043/125	3	{Adaptation of walking-beam pump systems}	<administrative transfer to E21B43/127 INV>
C	E21B 43/126	3	{Adaptations of down-hole pump systems powered by drives outside the borehole, e.g. by a rotary or oscillating drive (powered by fluid E21B 43/129)}	E21B43/126, E21B43/13
C	E21B 43/127	4	{Adaptations of walking-beam pump systems}	E21B43/127, E21B43/13

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C	E21B 43/128	3	{Adaptation of pump systems with down-hole electric drives}	E21B43/128, E21B43/13
C	E21B 43/129	3	{Adaptations of down-hole pump systems powered by fluid supplied from outside the borehole (gas-lift E21B 43/122; jet pumps E21B 43/124)}	E21B43/129, E21B43/13
N	E21B43/13	3	{specially adapted to dewatering of wells of gas producing reservoirs, e.g. methane producing coal beds}	
T	E21B 43/16	1	Enhanced recovery methods for obtaining hydrocarbons (fracturing E21B 43/26; obtaining slurry E21B 43/29; reclamation of contaminated soil in situ B09C {; chemical compositions therefor C09K 8/58})	
M	E21B 43/2403	3	{by means of nuclear energy}	
M	E21B 43/25	1	Methods for stimulating production (dump bailers E21B 27/02; vibration generating arrangements E21B 28/00; {by vibrating earth formations E21B 43/003;}; chemical compositions therefor C09K 8/60)	
C	E21B 43/26	2	by forming crevices or fractures {(chemical compositions therefor C09K 8/62)}	E21B43/26, E21B43/2605, E21B43/2607, E21B43/27
N	E21B43/2605	3	{using gas or liquefied gas}	
N	E21B43/2607	3	{Surface equipment specially adapted for fracturing operations}	
M	E21B 43/2635	4	{by means of nuclear energy}	
U	E21B 43/267	3	reinforcing fractures by propping {(chemical compositions therefor C09K 8/80)}	
N	E21B 43/27	3	by use of eroding chemicals, e.g. acids	

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M	E21B 43/28	1	Dissolving minerals other than hydrocarbons, e.g. by an alkaline or acid leaching agent (E21B 43/241 takes precedence)	
M	E21B 43/281	2	{using heat}	
M	E21B 43/32	1	Preventing gas- or water-coning phenomena, i.e. the formation of a conical column of gas or water around wells	
C	E21B 43/34	1	Arrangements for separating materials produced by the well (separating apparatus per se, see the relevant subclasses)	E21B43/34, E21B43/35
N	E21B43/35	2	{specially adapted for separating solids (down-hole drilling fluid separation systems E21B21/002; separating solids from drilling fluids E21B21/065)}	
C	E21B 43/36	2	Underwater separating arrangements (E21B 43/38 takes precedence)	E21B 43/36, E21B 43/35
C	E21B 43/38	2	in the well	E21B 43/38, E21B 43/35
C	E21B 43/385	3	{by reinjecting the separated materials into an earth formation in the same well}	E21B 43/385, E21B 43/35
C	E21B 43/40	2	Separation associated with re-injection of separated materials {(E21B 43/385 takes precedence)}	E21B 43/40, E21B 43/35

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M	E21B 44/00	0	Automatic control systems specially adapted for drilling operations, i.e. self-operating systems which function to carry out or modify a drilling operation without intervention of a human operator, e.g. computer-controlled drilling systems (for non-automatic drilling control, see the operation controlled; automatic feeding from rack and connecting of drilling pipes E21B 19/20; controlling pressure or flow of drilling fluid E21B 21/08); Systems specially adapted for monitoring a plurality of drilling variables or conditions (means for transmitting measuring-signals from the well to the surface E21B 47/12)	
M	E21B 44/02	1	Automatic control of the tool feed ({E21B 44/005,} E21B 44/10 take precedence)	
M	E21B 44/04	2	in response to the torque of the drive {; Measuring drilling torque (E21B 44/06 takes precedence; measuring stresses in a well bore pipe E21B 47/007)}	
M	E21B 44/10	1	Arrangements for automatic stopping when the tool is lifted from the working face	
C	E21B 47/00	0	Survey of boreholes or wells (monitoring pressure or flow of drilling fluid E21B 21/08)	E21B47/00, E21B47/006
D	E21B 47/0001	1	{for underwater installations}	<Administrative transfer to E21B 47/001>
D	E21B 47/0002	1	{Survey of boreholes or wells by visual inspection (photographing internal surfaces, e.g. of pipes G03B 37/005; closed circuit television systems H04N 7/18)}	<Administrative transfer to E21B 47/002>

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D	E21B 47/0003	1	{Determining well or borehole volumes (determining depth E21B 47/04, diameter E21B 47/08; measuring volumes in general G01F)}	<Administrative transfer to E21B 47/003>
D	E21B 47/0005	1	{control of cementation quality or level (measuring temperature E21B 47/065)}	<Administrative transfer to E21B 47/005>
D	E21B 47/0006	1	{Measuring stresses in a well bore pipe string or casing (for locating stuck pipe E21B 47/09)}	<Administrative transfer to E21B 47/007>
D	E21B 47/0007	1	{Survey of down-hole pump systems}	<Administrative transfer to E21B 47/008>
D	E21B 47/0008	2	{Survey of walking-beam pump systems, e.g. for the detection of so called "pumped-off" conditions}	<Administrative transfer to E21B 47/009>
N	E21B 47/001	1	for underwater installation	
Q	E21B 47/002	1	by visual inspection	E21B 47/002, E21B 47/0025
N	E21B 47/0025	2	{generating an image of the borehole wall using down-hole measurements, e.g. acoustic or electric}	
N	E21B 47/003	1	Determining well or borehole volumes (determining depth E21B 47/04; diameter E21B 47/08)	
N	E21B 47/005	1	Monitoring or checking of cementation quality or level	
N	E21B 47/006	1	{Detection of corrosion or deposition of substances}	
N	E21B 47/007	1	Measuring stresses in a pipe string or casing (for locating blocked portions of pipes E21B 47/09)	
N	E21B 47/008	1	Monitoring of down-hole pump systems, e.g. for the detection of “pumped-off” conditions	

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N	E21B 47/009	2	Monitoring of walking-beam pump systems	
C	E21B 47/01	1	Devices for supporting measuring instruments on drill bits, pipes, rods or wirelines; Protecting measuring instruments in boreholes against heat, shock, pressure or the like	E21B47/01, E21B47/013
D	E21B 47/011	2	{Protecting measuring instruments (cooling or insulating arrangements for boreholes or wells E21B 36/00)}	<Administrative transfer to E21B47/017>
N	E21B 47/013	2	Devices specially adapted for supporting measuring instruments on drill bits	
Q	E21B 47/017	2	Protecting measuring instruments	E21B 47/017, E21B 47/013, E21B 47/0175
N	E21B47/0175	3	{Cooling arrangements}	
M	E21B 47/02	1	Determining slope or direction	
M	E21B 47/022	2	of the borehole, e.g. using geomagnetism	
D	E21B 47/02208	3	{using seismic or acoustic means}	<Administrative transfer to E21B47/0224>
D	E21B 47/02216	3	{using at least one source of electromagnetic energy and at least one detector therefor}	<Administrative transfer to E21B47/0228>
D	E21B 47/02224	4	{at least one of the sources or one of the detectors being located above ground}	<Administrative transfer to E21B47/0232>
D	E21B 47/02232	3	{using a pendulum}	<Administrative transfer to E21B47/0236>
N	E21B 47/0224	3	using seismic or acoustic means	
N	E21B 47/0228	3	using electromagnetic energy or detectors therefor	



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N	E21B 47/0232	4	at least one of the energy sources or one of the detectors being located on or above the ground surface	
N	E21B 47/0236	3	using a pendulum	
M	E21B 47/026	2	of penetrated ground layers	
M	E21B 47/04	1	Measuring depth or liquid level	
D	E21B 47/042	2	{Measuring or locating liquid level (E21B 47/044 takes precedence)}	<Administrative transfer to E21B 47/047>
D	E21B 47/044	2	{using radioactive markers}	<Administrative transfer to E21B 47/053>
N	E21B 47/047	2	Liquid level (E21B 47/053 takes precedence)	
N	E21B 47/053	2	using radioactive markers	
M	E21B 47/06	1	Measuring temperature or pressure	
D	E21B 47/065	2	{Measuring temperature}	<Administrative transfer to E21B 47/07>
N	E21B 47/07	2	Temperature	
M	E21B 47/08	1	Measuring diameters or related dimensions at the borehole	
D	E21B 47/082	2	{using radiant means, e.g. acoustic, radioactive, electromagnetic}	<Administrative transfer to E21B 47/085>
N	E21B 47/085	2	using radiant means, e.g. acoustic, radioactive or electromagnetic	
M	E21B 47/09	1	Locating or determining the position of objects in boreholes or wells {, e.g. the position of an extending arm}; Identifying the free or blocked portions of pipes	
D	E21B 47/0905	2	{by detecting magnetic anomalies (investigating materials by investigating magnetic variables G01N 27/72)}	<Administrative transfer to E21B 47/092>

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D	E21B 47/091	2	{by detecting an acoustic anomaly, e.g. a mud-pressure pulse}	<Administrative transfer to E21B 47/095>
D	E21B 47/0915	2	{using impression packers, e.g. to detect recesses or perforations}	<Administrative transfer to E21B 47/098>
N	E21B 47/092	2	by detecting magnetic anomalies	
N	E21B 47/095	2	by detecting an acoustic anomalies, e.g. using mud-pressure pulses	
N	E21B 47/098	2	using impression packers, e.g. to detect recesses or perforations	
C	E21B 47/10	1	Locating fluid leaks, intrusions or movements {(using impression packers E21B 47/098)}	E21B47/10, E21B47/113, E21B47/114
D	E21B 47/1005	2	{using thermal measurements (measurement temperature E21B 47/065)}	<Administrative transfer to E21B 47/103>
D	E21B 47/101	2	{using acoustic energy}	<Administrative transfer to E21B 47/107>
D	E21B 47/1015	2	{using tracers: using radioactivity}	<Administrative transfer to E21B 47/11>
D	E21B 47/102	2	{using electrical indications: using light radiations}	<Administrative transfer to E21B 47/113>
D	E21B 47/1025	2	{Detecting leaks, e.g. of tubing, by pressure testing (investigating fluid- tightness of structures by using fluid or vacuum G01M 3/02)}	<Administrative transfer to E21B 47/117>
N	E21B 47/103	2	using thermal measurements {(measurement temperature E21B 47/07)}	
N	E21B 47/107	2	using acoustic means	
Q	E21B 47/11	2	using tracers; using radioactivity	E21B 47/11, E21B 47/111
N	E21B 47/111	3	{using radioactivity}	

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Q	E21B 47/113	2	using electrical indications; using light radiations	E21B 47/113, E21B 47/114
N	E21B 47/114	3	{using light radiation}	
N	E21B 47/117	2	Detecting leaks, e.g. from tubing, by pressure testing	
C	E21B 47/12	1	Means for transmitting measuring-signals or control signals from the well to the surface, or from the surface to the well, e.g. for logging while drilling	E21B47/12, E21B47/138
D	E21B 47/121	2	{using earth as an electrical conductor (E21B 47/122 takes precedence; in general H04B 13/02; electric prospecting G01V 3/00)}	<Administrative transfer to E21B 47/125>
D	E21B 47/122	2	{by electromagnetic energy, e.g. radio frequency (in general H04B; magnetic prospecting G01V 3/00)}	<Administrative transfer to E21B 47/13>
D	E21B 47/123	3	{using light waves (optical transmission in general H04B 10/00; light guides, e.g. optical fibres G02B 6/00)}	<Administrative transfer to E21B 47/135>
D	E21B 47/124	2	{Storing data down-hole, e.g. in a memory or on a record carrier (recording in connection with measuring in general G01D; information storage in general G11)}	<Administrative transfer to E21B 47/26>
N	E21B 47/125	2	using earth as an electrical conductor (E21B 47/13 takes precedence)	
N	E21B 47/13	2	by electromagnetic energy, e.g. radio frequency	
N	E21B 47/135	3	using light waves, e.g. infrared or ultraviolet waves	
N	E21B47/138	2	{Devices entrained in the flow of well-bore fluid for transmitting data, control or actuation signals}	

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U	E21B 47/18	3	through the well fluid {, e.g. mud pressure pulse telemetry}	
D	E21B 47/182	4	{by continuous mud waves with modulation of the waves}	<Administrative transfer to E21B 47/20>
D	E21B 47/185	4	{by negative mud pulses using a pressure relieve valve between drill pipe and annulus}	<Administrative transfer to E21B 47/22>
D	E21B 47/187	4	{by positive mud pulses using a flow restricting valve within the drill pipe}	<Administrative transfer to E21B 47/24>
N	E21B 47/20	4	by modulation of mud waves, e.g. by continuous modulation	
N	E21B 47/22	4	by negative mud pulses using a pressure relieve valve between drill pipe and annulus	
N	E21B 47/24	4	by positive mud pulses using a flow restricting valve within the drill pipe	
N	E21B 47/26	1	Storing data down-hole, e.g. in a memory or on a record carrier	
M	E21B 49/005	1	{Testing the nature of borehole walls or the formation by using drilling mud or cutting data}	
M	E21B 49/006	1	{Measuring wall stresses in the borehole}	
M	E21B 49/008	1	{by injection test; by analysing pressure variations in an injection or production test, e.g. for estimating the skin factor (measuring pressure E21B 47/06)}	
M	E21B 49/025	2	{of underwater soil, e.g. with grab devices}	
M	E21B 49/04	2	using explosives in boreholes; using projectiles penetrating the wall	
M	E21B 49/06	2	using side-wall drilling tools {pressing} or scrapers	

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M	E21B 49/08	1	Obtaining fluid samples or testing fluids, in boreholes or wells	
C	E21B 49/081	2	{with down-hole means for trapping a fluid sample (E21B 49/10 takes precedence)}	E21B49/081, E21B49/0813, E21B49/0815
N	E21B49/0813	3	{Sampling valve actuated by annulus pressure changes}	
N	E21B49/0815	3	{Sampling valve actuated by tubing pressure changes}	
C	E21B 49/083	3	{Samplers adapted to be lowered into or retrieved from a landing nipple, e.g. for testing a well without removing the drill string}	E21B49/083, E21B49/0813, E21B49/0815
D	E21B 2049/085	2	{Determining specific physical fluid parameters}	<administrative transfer to E21B49/0875 INV>
C	E21B 49/087	2	{Well testing, e.g. testing for reservoir productivity or formation parameters}	E21B49/087, E21B49/0875
N	E21B49/0875	3	{determining specific fluid parameters}	
U	E21B 49/10	2	using side-wall fluid samplers or testers	
N	E21B2200/00	0	Special features related to earth drilling for obtaining oil, gas or water	
N	E21B2200/01	1	Sealings characterised by their shape	
N	E21B2200/02	1	Down-hole chokes or valves for variably regulating fluid flow	
N	E21B2200/03	1	Valves operated by gear mechanisms, e.g. rack and pinion mechanisms	
N	E21B2200/04	1	Ball valves	
N	E21B2200/05	1	Flapper valves	
N	E21B2200/06	1	Sleeve valves	

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N	E21B2200/08	1	Down-hole devices using materials which decompose under well-bore conditions	
N	E21B2200/09	1	Detecting, eliminating, preventing liquid slugs in production pipes	
N	E21B2200/20	1	Computer models or simulations, e.g. for reservoirs under production, drill bits	
N	E21B2200/22	1	Fuzzy logic, artificial intelligence, neural networks or the like	

**SUBCLASS E21C - MINING OR QUARRYING**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of dots</u> <u>(e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>(new or modified)</u> <u>“CPC only” text should normally</u> <u>be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
D	E21C 1/00	0	{Rotary-drilling machines (rotary-drilling machines in general B23B; rotary earth drilling E21B 3/00; driving of shafts, galleries or tunnels E21D not used, see subgroup and E21B 3/00)}	<Administrative transfer to E21B 3/00>
D	E21C 1/10	1	{with a built-in feeding device (feeding devices E21C5/00)}	<Administrative transfer to E21B 19/08>
D	E21C 3/00	0	{Drilling machines with reciprocating tool that is intermittently turned when out of contact with the working face (portable percussion tools in general B25D)}	<Administrative transfer to E21B 1/00>
D	E21C 3/02	1	{Machines in which the tool is connected to an impulse member}	<Administrative transfer to E21B 1/36>
D	E21C 3/04	1	{Hammer drilling machines in which the tool is hit by an impulse member}	<Administrative transfer to E21B 1/38>

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<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title (new or modified)</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
D	E21C 3/06	1	{Means for driving the impulse member}	<Administrative transfer to E21B 1/12>
D	E21C 3/16	2	{by electromagnets}	<Administrative transfer to E21B 1/22>
D	E21C 3/18	2	{directly by a piston of an internal-combustion engine}	<Administrative transfer to E21B 1/34>
D	E21C 3/24	2	{directly by air, steam, or gas pressure}	<Administrative transfer to E21B 1/30>
D	E21C 3/26	3	{working with pulses}	<Administrative transfer to E21B 1/32>
D	E21C 5/00	0	{Devices for feeding tool to working face (feeding devices for metal-boring machines B23B not used, see subgroups and E21B 19/08)}	<Administrative transfer to E21B 19/08>
D	E21C 5/08	1	{Means for driving feed mechanism (not used, see subgroups and E21B 19/08)}	<Administrative transfer to E21B 19/08>
D	E21C 5/10	2	{Separate motor, e.g. compressed-air motor or cylinder}	<Administrative transfer to E21B 19/08>
D	E21C 7/00	0	{Dust eliminating or dust removing while drilling (see also E21B 21/00; equipment for preventing the formation of dust by slitting or dislodging machines E21C 35/22; by foam E21B 21/14; exhausting dust from mines E21F 5/20)}	<Administrative transfer to E21B 21/011>
D	E21C 7/04	1	{using exhaust air from the drill motor for blowing-off the dust}	<Administrative transfer to E21B 21/012>
D	E21C 7/08	1	{by liquids}	<Administrative transfer to E21B 21/013>
D	E21C 7/10	2	{Liquid flushing installations}	<Administrative transfer to E21B 21/0135>

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<b>Type*</b>	<b>Symbol</b>	<b>Indent Level Number of dots (e.g. 0, 1, 2)</b>	<b>Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**</b>	<b>Transferred to#</b>
D	E21C 7/12	1	{Preventing exhaust air from the drill motor from blowing-off towards the working face}	<Administrative transfer to E21B 21/014>
D	E21C 11/00	0	{Supports or guides for drilling machines; Columns to which the machine is clamped (slitting machines mounted on supports E21C 25/64; guiding, slitting, or dislodging machines E21C 35/08; feed legs E21B 19/087)}	<Administrative transfer to E21B 15/006>
D	E21C 43/00	0	{Methods for preparing for the gasification of coal underground (methods for generating gas C10B)}	<Administrative transfer to E21B 43/295>

\*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T = existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

## NOTES:

- \*\*No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required "anchor" symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- "Transferred to" column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the "Transferred to" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("Transferred to") symbol, however it is required to specify "<no transfer>" in the "Transferred to" column for such cases.
- For finalisation projects, the deleted "F" symbols should have <no transfer> in the "Transferred to" column.
- For more details about the types of scheme change, see CPC Guide.



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B. New, Modified or Deleted Warning notice(s)

**SUBCLASS E21B - EARTH DRILLING, e.g. DEEP DRILLING (mining, quarrying E21C; making shafts, driving galleries or tunnels E21D); OBTAINING OIL, GAS, WATER, SOLUBLE OR MELTABLE MATERIALS OR A SLURRY OF MINERALS FROM WELLS**

<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
M	E21B	<p>1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:</p> <p>E21B 1/12 - E21B 1/38 covered by E21B 1/00</p> <p>E21B 7/08 covered by E21B 7/06</p> <p>E21B 11/04 covered by E21B 27/00</p> <p>E21B 23/12 covered by E21B 23/002</p> <p>E21B 31/08 covered by E21B 27/00</p> <p>E21B 43/22 covered by C09K 8/58</p> <p>E21B 43/27 covered by E21B 43/26</p> <p>E21B 47/001-E21B 47/005 covered by E21B 47/0001 - E21B 47/0005</p> <p>E21B 47/007 - E21B 47/009 covered by E21B 47/0006 - E21B 47/0008</p> <p>E21B 47/013 covered by E21B 47/01</p> <p>E21B 47/017 covered by E21B 47/011</p> <p>E21B 47/0224-E21B 47/0236 covered by E21B 47/02208 - E21B 47/02232</p> <p>E21B 47/047-E21B 47/053 covered by E21B 47/042 - E21B 47/044</p> <p>E21B 47/07 covered by E21B 47/065</p> <p>E21B 47/085 covered by E21B 47/082</p> <p>E21B 47/092-E21B 47/098 covered by E21B 47/0905 - E21B 47/0915</p> <p>E21B 47/103-E21B 47/117 covered by E21B 47/1005 - E21B 47/1025</p> <p>E21B 47/125-E21B 47/135 covered by E21B 47/121 - E21B 47/123</p> <p>E21B 47/20-E21B 47/24 covered by E21B 47/182 - E21B 47/187</p> <p>E21B 47/26 covered by E21B 47/124</p>	<p><u>Replace:</u> The existing Warning number 1 with the following new Warning.</p> <p>1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:</p> <p>E21B7/08 covered by E21B 7/06</p> <p>E21B43/22 covered by C09K 8/58</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 1/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 1/00 is impacted by reclassification into groups E21B 1/12, E21B 1/14, E21B 1/16, E21B 1/18, E21B 1/20, E21B 1/22, E21B 1/24, E21B 1/26, E21B 1/28, E21B 1/30, E21B 1/32, E21B 1/34, E21B 1/36, and E21B 1/38. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 1/02		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 1/02 is incomplete pending reclassification of documents from groups E21B 1/12. Group E21B 1/02 is also impacted by reclassification into groups E21B 1/04, E21B 1/36 and E21B 1/38. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 1/04		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 1/04 is incomplete pending reclassification of documents from groups E21B1/02 and E21B1/12. All groups listed in this Warning should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 1/12		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 1/12 is incomplete pending reclassification of documents from group E21B 1/00.</p> <p>Group E21B 1/12 is also impacted by reclassification into groups E21B1/02, E21B 1/04, E21B 1/14, E21B 1/16, E21B 1/18, E21B 1/20, E21B 1/22, E21B 1/24, E21B 1/26, E21B 1/28, E21B 1/30, E21B 1/32, E21B 1/34 and E21B 1/38. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 1/14		<p><u>Insert:</u> The following new Warning.</p> <p>Groups E21B 1/14 - E21B 1/20 are incomplete pending reclassification of documents from groups E21B 1/00 and E21B 1/12. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 1/22		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 1/22 is incomplete pending reclassification of documents from groups E21B 1/00 and E21B 1/12. All groups listed in this Warning should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 1/24		<p><u>Insert:</u> The following new Warning.</p> <p>Groups E21B 1/24 - E21B 1/34 are incomplete pending reclassification of documents from groups E21B 1/00 and E21B 1/12. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 1/36		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 1/36 is incomplete pending reclassification of documents from groups E21B 1/00, E21B 1/02 and E21B 1/12. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 1/38		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 1/38 is incomplete pending reclassification of documents from groups E21B 1/00, E21B 1/02 and E21B 1/12. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 3/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 3/00 is impacted by reclassification into groups E21B 3/02, E21B 3/022, E21B 3/025, E21B 3/03, E21B 3/035, E21B 3/04, E21B 3/045, and E21B 3/06. All groups listed in this Warning should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 3/02		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 3/02 is incomplete pending reclassification of documents from group E21B 3/00. Group E21B 3/02 is also impacted by reclassification into group E21B 3/022. Groups E21B 3/00, E21B 3/02, and E21B 3/022 should be considered in order to perform a complete search.</p>
N	E21B 3/022		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 3/022 is incomplete pending reclassification of documents from groups E21B 3/00 and E21B 3/02. Groups E21B 3/00, E21B 3/02, and E21B 3/022 should be considered in order to perform a complete search.</p>
N	E21B 3/025		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 3/025 is incomplete pending reclassification of documents from group E21B 3/00. Groups E21B 3/00 and E21B 3/025 should be considered in order to perform a complete search.</p>
N	E21B 3/03		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 3/03 is incomplete pending reclassification of documents from group E21B 3/00. Groups E21B 3/00 and E21B 3/03 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 3/035		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 3/035 is incomplete pending reclassification of documents from group E21B 3/00. Groups E21B 3/00 and E21B 3/035 should be considered in order to perform a complete search.</p>
N	E21B 3/04		<p><u>Insert:</u> The following new Warning.</p> <p>Groups E21B 3/04 – E21B3/06 are incomplete pending reclassification of documents from group E21B 3/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 7/028		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 7/028 is incomplete pending reclassification of documents from group E21B 11/005. Groups E21B 11/005 and E21B 7/028 should be considered in order to perform a complete search.</p>
N	E21B 7/26		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 7/26 is impacted by reclassification into group E21B 7/267. Groups E21B 7/26 and E21B 7/267 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 7/265		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 7/265 is impacted by reclassification into group E21B 7/267. Groups E21B 7/265 and E21B 7/267 should be considered in order to perform a complete search.</p>
N	E21B 7/267		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 7/267 is incomplete pending reclassification of documents from groups E21B 7/26 and E21B 7/265. Groups E21B 7/26, E21B 7/265, and E21B 7/267 should be considered in order to perform a complete search.</p>
N	E21B 10/26		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/26 is impacted by reclassification into group E21B 10/265. Groups E21B 10/26 and E21B 10/265 should be considered in order to perform a complete search.</p>
N	E21B 10/265		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/265 is incomplete pending reclassification of documents from groups E21B 10/26, E21B 10/28, E21B 10/30, E21B 10/32, E21B 10/322, E21B 10/325, E21B 10/327, E21B 10/34, and E21B 10/345. All groups listed in this Warning should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 10/28		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/28 is impacted by reclassification into group E21B 10/265. Groups E21B 10/28 and E21B 10/265 should be considered in order to perform a complete search.</p>
N	E21B 10/30		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/30 is impacted by reclassification into group E21B 10/265. Groups E21B 10/30 and E21B 10/265 should be considered in order to perform a complete search.</p>
N	E21B 10/32		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/32 is impacted by reclassification into group E21B 10/265. Groups E21B 10/32 and E21B 10/265 should be considered in order to perform a complete search.</p>
N	E21B 10/322		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/322 is impacted by reclassification into group E21B 10/265. Groups E21B 10/322 and E21B 10/265 should be considered in order to perform a complete search.</p>
N	E21B 10/325		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/325 is impacted by reclassification into group E21B 10/265. Groups E21B 10/325 and E21B 10/265 should be considered in order to perform a complete search.</p>



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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 10/327		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/327 is impacted by reclassification into group E21B 10/265. Groups E21B 10/327 and E21B 10/265 should be considered in order to perform a complete search.</p>
N	E21B 10/34		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/34 is impacted by reclassification into group E21B 10/265. Groups E21B 10/34 and E21B 10/265 should be considered in order to perform a complete search.</p>
N	E21B 10/345		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/345 is impacted by reclassification into group E21B 10/265. Groups E21B 10/345 and E21B 10/265 should be considered in order to perform a complete search.</p>
N	E21B 10/42		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/42 is impacted by reclassification into groups E21B 10/62, E21B 10/627, and E21B 10/633. All groups listed in this Warning should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 10/43		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/43 is impacted by reclassification into groups E21B 10/62, E21B 10/627, and E21B 10/633. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 10/567		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/567 is impacted by reclassification into group E21B 10/5671. Groups E21B 10/567 and E21B 10/5671 should be considered in order to perform a complete search.</p>
N	E21B 10/5671		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/5671 is incomplete pending reclassification of documents from groups E21B 10/567 and E21B 10/5673. Groups E21B 10/567, E21B 10/5673, and E21B 10/5671 should be considered in order to perform a complete search.</p>
N	E21B 10/5673		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 10/5673 is impacted by reclassification into group E21B 10/5671. Groups E21B 10/5673 and E21B 10/5671 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 10/62		<p><u>Insert:</u> The following new Warning.</p> <p>Groups E21B 10/62 - E21B 10/633 are incomplete pending reclassification of documents from groups E21B 10/42 and E21B 10/43. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 11/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 11/00 is impacted by reclassification into group E21B 11/04. Groups E21B 11/00 and E21B 11/04 should be considered in order to perform a complete search.</p>
N	E21B 11/005		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 11/005 is impacted by reclassification into group E21B 7/028. Groups E21B 11/005 and E21B 7/028 should be considered in order to perform a complete search.</p>
N	E21B 11/04		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 11/04 is incomplete pending reclassification of documents from groups E21B 11/00 and E21B 27/00. Groups E21B 11/00, E21B 27/00, and E21B 11/04 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 17/02		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/02 is impacted by reclassification into group E21B 17/041. Groups E21B 17/02 and E21B 17/041 should be considered in order to perform a complete search.</p>
N	E21B 17/028		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/028 is impacted by reclassification into groups E21B 17/0283 and E21B 17/0285. Groups E21B 17/028, E21B 17/0283, and E21B 17/0285 should be considered in order to perform a complete search.</p>
N	E21B 17/0283		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/0283 is incomplete pending reclassification of documents from group E21B 17/028. Groups E21B 17/028 and E21B 17/0283 should be considered in order to perform a complete search.</p>
N	E21B 17/0285		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/0285 is incomplete pending reclassification of documents from group E21B 17/028. Groups E21B 17/028 and E21B 17/0285 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 17/04		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/04 is impacted by reclassification into group E21B 17/041. Groups E21B 17/04 and E21B 17/041 should be considered in order to perform a complete search.</p>
N	E21B 17/041		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/041 is incomplete pending reclassification of documents from groups E21B 17/02 and E21B 17/04. Groups E21B 17/02, E21B 17/04, and E21B 17/041 should be considered in order to perform a complete search.</p>
N	E21B 17/046		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/046 is impacted by reclassification into group E21B 17/0465. Groups E21B 17/046 and E21B 17/0465 should be considered in order to perform a complete search.</p>
N	E21B 17/0465		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/0465 is incomplete pending reclassification of documents from group E21B 17/046. Groups E21B 17/046 and E21B 17/0465 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 17/085		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/085 is impacted by reclassification into group E21B 17/0853. Groups E21B 17/085 and E21B 17/0853 should be considered in order to perform a complete search.</p>
N	E21B 17/0853		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 17/0853 is incomplete pending reclassification of documents from group E21B 17/085. Groups E21B 17/085 and E21B 17/0853 should be considered in order to perform a complete search.</p>
N	E21B 19/08		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/08 is impacted by reclassification into groups E21B 19/081, E21B 19/083, E21B 19/084, E21B 19/086, E21B 19/087, E21B 19/089, and E21B 19/09. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 19/081		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/081 is incomplete pending reclassification of documents from group E21B 19/08. Groups E21B 19/08 and E21B 19/081 should be considered in order to perform a complete search.</p>

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N	E21B 19/083		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/083 is incomplete pending reclassification of documents from group E21B 19/08. Groups E21B 19/08 and E21B 19/083 should be considered in order to perform a complete search.</p>
N	E21B 19/084		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/084 is incomplete pending reclassification of documents from group E21B 19/08. Groups E21B 19/08 and E21B 19/084 should be considered in order to perform a complete search.</p>
N	E21B 19/086		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/086 is incomplete pending reclassification of documents from group E21B 19/08. Groups E21B 19/08 and E21B 19/086 should be considered in order to perform a complete search.</p>
N	E21B 19/087		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/087 is incomplete pending reclassification of documents from group E21B 19/08. Groups E21B 19/08 and E21B 19/087 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 19/089		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/089 is incomplete pending reclassification of documents from group E21B 19/08. Groups E21B 19/08 and E21B 19/089 should be considered in order to perform a complete search.</p>
N	E21B 19/09		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/09 is incomplete pending reclassification of documents from group E21B 19/08. Groups E21B 19/08 and E21B 19/09 should be considered in order to perform a complete search.</p>
N	E21B 19/10		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/10 is impacted by reclassification into group E21B 19/102. Groups E21B 19/10 and E21B 19/102 should be considered in order to perform a complete search.</p>
N	E21B 19/102		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 19/102 is incomplete pending reclassification of documents from group E21B 19/10. Groups E21B 19/10 and E21B 19/102 should be considered in order to perform a complete search.</p>



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N	E21B 21/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/00 is impacted by reclassification into groups E21B 21/001, E21B 21/002, E21B 21/003, E21B 21/01, E21B 21/012, E21B 21/015, E21B 21/019, E21B 21/02, E21B 21/06, E21B 21/062, E21B 21/063, E21B 21/065, E21B 21/066, E21B 21/067, E21B 21/068, E21B 21/07, E21B 21/08, E21B 21/082, E21B 21/085, E21B 21/10, E21B 21/103, E21B 21/106, E21B 21/12, E21B 21/14, E21B 21/16, and E21B 21/18. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 21/001		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/001 is incomplete pending reclassification of documents from group E21B 21/00. Group E21B 21/001 is also impacted by reclassification into group E21B 21/082. Groups E21B 21/00, E21B 21/001, and E21B 21/082 should be considered in order to perform a complete search.</p>

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N	E21B 21/002		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/002 is incomplete pending reclassification of documents from group E21B 21/00. Groups E21B 21/00 and E21B 21/002 should be considered in order to perform a complete search.</p>
N	E21B 21/003		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/003 is incomplete pending reclassification of documents from group E21B 21/00. Groups E21B 21/00 and E21B 21/003 should be considered in order to perform a complete search.</p>
N	E21B 21/01		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/01 is incomplete pending reclassification of documents from group E21B 21/00. Group E21B 21/01 is also impacted by reclassification into group E21B 21/019. Groups E21B 21/00, E21B 21/01, and E21B 21/019 should be considered in order to perform a complete search.</p>
N	E21B 21/012		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/012 is incomplete pending reclassification of documents from group E21B 21/00. Groups E21B 21/00 and E21B 21/012 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 21/015		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/015 is incomplete pending reclassification of documents from group E21B 21/00. Group E21B 21/015 is also impacted by reclassification into group E21B 21/019. Groups E21B 21/00, E21B 21/015, and E21B 21/019 should be considered in order to perform a complete search.</p>
N	E21B 21/019		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/019 is incomplete pending reclassification of documents from groups E21B 21/00, E21B 21/01, and E21B 21/015. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 21/02		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/02 is incomplete pending reclassification of documents from group E21B 21/00. Groups E21B 21/00 and E21B 21/02 should be considered in order to perform a complete search.</p>

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N	E21B 21/06		<p><u>Insert:</u> The following new Warning.</p> <p>Groups E21B 21/06 - E21B 21/07 are incomplete pending reclassification of documents from group E21B 21/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 21/08		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/08 is incomplete pending reclassification of documents from group E21B 21/00. Group E21B 21/08 is also impacted by reclassification into groups E21B 21/082 and E21B 21/085. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 21/082		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/082 is incomplete pending reclassification of documents from groups E21B 21/00, E21B 21/001, and E21B 21/08. All groups listed in this Warning should be considered in order to perform a complete search.</p>

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N	E21B 21/085		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/085 is incomplete pending reclassification of documents from groups E21B 21/00 and E21B 21/08. Groups E21B 21/00, E21B 21/08, and E21B 21/085 should be considered in order to perform a complete search.</p>
N	E21B 21/10		<p><u>Insert:</u> The following new Warning.</p> <p>Groups E21B 21/10 - E21B 21/106 are incomplete pending reclassification of documents from group E21B 21/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 21/12		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/12 is incomplete pending reclassification of documents from group E21B 21/00. Groups E21B 21/00 and E21B 21/12 should be considered in order to perform a complete search.</p>
N	E21B 21/14		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/14 is incomplete pending reclassification of documents from group E21B 21/00. Groups E21B 21/00 and E21B 21/14 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 21/16		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/16 is incomplete pending reclassification of documents from group E21B 21/00. Groups E21B 21/00 and E21B 21/16 should be considered in order to perform a complete search.</p>
N	E21B 21/18		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 21/18 is incomplete pending reclassification of documents from group E21B 21/00. Groups E21B 21/00 and E21B 21/18 should be considered in order to perform a complete search.</p>
N	E21B 23/03		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/03 is impacted by reclassification into group E21B 23/12. Groups E21B 23/03 and E21B 23/12 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 23/04		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/04 is impacted by reclassification into groups E21B 23/0411, E21B 23/04115, E21B 23/0412, E21B 23/0413, E21B 23/0414, E21B 23/0415, E21B 23/0416, E21B 23/0417, E21B 23/0418, E21B 23/0419, E21B 23/042, E21B 23/0421, E21B 23/0422, E21B 23/0423, and E21B 34/142. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 23/0411		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0411 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0411 should be considered in order to perform a complete search.</p>
N	E21B 23/04115		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/04115 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/04115 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 23/0412		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0412 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0412 should be considered in order to perform a complete search.</p>
N	E21B 23/0413		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0413 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0413 should be considered in order to perform a complete search.</p>
N	E21B 23/0414		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0414 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0414 should be considered in order to perform a complete search.</p>
N	E21B 23/0415		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0415 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0415 should be considered in order to perform a complete search.</p>



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N	E21B 23/0416		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0416 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0416 should be considered in order to perform a complete search.</p>
N	E21B 23/0417		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0417 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0417 should be considered in order to perform a complete search.</p>
N	E21B 23/0418		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0418 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0418 should be considered in order to perform a complete search.</p>
N	E21B 23/0419		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0419 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0419 should be considered in order to perform a complete search.</p>

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N	E21B 23/042		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/042 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/042 should be considered in order to perform a complete search.</p>
N	E21B 23/0421		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0421 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0421 should be considered in order to perform a complete search.</p>
N	E21B 23/0422		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0422 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0422 should be considered in order to perform a complete search.</p>
N	E21B 23/0423		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/0423 is incomplete pending reclassification of documents from group E21B 23/04. Groups E21B 23/04 and E21B 23/0423 should be considered in order to perform a complete search.</p>

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<b><u>Type*</u></b>	<b><u>Location</u></b>	<b><u>Old Warning notice</u></b>	<b><u>New/Modified Warning notice</u></b>
N	E21B 23/12		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 23/12 is incomplete pending reclassification of documents from group E21B 23/03. Groups E21B 23/03 and E21B 23/12 should be considered in order to perform a complete search.</p>
N	E21B 27/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 27/00 is impacted by reclassification into groups E21B 11/04 and E21B 31/08. Groups E21B 27/00, E21B 11/04, and E21B 31/08 should be considered in order to perform a complete search.</p>
N	E21B 31/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 31/00 is impacted by reclassification into group E21B 31/08. Groups E21B 31/00 and E21B 31/08 should be considered in order to perform a complete search.</p>
N	E21B 31/03		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 31/03 is impacted by reclassification into group E21B 31/035. Groups E21B 31/03 and E21B 31/035 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 31/035		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 31/035 is incomplete pending reclassification of documents from group E21B 31/03. Groups E21B 31/03 and E21B 31/035 should be considered in order to perform a complete search.</p>
N	E21B 31/08		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 31/08 is incomplete pending reclassification of documents from groups E21B 27/00 and E21B 31/00. Groups E21B 27/00, E21B 31/00, and E21B 31/08 should be considered in order to perform a complete search.</p>
N	E21B 33/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/00 is impacted by reclassification into groups E21B 2200/00, E21B 2200/01, E21B 2200/02, E21B 2200/03, E21B 2200/04, E21B 2200/05, E21B 2200/06, E21B 2200/08, E21B 2200/09, E21B 2200/20, and E21B 2200/22. All groups listed in this Warning should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 33/035		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/035 is impacted by reclassification into groups E21B 33/0353 and E21B 33/0387. Groups E21B 33/035, E21B 33/0353, and E21B 33/0387 should be considered in order to perform a complete search.</p>
N	E21B 33/0353		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/0353 is incomplete pending reclassification of documents from groups E21B 33/035, E21B 33/0355, E21B 33/037, E21B 33/0375, E21B 33/038, E21B 33/0385, and E21B 33/0422. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 33/0355		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/0355 is impacted by reclassification into group E21B 33/0353. Groups E21B 33/0355 and E21B 33/0353 should be considered in order to perform a complete search.</p>
N	E21B 33/037		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/037 is impacted by reclassification into group E21B 33/0353. Groups E21B 33/037 and E21B 33/0353 should be considered in order to perform a complete search.</p>

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N	E21B 33/0375		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/0375 is impacted by reclassification into group E21B 33/0353. Groups E21B 33/0375 and E21B 33/0353 should be considered in order to perform a complete search.</p>
N	E21B 33/038		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/038 is impacted by reclassification into group E21B 33/0353. Groups E21B 33/038 and E21B 33/0353 should be considered in order to perform a complete search.</p>
N	E21B 33/0385		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/0385 is impacted by reclassification into group E21B 33/0353. Groups E21B 33/0385 and E21B 33/0353 should be considered in order to perform a complete search.</p>
N	E21B 33/0387		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/0387 is incomplete pending reclassification of documents from group E21B 33/035. Groups E21B 33/035 and E21B 33/0387 should be considered in order to perform a complete search.</p>
N	E21B 33/0422		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/0422 is impacted by reclassification into group E21B 33/0353. Groups E21B 33/0422 and E21B 33/0353 should be considered in order to perform a complete search.</p>

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N	E21B 33/16		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/16 is impacted by reclassification into groups E21B 33/165 and E21B 33/167. Groups E21B 33/16, E21B 33/165, and E21B 33/167 should be considered in order to perform a complete search.</p>
N	E21B 33/165		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/165 is incomplete pending reclassification of documents from group E21B 33/16. Groups E21B 33/16 and E21B 33/165 should be considered in order to perform a complete search.</p>
N	E21B 33/167		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 33/167 is incomplete pending reclassification of documents from group E21B 33/16. Groups E21B 33/16 and E21B 33/167 should be considered in order to perform a complete search.</p>
N	E21B 34/02		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 34/02 is impacted by reclassification into group E21B 34/025. Groups E21B 34/02 and E21B 34/025 should be considered in order to perform a complete search.</p>

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N	E21B 34/025		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 34/025 is incomplete pending reclassification of documents from groups E21B 34/02, E21B 34/04, and E21B 34/045. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 34/04		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 34/04 is impacted by reclassification into group E21B 34/025. Groups E21B 34/04 and E21B 34/025 should be considered in order to perform a complete search.</p>
N	E21B 34/045		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 34/045 is impacted by reclassification into group E21B 34/025. Groups E21B 34/045 and E21B 34/025 should be considered in order to perform a complete search.</p>
N	E21B 34/14		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 34/14 is impacted by reclassification into group E21B 34/142. Groups E21B 34/14 and E21B 34/142 should be considered in order to perform a complete search.</p>



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N	E21B 34/142		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 34/142 is incomplete pending reclassification of documents from groups E21B 23/04 and E21B 34/14. Groups E21B 23/04, E21B 34/14, and E21B 34/142 should be considered in order to perform a complete search.</p>
N	E21B 40/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 40/00 is impacted by reclassification into group E21B 40/001. Groups E21B 40/00 and E21B 40/001 should be considered in order to perform a complete search.</p>
N	E21B 40/001		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 40/001 is incomplete pending reclassification of documents from group E21B 40/00. Groups E21B 40/00 and E21B 40/001 should be considered in order to perform a complete search.</p>
N	E21B 41/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 41/00 is incomplete pending reclassification of documents from group E21B 41/0092. Group E21B 41/00 is also impacted by reclassification into group E21B 41/0099. Groups E21B 41/0092, E21B 41/00, and E21B 41/0099 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 41/0092		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 41/0092 is no longer used for the classification of documents as of &lt;DATE&gt;. The content of this group is being reclassified into groups E21B 41/00, E21B 43/00, E21B 43/16, and G06Q 10/06. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 41/0099		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 41/0099 is incomplete pending reclassification of documents from group E21B 41/00. Groups E21B 41/00 and E21B 41/0099 should be considered in order to perform a complete search.</p>
N	E21B 43/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/00 is incomplete pending reclassification of documents from group E21B 41/0092. Groups E21B 41/0092 and E21B 43/00 should be considered in order to perform a complete search.</p>
N	E21B 43/017		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/017 is impacted by reclassification into group E21B 43/0175. Groups E21B 43/017 and E21B 43/0175 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 43/0175		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/0175 is incomplete pending reclassification of documents from group E21B 43/017. Groups E21B 43/017 and E21B 43/0175 should be considered in order to perform a complete search.</p>
N	E21B 43/119		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/119 is impacted by reclassification into group E21B 43/1193. Groups E21B 43/119 and E21B 43/1193 should be considered in order to perform a complete search.</p>
N	E21B 43/1193		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/1193 is incomplete pending reclassification of documents from group E21B 43/119. Groups E21B 43/119 and E21B 43/1193 should be considered in order to perform a complete search.</p>
N	E21B 43/121		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/121 is impacted by reclassification into group E21B 43/13. Groups E21B 43/121 and E21B 43/13 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 43/122		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/122 is impacted by reclassification into group E21B 43/13. Groups E21B 43/122 and E21B 43/13 should be considered in order to perform a complete search.</p>
N	E21B 43/123		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/123 is impacted by reclassification into groups E21B 43/1235 and E21B 43/13. Groups E21B 43/123, E21B 43/1235, and E21B 43/13 should be considered in order to perform a complete search.</p>
N	E21B 43/1235		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/1235 is incomplete pending reclassification of documents from group E21B 43/123. Groups E21B 43/123 and E21B 43/1235 should be considered in order to perform a complete search.</p>
N	E21B 43/124		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/124 is impacted by reclassification into group E21B 43/13. Groups E21B 43/124 and E21B 43/13 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 43/126		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/126 is impacted by reclassification into group E21B 43/13. Groups E21B 43/126 and E21B 43/13 should be considered in order to perform a complete search.</p>
N	E21B 43/127		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/127 is impacted by reclassification into group E21B 43/13. Groups E21B 43/127 and E21B 43/13 should be considered in order to perform a complete search.</p>
N	E21B 43/128		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/128 is impacted by reclassification into group E21B 43/13. Groups E21B 43/128 and E21B 43/13 should be considered in order to perform a complete search.</p>
N	E21B 43/129		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/129 is impacted by reclassification into group E21B 43/13. Groups E21B 43/129 and E21B 43/13 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 43/13		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/13 is incomplete pending reclassification of documents from groups E21B 43/121, E21B 43/122, E21B 43/123, E21B 43/124, E21B 43/126, E21B 43/127, E21B 43/128, and E21B 43/129. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 43/16		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/16 is incomplete pending reclassification of documents from group E21B 41/0092. Groups E21B 41/0092 and E21B 43/16 should be considered in order to perform a complete search.</p>
N	E21B 43/26		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/26 is impacted by reclassification into groups E21B 43/2605, E21B 43/2607, and E21B 43/27. All groups listed in this Warning should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 43/2605		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/2605 is incomplete pending reclassification of documents from group E21B 43/26. Groups E21B 43/26 and E21B 43/2605 should be considered in order to perform a complete search.</p>
N	E21B 43/2607		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/2607 is incomplete pending reclassification of documents from group E21B 43/26. Groups E21B 43/26 and E21B 43/2607 should be considered in order to perform a complete search.</p>
N	E21B 43/27		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/27 is incomplete pending reclassification of documents from group E21B 43/26. Groups E21B 43/26 and E21B 43/27 should be considered in order to perform a complete search.</p>
N	E21B 43/34		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/34 is impacted by reclassification into group E21B 43/35. Groups E21B 43/34 and E21B 43/35 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 43/35		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/35 is incomplete pending reclassification of documents from groups E21B 43/34, E21B 43/36, E21B 43/38, E21B 43/385, and E21B 43/40. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E21B 43/36		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/36 is impacted by reclassification into group E21B 43/35. Groups E21B 43/36 and E21B 43/35 should be considered in order to perform a complete search.</p>
N	E21B 43/38		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/38 is impacted by reclassification into group E21B 43/35. Groups E21B 43/38 and E21B 43/35 should be considered in order to perform a complete search.</p>
N	E21B 43/385		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/385 is impacted by reclassification into group E21B 43/35. Groups E21B 43/385 and E21B 43/35 should be considered in order to perform a complete search.</p>



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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 43/40		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 43/40 is impacted by reclassification into group E21B 43/35. Groups E21B 43/40 and E21B 43/35 should be considered in order to perform a complete search.</p>
N	E21B 47/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/00 is impacted by reclassification into group E21B 47/006. Groups E21B 47/00 and E21B 47/006 should be considered in order to perform a complete search.</p>
N	E21B 47/002		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/002 is impacted by reclassification into group E21B 47/0025. Groups E21B 47/002 and E21B 47/0025 should be considered in order to perform a complete search.</p>
N	E21B 47/0025		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/0025 is incomplete pending reclassification of documents from group E21B 47/002. Groups E21B 47/002 and E21B 47/0025 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 47/006		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/006 is incomplete pending reclassification of documents from group E21B 47/00. Groups E21B 47/00 and E21B 47/006 should be considered in order to perform a complete search.</p>
N	E21B 47/01		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/01 is impacted by reclassification into group E21B 47/013. Groups E21B 47/01 and E21B 47/013 should be considered in order to perform a complete search.</p>
N	E21B 47/013		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/013 is incomplete pending reclassification of documents from groups E21B 47/01 and E21B 47/017. Groups E21B 47/01, E21B 47/017, and E21B 47/013 should be considered in order to perform a complete search.</p>
N	E21B 47/017		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/017 is impacted by reclassification into groups E21B 47/013 and E21B 47/0175. Groups E21B 47/017, E21B 47/013, and E21B 47/0175 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 47/0175		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/0175 is incomplete pending reclassification of documents from group E21B 47/017. Groups E21B 47/017 and E21B 47/0175 should be considered in order to perform a complete search.</p>
N	E21B 47/10		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/10 is impacted by reclassification into groups E21B 47/113 and E21B 47/114. Groups E21B 47/10, E21B 47/113, and E21B 47/114 should be considered in order to perform a complete search.</p>
N	E21B 47/11		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/11 is impacted by reclassification into group E21B 47/111. Groups E21B 47/11 and E21B 47/111 should be considered in order to perform a complete search.</p>
N	E21B 47/111		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/111 is incomplete pending reclassification of documents from group E21B 47/11. Groups E21B 47/11 and E21B 47/111 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 47/113		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/113 is incomplete pending reclassification of documents from group E21B 47/10. Group E21B 47/113 is also impacted by reclassification into group E21B 47/114. Groups E21B 47/10, E21B 47/113, and E21B 47/114 should be considered in order to perform a complete search.</p>
N	E21B 47/114		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/114 is incomplete pending reclassification of documents from groups E21B 47/10 and E21B 47/113. Groups E21B 47/10, E21B 47/113, and E21B 47/114 should be considered in order to perform a complete search.</p>
N	E21B 47/12		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/12 is impacted by reclassification into group E21B 47/138. Groups E21B 47/12 and E21B 47/138 should be considered in order to perform a complete search.</p>
N	E21B 47/138		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 47/138 is incomplete pending reclassification of documents from group E21B 47/12. Groups E21B 47/12 and E21B 47/138 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 49/081		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 49/081 is impacted by reclassification into groups E21B 49/0813 and E21B 49/0815. Groups E21B 49/081, E21B 49/0813, and E21B 49/0815 should be considered in order to perform a complete search.</p>
N	E21B 49/0813		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 49/0813 is incomplete pending reclassification of documents from groups E21B 49/081 and E21B 49/083. Groups E21B 49/081, E21B 49/083, and E21B 49/0813 should be considered in order to perform a complete search.</p>
N	E21B 49/0815		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 49/0815 is incomplete pending reclassification of documents from groups E21B 49/081 and E21B 49/083. Groups E21B 49/081, E21B 49/083, and E21B 49/0815 should be considered in order to perform a complete search.</p>
N	E21B 49/083		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 49/083 is impacted by reclassification into groups E21B 49/0813 and E21B 49/0815. Groups E21B 49/083, E21B 49/0813, and E21B 49/0815 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 49/087		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 49/087 is impacted by reclassification into group E21B 49/0875. Groups E21B 49/087 and E21B 49/0875 should be considered in order to perform a complete search.</p>
N	E21B 49/0875		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 49/0875 is incomplete pending reclassification of documents from group E21B 49/087. Groups E21B 49/087 and E21B 49/0875 should be considered in order to perform a complete search.</p>
N	E21B 2200/00		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/00 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/00 should be considered in order to perform a complete search.</p>
N	E21B 2200/01		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/01 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/01 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 2200/02		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/02 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/02 should be considered in order to perform a complete search.</p>
N	E21B 2200/03		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/03 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/03 should be considered in order to perform a complete search.</p>
N	E21B 2200/04		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/04 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/04 should be considered in order to perform a complete search.</p>
N	E21B 2200/05		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/05 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/05 should be considered in order to perform a complete search.</p>

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 2200/06		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/06 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/06 should be considered in order to perform a complete search.</p>
N	E21B 2200/08		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/08 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/08 should be considered in order to perform a complete search.</p>
N	E21B 2200/09		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/09 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/09 should be considered in order to perform a complete search.</p>
N	E21B 2200/20		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/20 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/20 should be considered in order to perform a complete search.</p>



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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	E21B 2200/22		<p><u>Insert:</u> The following new Warning.</p> <p>Group E21B 2200/22 is incomplete pending reclassification of documents from group E21B 33/00. Groups E21B 33/00 and E21B 2200/22 should be considered in order to perform a complete search.</p>

**SUBCLASS G06Q - DATA PROCESSING SYSTEMS OR METHODS, SPECIALLY ADAPTED FOR ADMINISTRATIVE, COMMERCIAL, FINANCIAL, MANAGERIAL, SUPERVISORY OR FORECASTING PURPOSES; SYSTEMS OR METHODS SPECIALLY ADAPTED FOR ADMINISTRATIVE, COMMERCIAL, FINANCIAL, MANAGERIAL, SUPERVISORY OR FORECASTING PURPOSES, NOT OTHERWISE PROVIDED FOR**

<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	G06Q 10/06		<p><u>Insert:</u> The following new Warning.</p> <p>Group G06Q 10/06 is incomplete pending reclassification of documents from group E21B 41/0092. Groups E21B 41/0092 and G06Q 10/06 should be considered in order to perform a complete search.</p>

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C. New, Modified or Deleted Note(s)

**SUBCLASS E21B - EARTH DRILLING, e.g. DEEP DRILLING (mining, quarrying E21C; making shafts, driving galleries or tunnels E21D); OBTAINING OIL, GAS, WATER, SOLUBLE OR MELTABLE MATERIALS OR A SLURRY OF MINERALS FROM WELLS**

<u>Type*</u>	<u>Location</u>	<u>Old Note</u>	<u>New/Modified Note</u>
N	E21B 1/00		<p><u>Insert:</u> The following new Note.</p> <p>When classifying in groups E21B 1/12- E21B 1/38, a symbol from one of the following main groups of B25D should also be given:</p> <ul style="list-style-type: none"> <li>• B25D 9/00 Portable percussive tools with fluid-pressure drives</li> <li>• B25D 11/00 Portable percussive tools with motor drive</li> <li>• B25D 16/00 Portable percussive machines with superimposed rotation</li> <li>• B25D 17/00 Details of, or accessories for, portable power-driven percussive tools</li> </ul>
M	E21B 47/01	Devices for both supporting and protecting measuring instruments are only classified in E21B47/011	<p><u>Replace:</u> The existing symbol E21B47/011 with the new symbol E21B47/017 so that the Note reads as follows.</p> <p>Devices for both supporting and protecting measuring instruments are only classified in <a href="#">E21B47/017</a></p>

\*N = new note, M = modified note, D = deleted note

NOTE: The “Location” column only requires the symbol PRIOR to the location of the note. No further directions such as “before” or “after” are required.

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D. New, Modified or Deleted Guidance Heading(s)

**SUBCLASS E21C - MINING OR QUARRYING**

<b><u>Type*</u></b>	<b><u>Location</u></b>	<b><u>Old Guidance Heading</u></b>	<b><u>New/Modified Guidance Heading</u></b>
D	E21C1/00	Drilling machines	<u>Delete</u> : The existing Guidance Heading.
D	E21C5/00	Details of drilling apparatus	<u>Delete</u> : The existing Guidance Heading.

\*N = new guidance heading, M =modified guidance heading, D = deleted guidance heading

NOTES:

- The “Location” column requires the symbol AFTER the guidance heading location. No further directions such as “before” or “after” are required.
- In cases where there may be confusion as to whether a new group falls within the scope of a guidance heading, indicate the guidance heading and whether the group does or does not go with the guidance heading. This can be included in the “Location” column. For example, the guidance heading “Compounds containing carbon together with sulfur, selenium or tellurium with or without hydrogen, halogens, oxygen or nitrogen” encompasses groups C07C 301/00-395/00 only. If a new group C07C 398/00 is proposed and is included in the guidance heading scope, indicate this in the “Location” column as follows: 398/00 to be included under the guidance heading: “Compounds containing carbon together with sulfur, selenium or tellurium with or without hydrogen, halogens, oxygen or nitrogen.”

## 2. A. DEFINITIONS (New)

Insert: The following new Definitions.

### **E21B 3/045**

#### **References**

##### ***Limiting References***

*This place does not cover:*

Derricks adapted to be moved on their substructure	<a href="#">E21B 15/003</a>
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##### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Supports for the drilling machine specially adapted for underwater drilling	<a href="#">E21B 15/02</a>
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### **E21B 4/003**

#### **References**

##### ***Limiting References***

*This place does not cover:*

Bearing, lubrication or sealing details for roller bits	<a href="#">E21B 10/22</a>
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##### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Bearings in general	<a href="#">F16C</a>
Sealing in general	<a href="#">F16J</a>
Lubricating in general	<a href="#">F16N</a>

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**E21B 4/006****References****Limiting References***This place does not cover:*

Continuous unidirectional rotary motion of shaft or drilling pipe effecting consecutive impacts	<a href="#">E21B 4/10</a>
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**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Gearings in general	<a href="#">F16H</a>
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**E21B 4/06****References****Limiting References***This place does not cover:*

Percussion drill bits	<a href="#">E21B 10/36</a>
Releasing-jars	<a href="#">E21B 31/107</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Boring rams	<a href="#">E21B 11/02</a>
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**Special rules of classification**

Looping references between [E21B11/02](#) and [E21B4/06](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: Reference [E21B11/02](#) is non-limiting in the subgroup [E21B4/06](#). CPC will be corrected once this inconsistency is resolved in IPC.

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**E21B7/006****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Bailers with helical conveying means	<a href="#">E21B 27/04</a>
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**E21B 7/007****References****Limiting References***This place does not cover:*

Underwater drilling using explosives	<a href="#">E21B 7/1245</a>
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**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Setting-tools actuated by explosives	<a href="#">E21B 23/04</a> , <a href="#">E21B 23/065</a>
Cutting or destroying objects in boreholes by explosives	<a href="#">E21B 29/02</a>
Freeing objects using explosives	<a href="#">E21B 31/1075</a>
Gun or shaped-charge perforators	<a href="#">E21B 43/116</a>
Fracturing by explosives	<a href="#">E21B 43/263</a> , <a href="#">E21B 43/248</a>
Taking samples using explosives	<a href="#">E21B 49/04</a>

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**E21B 7/021****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Rotary tables	<a href="#">E21B 3/04</a>
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**E21B 7/06****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Directional window cutting	<a href="#">E21B 29/06</a>
Deflecting the direction of fishing tools	<a href="#">E21B 31/14</a>

**E21B 7/128****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Guide line systems	<a href="#">E21B 41/10</a>
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**E21B 7/14****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Drilling by use of explosives	<a href="#">E21B 7/007</a>
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**E21B 7/18****References****Limiting References***This place does not cover:*

Drilling by use of heat	<a href="#">E21B 7/14</a>
Methods of hydraulic mining; Hydraulic monitors	<a href="#">E21C 45/00</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Obtaining a slurry of minerals from wells	<a href="#">E21B 43/29</a>
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**E21B 7/201****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Drilling with helical conveying means	<a href="#">E21B 7/005</a>
Augers	<a href="#">E21B 10/44</a>
Drilling rods or pipes with helical structure	<a href="#">E21B 17/22</a>



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**E21B 7/203**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Down-hole drives per se	<a href="#">E21B 4/00</a>
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**E21B 7/206**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Down-hole drives per se	<a href="#">E21B 4/00</a>
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**E21B 7/208**

**References**

***Limiting References***

*This place does not cover:*

Using down-hole drives in combination with helical conveying means	<a href="#">E21B 7/203</a>
Using down-hole drives without earth removal	<a href="#">E21B 7/206</a>

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Using down-hole drives per se	<a href="#">E21B 4/00</a>
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**E21B 10/02****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Drill bits characterised by wear resisting parts	<a href="#">E21B 10/46</a>
Apparatus for obtaining undisturbed cores	<a href="#">E21B 25/00</a>

**Special rules of classification**

Reference [E21B10/46](#) is non-limiting in the subgroup [E21B10/02](#). CPC will be corrected once this inconsistency is resolved in IPC.

Looping references between [E21B25/00](#) and [E21B10/02](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: Reference [E21B25/00](#) is non-limiting in the subgroup [E21B10/46](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 10/445****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Percussion drill bits in general	<a href="#">E21B 10/36</a>
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**E21B 10/46****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Drill bits with self-renewable cutting edge	<a href="#">E21B 10/006</a>
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**E21B 10/48****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Saw cylinders having their cutting rim equipped with abrasive particles for drilling stone or glass	<a href="#">B28D 1/041</a>
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**E21B 10/55****Definition statement***This place covers:*

Rotary drag type bits with blades having preformed cutting elements mounted on a distinct support, e.g. polycrystalline inserts.

**References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Inserts per se	<a href="#">E21B 10/56</a> , <a href="#">E21B 10/58</a>
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**Special rules of classification**

References [E21B10/56](#) and [E21B10/58](#) are non-limiting in the subgroup [E21B10/55](#). CPC will be corrected once this inconsistency is resolved in IPC.

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**E21B 10/60****References****Limiting References***This place does not cover:*

Roller drill bits characterised by conduits or nozzles for drilling fluids	<a href="#">E21B 10/18</a>
Percussion drill bits characterised by conduits or nozzles for drilling fluids	<a href="#">E21B 10/38</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Mining picks with arrangement of fluid-spraying nozzles	<a href="#">E21C 35/187</a>
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**E21B 10/62****References****Limiting References***This place does not cover:*

Roller bits characterised by detachable or adjustable parts	<a href="#">E21B 10/20</a>
Augers with leading portion or with detachable parts	<a href="#">E21B 10/44</a>
Drill bits characterised by the whole or part thereof being insertable into or removable from the borehole without withdrawing the drilling pipe	<a href="#">E21B 10/64</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Rotary drag type drill bits	<a href="#">E21B 10/42</a>
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## **E21B 10/64**

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Retrievable core receivers	<a href="#">E21B 25/02</a>
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### **Special rules of classification**

Looping references between [E21B25/02](#) and [E21B10/64](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: Reference [E21B25/02](#) is non-limiting in the subgroup [E21B10/64](#). CPC will be corrected once this inconsistency is resolved in IPC.

## **E21B 15/003**

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Derricks or masts specially adapted for directional drilling, e.g. slant hole rigs	<a href="#">E21B 15/04</a>
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**E21B 15/02****References****Limiting References***This place does not cover:*

Derricks or masts specially adapted for directional drilling, e.g. slant hole rigs	<a href="#">E21B 15/04</a>
Floating drilling platforms	<a href="#">B63B 35/44</a>
Drilling platforms on legs	<a href="#">E02B 17/00</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Derricks or masts adapted to be moved on their substructure, e.g. with skidding means	<a href="#">E21B 15/003</a>
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**E21B 15/04****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Derricks or masts adapted to be moved on their substructure, e.g. with skidding means	<a href="#">E21B 15/003</a>
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**E21B 17/021****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Connecting or disconnecting pipe couplings or joints	<a href="#">E21B 19/16</a>
Fishing tools for frozen rods, casings, ropes, bits or the like	<a href="#">E21B 31/00</a>

**E21B 17/026****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Protectors and centralisers for cables and control lines	<a href="#">E21B 17/1035</a>
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**E21B 17/042****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Releasing-joints between rod or the like and bit or between rod and rod or the like	<a href="#">E21B 17/06</a>
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**E21B 17/07**

**References**

**Limiting References**

*This place does not cover:*

Heave compensators in the derrick	E21B 19/09
Releasing-jars	E21B 31/107

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Shock-absorbers in general	F16F
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**E21B 17/1021**

**References**

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Measuring diameter of boreholes or wells	E21B 47/08
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**E21B 17/18****References****Limiting References***This place does not cover:*

Flexible or articulated drilling pipes with plural fluid passages	<a href="#">E21B 17/203</a>
Circulation of drilling fluid by means of such pipes	<a href="#">E21B 21/12</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Joints or fittings for double-walled or multi-channel pipes or pipe assemblies	<a href="#">F16L 39/00</a>
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**E21B 17/20****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Risers	<a href="#">E21B 17/01</a>
Swivel joints between rod or the like and bit or between rod and rod or the like	<a href="#">E21B 17/05</a>

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## **E21B 17/206**

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Hoses with electrically conducting means in general	<a href="#">F16L 11/127</a>
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## **E21B 17/22**

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Drill bits with helical conveying portion	<a href="#">E21B 10/44</a>
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### **Special rules of classification**

Looping references between [E21B10/44](#) and [E21B17/22](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: Reference [E21B10/44](#) is non-limiting in the subgroup [E21B17/22](#). CPC will be corrected once this inconsistency is resolved in IPC.

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**E21B 19/008****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Cathead actuated pipe wrenches or spinners	<a href="#">E21B 19/162</a>
Capstans, winches	<a href="#">B66D</a>

**E21B 19/10****References*****Limiting References****This place does not cover:*

Rotary tables with master bushing or kelly bushing	<a href="#">E21B3/04</a>
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***Informative references****Attention is drawn to the following places, which may be of interest for search:*

Slip-type elevators	<a href="#">E21B 19/07</a>
Casing heads with slips	<a href="#">E21B 33/0422</a>

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**E21B 19/12****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Rope clamps in general	<a href="#">F16G 11/00</a>
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**Special rules of classification**

Looping references between [E21B 19/12](#) and [F16G 11/00](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: Reference [F16G 11/00](#) is non-limiting in the subgroup [E21B 19/12](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 21/01****References****Limiting References**

*This place does not cover:*

Arrangements for treating drilling fluids	<a href="#">E21B 21/06</a>
Waste disposal systems	<a href="#">E21B 41/005</a>

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Swivel joints in hose-lines	<a href="#">E21B 21/02</a>
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## **E21B 21/02**

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Hose connections in general	<a href="#">F16L 31/00</a> , <a href="#">F16L 33/00</a>
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## **E21B 21/10**

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Valves in general	<a href="#">F16K</a>
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### **Special rules of classification**

Reference [F16K](#) is non-limiting in the subgroup [E21B21/10](#). CPC will be corrected once this inconsistency is resolved in IPC.

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**E21B 21/12****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Pipes provided with plural fluid passages	<a href="#">E21B 17/18</a>
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**Special rules of classification**

Looping references between [E21B17/18](#) and [E21B21/12](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: Reference [E21B17/18](#) is non-limiting in the subgroup [E21B21/12](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 23/01****References****Limiting References**

*This place does not cover:*

Anchoring of drives in the borehole	<a href="#">E21B 4/18</a>
Apparatus for locking the tools or the like in landing nipples or in recesses between adjacent sections of tubing	<a href="#">E21B 23/02</a>
Apparatus for setting the tools into, or removing the tools from, laterally offset landing nipples or pockets	<a href="#">E21B 23/03</a>
Apparatus operated by fluid means	<a href="#">E21B 23/04</a>
Apparatus for setting packers	<a href="#">E21B 23/06</a>

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Packers	<a href="#">E21B 33/12</a>
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**E21B 23/08**

**References**

**Limiting References**

*This place does not cover:*

Special provisions on heads therefor	E21B 33/068
Cementing plugs	E21B 33/16
Scrapers operated by fluid pressure	E21B 37/04

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Tool diverters	E21B 23/12
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**E21B 23/12**

**Definition statement**

*This place covers:*

Tool diverters, e.g. for through-the-flow line tool systems or for wire-line tools

**References**

**Application-oriented references**

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Tool diverters for setting the tools into, or removing the tools from, laterally offset landing nipples or pockets	E21B 23/03
Tool diverters for drilling	E21B7/06

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**E21B 23/14****References****Limiting References***This place does not cover:*

Introducing or running tools by fluid pressure	<a href="#">E21B 23/08</a>
Provision on well heads for introducing or removing cable-operated tools	<a href="#">E21B 33/072</a> , <a href="#">E21B 33/076</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Side entry subs for connecting cables or wirelines to downhole devices	<a href="#">E21B 17/025</a>
Control line protectors for plural rods, pipes or lines	<a href="#">E21B 17/1035</a>

**E21B 25/02****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Retrievable drill bits	<a href="#">E21B 10/64</a>
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**Special rules of classification**

Looping references between [E21B10/64](#) and [E21B25/02](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: reference [E21B10/64](#) is non-limiting in the subgroup [E21B25/02](#). CPC will be corrected once this inconsistency is resolved in IPC.



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**E21B 29/06****References****Limiting References***This place does not cover:*

Cutting a pipe with a cutter rotating along the circumference of the pipe with a radially-expansible cutter rotating inside the pipe	<a href="#">E21B 29/005</a>
Cutting or deforming pipes to control fluid flow	<a href="#">E21B 29/08</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Whipstocks	<a href="#">E21B 7/061</a>
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**E21B 31/002****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Cutting by explosive	<a href="#">E21B 29/02</a>
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**E21B 31/005****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Vibration generating arrangements for boreholes or wells	<a href="#">E21B 28/00</a>
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## **E21B 31/107**

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Telescopic joints	<a href="#">E21B 17/07</a>
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### **Special rules of classification**

Looping references between [E21B17/07](#) and [E21B31/107](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: reference [E21B17/07](#) is non-limiting in the subgroup [E21B31/107](#). CPC will be corrected once this inconsistency is resolved in IPC.

## **E21B 33/0375**

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Corrosion protection means in general	<a href="#">C23F</a>
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## **E21B 33/0385**

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Underwater electrical connections in general	<a href="#">H01R 13/523</a>
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**E21B 33/0422**

**References**

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Slips in rotary table	<a href="#">E21B 19/10</a>
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**E21B 33/06**

**References**

**Limiting References**

*This place does not cover:*

Rotating blow-out preventers	<a href="#">E21B 33/085</a>
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**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Valve arrangements for boreholes or wells	<a href="#">E21B 34/00</a>
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**E21B 33/063**

**References**

**Limiting References**

*This place does not cover:*

Cutting of wireline	<a href="#">E21B 29/04</a>
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**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Cutting pipes	<a href="#">E21B 29/08</a>
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**E21B 33/134**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Packers	<a href="#">E21B 33/12</a>
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**E21B 33/138**

**References**

***Limiting References***

*This place does not cover:*

Packers	<a href="#">E21B 33/12</a>
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***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Consolidation of loose sand or the like round the wells without excessively decreasing the permeability thereof	<a href="#">E21B 43/025</a>
Compositions for plastering the borehole wall	<a href="#">C09K 8/56</a>

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**E21B 33/14****References****Limiting References***This place does not cover:*

Control of cementation quality or level	<a href="#">E21B 47/005</a>
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**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Compositions for cementing	<a href="#">C09K 8/42</a>
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**E21B 37/04****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Operating other tools by fluid pressure	<a href="#">E21B 23/08</a>
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**Special rules of classification**

Looping references between [E21B23/08](#) and [E21B37/04](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: Reference [E21B23/08](#) is non-limiting in the subgroup [E21B37/04](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 37/10****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Pistons in general	<a href="#">F16J 1/00</a>
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**E21B 41/0035**

**References**

***References out of a residual place***

*Examples of places in relation to which this place is residual:*

Cutting casing windows	E21B 29/06
Tool diverters	E21B 23/12

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Whipstocks	E21B 7/061
Specific well pattern	E21B 43/30

**E21B 41/005**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Collecting oil or the like from a submerged leakage	E21B 43/0122
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**E21B 41/0078****References*****Limiting References****This place does not cover:*

Drilling by liquid or gas jets	E21B 7/18
Drill bits with nozzle	E21B 10/60
Perforators using direct fluid action	E21B 43/114
Obtaining a slurry of minerals using nozzles	E21B 43/29

***Informative references****Attention is drawn to the following places, which may be of interest for search:*

Nozzles in general	B05B
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**E21B 41/0085****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Generation of electric power per se	H02
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## E21B 41/02

### References

#### *Limiting References*

*This place does not cover:*

Compositions for in situ inhibition of corrosion in boreholes or wells	<a href="#">C09K 8/54</a>
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#### *References out of a residual place*

*Examples of places in relation to which this place is residual:*

Dump bailer	<a href="#">E21B 27/02</a>
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#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Inhibiting corrosion in general	<a href="#">C23F</a>
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#### **Special rules of classification**

Reference [C23F](#) and [E21B27/02](#) are non-limiting in the main group [E21B41/02](#). CPC will be corrected once this inconsistency is resolved in IPC.

## E21B 43/003

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Vibration generating arrangements for boreholes or wells	<a href="#">E21B 28/00</a>
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**E21B 43/006****References****Limiting References***This place does not cover:*

Enhanced recovery methods for obtaining hydrocarbons using heat with combustion in situ	<a href="#">E21B 43/243</a>
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**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Methods or devices for drawing-off gases for safety purposes in mines	<a href="#">E21F7/00</a>
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**E21B 43/025****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Sealing borehole walls	<a href="#">E21B 33/138</a>
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**E21B 43/08****References****Limiting References***This place does not cover:*

Expandable screens or liners	<a href="#">E21B 43/108</a>
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**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Obtaining drinking water using well filters	<a href="#">E03B 3/18</a>
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**E21B 43/116****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Projectiles with shaped or hollow charge	<a href="#">F42B 12/10</a>
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**E21B 43/1193****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Releasing-joints between rod or the like and bit or between rod and rod or the like	<a href="#">E21B 17/06</a>
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**E21B 43/24****References****Limiting References***This place does not cover:*

Compositions for enhanced recovery methods for obtaining hydrocarbons used in combination with generated heat	<a href="#">C09K 8/592</a>
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**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Heating, cooling or insulating wells	<a href="#">E21B 36/00</a>
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**Special rules of classification**

Looping references between [E21B43/24](#) and [E21B36/00](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in

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CPC is as follows: reference [E21B36/00](#) is non-limiting in the subgroup [E21B43/24](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 43/2403**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Nuclear reactors	<a href="#">G21</a>
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**E21B 43/2635**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Peaceful applications of nuclear explosive devices in general	<a href="#">G21J 3/00</a>
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**E21B 43/281**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

heating, cooling or insulating wells	<a href="#">E21B 36/00</a>
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**E21B 44/10****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Arrangements for automatic stopping for portable percussive tools	<a href="#">B25D 9/265</a>
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**E21B 47/002****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Photographing internal surfaces, e.g. of pipes	<a href="#">G03B 37/005</a>
Closed circuit television systems	<a href="#">H04N 7/18</a>

**E21B47/003****References****Limiting References***This place does not cover:*

Measuring depth of borehole or well	<a href="#">E21B 47/04</a>
Measuring diameter of borehole or well	<a href="#">E21B 47/08</a>

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Measuring volumes in general	<a href="#">G01F</a>
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## **E21B 47/005**

### **Definition statement**

*This place covers:*

Processes or apparatus for tracking or examining the extent or integrity of the plugging or consolidating material.

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Measuring temperature at borehole or well	<a href="#">E21B 47/07</a>
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## **E21B 47/01**

### **Definition statement**

*This place covers:*

Devices for mounting a data collection instrument upon a boring tool, boring tool string or cable-carried tool; Devices for shielding down-hole data collection instruments from damage.

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Flexible or expansible centering means per se	<a href="#">E21B 17/1014</a>
Setting or locking tools in boreholes or wells	<a href="#">E21B 23/00</a>

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## **E21B 47/017**

### **Definition statement**

*This place covers:*

Processes or apparatus for shielding the data collection device against thermal effect, vibration, pressure, debris or the like.

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Cooling or insulating arrangements for boreholes or wells	<a href="#">E21B 36/00</a>
---	----------------------------

## **E21B 47/0175**

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Cooling or insulating arrangements for boreholes or wells	<a href="#">E21B 36/00</a>
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## **E21B 47/02**

### **Definition statement**

*This place covers:*

Processes or apparatus for measuring the inclination or orientation of boreholes or wells.

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Clinometers or direction meters in general	<a href="#">G01C</a>
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**E21B 47/026****Definition statement***This place covers:*

Processes or apparatus for measuring the inclination (i.e. dip) or orientation (i.e. strike) of a drilled stratum, e.g. by using a specially adapted compass (e.g. a Brunton compass).

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Apparatus for obtaining oriented cores	<a href="#">E21B 25/16</a>
Formation testing	<a href="#">E21B 49/00</a>

**E21B 47/04****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Measuring depth in general	<a href="#">G01B 7/26</a>
Measuring liquid level in general and telerecorders for level of liquids	<a href="#">G01F</a>

**E21B 47/06****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Measuring temperature in general; Telerecorders for temperature	<a href="#">G01K</a>
Measuring pressure in general; Telerecorders for pressure	<a href="#">G01L</a>

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**E21B 47/08****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Measuring diameter in general	<a href="#">G01B</a>
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**E21B 47/09****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Measuring depth at borehole or well	<a href="#">E21B 47/04</a>
Measuring borehole or well diameter	<a href="#">E21B 47/08</a>

**E21B 47/092****Definition statement***This place covers:*

Processes or apparatus for determining the whereabouts or position of objects in a borehole or well using magnetic attraction/repulsion force irregularities.

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Investigating materials by investigating magnetic variables	<a href="#">G01N 27/72</a>
---	----------------------------



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**E21B 47/10**

**Definition statement**

*This place covers:*

Processes or apparatus for determining if the pipes are sufficiently fluid-tight to prevent leakage or ingress of liquid or gas.

Processes or apparatus for detecting unwanted fluids flowing from the formation into the borehole.

Processes or apparatus for detecting the presence and properties of production fluids in the borehole.

Processes or apparatus for determining well debit or flow rate.

**References**

**Limiting References**

*This place does not cover:*

Locating or determining the position of objects in boreholes or wells using impression packers	E21B 47/098
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**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Flow measurement in general	G01F
Examining density and leaking in general	G01M

**E21B 47/117**

**References**

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Investigating fluid-tightness of structures by using fluid or vacuum	G01M 3/02
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**E21B 47/12****Definition statement***This place covers:*

Processes or apparatus in which an information or control signal is sent to or from equipment located in the borehole over an information transmission link, for the purpose of measuring while boring.

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Remote signaling in general	G08C
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**E21B 47/125****Definition statement***This place covers:*

Processes or apparatus in which the transmission link is through the ground.

**References****Limiting References***This place does not cover:*

Means for transmitting measuring-signals or control signals from the well to the surface or from the surface to the well by electromagnetic energy	E21B 47/13
--	------------

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Magnetic or electric prospecting	G01V 3/00
Electronic transmission systems in which the earth is the medium	H04B 13/02

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**E21B 47/13****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Magnetic or electric prospecting	G01V 3/00
Electronic transmission in general	H04B

**E21B 47/135****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Light guides, e.g. optical fibres	G02B 6/00
Optical transmission in general	H04B 10/00

**E21B 47/26****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Recording in connection with measuring in general	G01D
Recording seismic data	G01V 1/24
Recording data of measuring magnetic field characteristic of the earth	G01V 3/36
Information storage in general	G11

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**E21B 49/005**

**References**

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Investigating chemical or physical properties of materials per se	<a href="#">G01N</a>
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**E21B 49/006**

**References**

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Investigation of mechanical properties of foundation soil	<a href="#">E02D 1/022</a>
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**E21B 49/008**

**References**

**Limiting References**

*This place does not cover:*

Measuring pressure of boreholes or wells	<a href="#">E21B 47/06</a>
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**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Obtaining fluid samples or testing fluids	<a href="#">E21B 49/08</a>
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**E21B 49/02****References****Limiting References***This place does not cover:*

Apparatus for obtaining undisturbed cores	E21B 25/00
---	------------

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Investigation of foundation soil in situ	E02D 1/00
--	-----------

**Special rules of classification**

Looping references between [E02D1/00](#) and [E21B49/02](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: reference [E02D1/00](#) is non-limiting in the subgroup [E21B49/02](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 49/025****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Underwater coring	E21B 25/18
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**E21B 49/04****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Drilling by use of explosives	E21B 7/007
Gun or shaped charge perforators	E21B 43/116

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**E21B 49/08**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Packers	<a href="#">E21B 33/12</a>
Valve arrangements for boreholes or wells	<a href="#">E21B 34/00</a>
Analysing pressure variations in an injection or production test	<a href="#">E21B 49/008</a>

**E21B 49/0875**

**References**

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Locating fluid leaks, intrusions or movements	<a href="#">E21B 47/10</a>
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## 2. A. DEFINITIONS (modified)

### E21B 1/00

Insert: The following new Relationships with other classification places section.

#### **Relationships with other classification places**

When classifying in groups [E21B1/12](#) - [E21B1/38](#), a symbol from one of the following main groups of [B25D](#) should also be given:

- [B25D9/00](#) Portable percussive tools with fluid-pressure drives
- [B25D11/00](#) Portable percussive tools with motor drive
- [B25D16/00](#) Portable percussive machines with superimposed rotation
- [B25D17/00](#) Details of, or accessories for, portable power-driven percussive tools

#### **References**

##### ***Limiting references***

Replace: The existing text in the Limiting references table so that the table row reads as follows.

Drives for drilling, used in the borehole	<a href="#">E21B 4/00</a>
---	---------------------------

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**E21B 3/00****References**

Insert: The following new Limiting references section.

***Limiting references***

*This place does not cover*

Drives for drilling, used in the borehole	E21B 4/00
---	-----------

Insert: The following new Special rules of classification section.

**Special rules of classification**

Reference [B23B](#) is non-limiting in the main group [E21B3/00](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 6/00****References*****Limiting references***

Replace: The existing text in the Limiting references table so that the table row reads as follows.

Drives for drilling, used in the borehole	E21B 4/00
---	-----------

***Informative references***

Insert: The following new row into the Informative references table:

Portable percussive machines with superimposed rotation	B25D 16/00
---	------------

Insert: The following new Special rules of classification section.

**Special rules of classification**

Reference [B25D16/00](#) is non-limiting in the main group [E21B6/00](#). CPC will be corrected once this inconsistency is resolved in IPC.



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**E21B 7/00**

**References**

Delete: The entire Limiting references section.

***Informative references***

Insert: The following four new rows into the Informative references table.

Rotary or percussion drill bits	E21B 10/00
Derricks or masts	E21B 15/00
Drilling rods or pipes	E21B 17/00
Setting of casings when not simultaneous with drilling of the borehole	E21B 43/10

**E21B 7/04**

Insert: The following new References/Limiting references sections.

**References**

***Limiting references***

*This place does not cover:*

Derricks or masts specially adapted therefor	E21B 15/04
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**E21B 7/20**

**References**

***Limiting references***

Delete: The following row from the Limiting references table.

Pushing means outside of the borehole	E21B 19/08
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Insert: The following new Informative references section.

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Pushing means outside of the borehole	E21B 19/08
---------------------------------------	------------

**E21B 10/00**

**References**

***Limiting references***

Delete: The following two rows from the Limiting references table.

Drill bits for stone or stone-like material	B28D 1/00
Bulkheads, piles specially adapted to foundation engineering	E02D 5/00

***Informative references***

Insert: The following two new rows into the Informative references table.

Drill bits for stone or stone-like material	B28D 1/00
Bulkheads, piles specially adapted to foundation engineering	E02D 5/00

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**E21B 12/00**

**References**

Delete: The entire Limiting references section.

Insert: The following new Informative references section.

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Connecting and disconnecting drill bit and drilling pipe	<a href="#">E21B 19/18</a>
Sharpening stone drill bits	<a href="#">B24B 3/33</a>

**E21B 15/00**

**References**

Delete: The entire Limiting references section.

***Informative references***

Insert: The following two new rows into the Informative references table.

Floating drilling platforms	<a href="#">B63B 35/44</a>
Drilling platforms on legs	<a href="#">E02B 17/00</a>

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**E21B 17/00**

**References**

Delete: The entire Limiting references section.

***Informative references***

Insert: The following five new rows into the Informative references table.

Connecting flow lines to offshore structures	<a href="#">E21B 43/0107</a>
Connecting flow lines to an underwater wellhead	<a href="#">E21B 43/013</a>
Expansible tubulars	<a href="#">E21B 43/103</a>
Pipeline systems	<a href="#">F17D 1/00</a>
Subsea flow lines	<a href="#">F16L 1/00</a>

Insert: The following new Special rules of classification section.

**Special rules of classification**

References [F16D](#) and [F16L](#) are non-limiting in the main group [E21B17/00](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 19/00**

**References**

Delete: The entire Informative references section.

Insert: The following new Limiting references section.

***Limiting references***

*This place does not cover:*

Surface percussion drives	<a href="#">E21B 1/02</a>
Surface rotary drives	<a href="#">E21B 3/02</a>

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**E21B 19/002**

Insert: The following new References/Limiting references/Informative references sections.

**References**

***Limiting references***

*This place does not cover:*

Apparatus specially adapted for drilling underwater for feeding the rods or cables, increasing or decreasing the pressure on the drilling tool or counterbalancing the weight of the rods	E21B 19/09
Racks, ramps, troughs or bins, for holding the lengths of rod singly or connected, specially adapted for drilling	E21B 19/143

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Risers with buoyancy elements	E21B 17/012, E21B 17/015
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**E21B 19/02**

Insert: The following new References/Informative references and Special rules of classification sections.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Load-engaging elements for hoisting or lowering purposes in general	B66C 1/00
Crown blocks or pulley blocks	B66D
Cable guides	B66D 1/36

**Special rules of classification**

References B66C1/00, B66D and B66D1/36 are non-limiting in the subgroup E21B19/02. CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 19/08**

Insert: The following new References/Limiting references/Informative references and Special rules of classification sections.

**References****Limiting references**

*This place does not cover:*

Handling reeled pipe or rod units	E21B 19/22
Automatic control of the tool feed	E21B 44/02

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Hoisting drums in general	B66D
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### Special rules of classification

Reference [B66D](#) is non-limiting in the subgroup [E21B19/08](#). CPC will be corrected once this inconsistency is resolved in IPC.

## E21B 19/09

Insert: The following new References/Limiting references/Informative references and Special rules of classification sections.

### References

#### Limiting references

*This place does not cover:*

Heave compensators for supporting a riser	<a href="#">E21B 19/006</a>
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#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Drilling-pipe telescoping joints	<a href="#">E21B 17/07</a>
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### Special rules of classification

Looping references between [E21B17/07](#) and [E21B19/09](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: reference [E21B17/07](#) is non-limiting in the subgroup [E21B19/09](#). CPC will be corrected once this inconsistency is resolved in IPC.

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**E21B 19/14**

Insert: The following new References/Limiting references/Informative references and Special rules of classification sections.

**References*****Limiting references***

*This place does not cover:*

Combined feeding from rack and connecting	E21B 19/20
Handling reeled pipe or rod units	E21B 19/22

***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Storing elongated articles in general	B65G 1/0442
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**E21B 19/16**

Insert: The following new References/Limiting references/Informative references and Special rules of classification sections.

**References*****Limiting references***

*This place does not cover:*

Combined feeding from rack and connecting	E21B 19/20
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***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Pipe wrenches or the like in general	B25B
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**Special rules of classification**



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Reference [B25B](#) is non-limiting in the subgroup [E21B19/16](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 21/00**

**References**

***Limiting references***

Delete: The following three rows from the Limiting references table.

Cementing	E21B 33/13
Enhanced recovery methods	E21B 43/16
Fracturing formations	E21B 43/26

***Informative references***

Insert: The following three new rows into the Informative references table.

Cementing	<a href="#">E21B 33/13</a>
Enhanced recovery methods	<a href="#">E21B 43/16</a>
Fracturing formations	<a href="#">E21B 43/26</a>

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**E21B 25/00**

**References**

**Limiting references**

Delete: The following row from the Limiting references table.

Core bits	E21B 10/02
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Insert: The following Informative references and Special rules of classification sections.

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Core bits	E21B 10/02
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**Special rules of classification**

Looping references between [E21B10/02](#) and [E21B25/00](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: reference [E21B10/02](#) is non-limiting in the main group [E21B25/00](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 29/00**

**References**

**Limiting references**

Replace: The existing Limiting references table with the following new table.

Perforators	E21B 43/11
Reconditioning of well casings while in the ground by enlarging drilled holes or counterboring	E21B 7/28

Insert: The following new Informative references section.

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

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Shear-type blow-out preventers	<a href="#">E21B 33/063</a>
Expanding tubulars	<a href="#">E21B 43/103</a>

**E21B 31/00**

**References**

**Limiting references**

Delete: The following row from the Limiting references table.

Fishing for or freeing objects in boreholes or wells using junk baskets or the like	<a href="#">E21B 27/00</a>
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**E21B 33/12**

Insert: The following References/Limiting references/Application-oriented references sections.

**References**

**Limiting references**

*This place does not cover:*

Bridging plugs for cementing	<a href="#">E21B 33/134</a>
Using plugs for isolating cement charge	<a href="#">E21B 33/16</a>

**Application-oriented references**

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Locking packers or plugs in landing nipples	<a href="#">E21B 23/02</a>
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**E21B 33/13**

Insert: The following References/Limiting references/Informative references sections.

**References****Limiting references**

*This place does not cover:*

Dump bailers	<a href="#">E21B 27/02</a>
Chemical compositions therefor	<a href="#">C09K 8/00</a>

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Methods or apparatus for grouting offshore structures	<a href="#">E02B 17/0008</a>
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**E21B 34/00****Limiting references**

Delete: The following row from the Limiting references table.

Tool diverters	<a href="#">E21B 23/002</a>
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**Informative references**

Insert: The following new row into the Informative references.

Tool diverters	<a href="#">E21B 23/12</a>
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Insert: The following new Special rules of classification.

**Special rules of classification**

Reference [F16K](#) is non-limiting in the main group [E21B34/00](#). CPC will be corrected once this inconsistency is resolved in IPC.

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**E21B 35/00****References**Insert: The following new Limiting references section.***Limiting references****This place does not cover:*

Cutting or deforming pipes to control fluid flow	<a href="#">E21B 29/08</a>
Controlling flow of fluid to or in wells	<a href="#">E21B 43/12</a>

***Informative references***Delete: The following two rows from the Informative references table.

Cutting or deforming pipes to control fluid flow	E21B 29/08
Controlling flow of fluid to or in wells	E21B 43/12

Insert: The following new Special rules of classification section.**Special rules of classification**References [A62C](#) and [A62D](#) are non-limiting in the main group [E21B35/00](#). CPC will be corrected once this inconsistency is resolved in IPC.**E21B 37/00****References*****Limiting references***Delete: The following two rows from the Limiting references table.

Inhibition of corrosion	E21B 41/02
Cleaning pipes in general	B08B 9/02

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Insert: The following new Informative references and Special rules of classification sections.

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Inhibition of corrosion	<a href="#">E21B 41/02</a>
Cleaning pipes in general	<a href="#">B08B 9/02</a>

### **Special rules of classification**

Looping references between [E21B37/00](#) and [B08B9/02](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: reference [B08B9/02](#) is non-limiting in the main group [E21B37/00](#). CPC will be corrected once this inconsistency is resolved in IPC.

## **E21B 40/00**

### **References**

#### **Limiting references**

Delete: The following row from the Limiting references table.

Slips, spiders	<a href="#">E21B 19/10</a>
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Insert: The following new Informative references section.

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Slips, spiders	<a href="#">E21B 19/10</a>
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## E21B 41/00

### Definition statement

Replace: The existing Definition statement text with the following bulleted text.

- Equipment as specified in the subgroups of [E21B41/00](#).
- Equipment specifically adapted for use in earth drilling and not covered by other groups of [E21B](#) or by the subgroups of [E21B41/00](#).
- Timers and actuators.

## E21B 43/00

### References

#### *Limiting references*

Delete: The following row from the Limiting references table.

Survey of wellbore pump systems	E21B 47/0007
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#### *Informative references*

Insert: The following new row into the Informative references table.

Survey of wellbore pump systems	<a href="#">E21B 47/008</a>
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### Special rules of classification

Insert: The following new text into the Special rules of classification section as a second paragraph.

Reference [F04](#) is non-limiting in the main group [E21B43/00](#). CPC will be corrected once this inconsistency is resolved in IPC.

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**E21B 43/01**

Insert: The following new References/Limiting references sections.

**References**

***Limiting references:***

*This place does not cover:*

Underwater well heads	E21B 33/035
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**E21B 43/02**

**Definition statement**

Replace: The existing Definition statement text with the following new text.

- Subsoil filtering;
- Production screens and gravelling.

Insert: The following new References/Limiting references sections.

**References**

***Limiting references:***

*This place does not cover:*

Perforators; Permeators	E21B 43/11
Chemical compositions for consolidating loose sand or the like around wells	C09K 8/56



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**E21B 43/10**

Insert: The following References/Limiting references/Informative references/Special rules of classification sections.

**References****Limiting references**

*This place does not cover:*

Driving or forcing casings into boreholes, simultaneously drilling and casing boreholes	E21B 7/20
Suspending casings in well heads	E21B 33/04

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Setting of tools, packers or the like	E21B 23/00
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**Special rules of classification**

Looping references between [E21B23/00](#) and [E21B43/10](#) have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: reference [E21B23/00](#) is non-limiting in the subgroup [E21B43/10](#). CPC will be corrected once this inconsistency is resolved in IPC.

**E21B 43/12**

Insert: The following References/Limiting references/Informative references/Special rules of classification sections.

**References****Limiting references**

*This place does not cover:*

Methods for stimulating production	E21B 43/25
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**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

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Valve arrangements for boreholes or wells	E21B 34/00
---	------------

### Special rules of classification

Looping references between E21B34/00 and E21B43/12 have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: reference E21B34/00 is non-limiting in the subgroup E21B43/12. CPC will be corrected once this inconsistency is resolved in IPC.

### E21B 43/16

Insert: The following References/Limiting references sections.

#### References

#### Limiting references

*This place does not cover:*

Fracturing	E21B 43/26
Obtaining slurry	E21B 43/29
Reclamation of contaminated soil in situ	B09C
Chemical compositions therefor	C09K 8/58

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**E21B 43/25**Insert: The following References/Limiting references sections.**References*****Limiting references****This place does not cover:*

Dump bailers	E21B 27/02
Vibration generating arrangements	E21B 28/00
Methods for stimulating production by vibrating earth formations	E21B 43/003
Chemical compositions therefor	C09K 8/60

**E21B 43/28**Insert: The following References/Limiting references/Informative references sections.**References*****Limiting references****This place does not cover:*

Enhanced recovery methods for obtaining hydrocarbons using heat combined with solution mining of non-hydrocarbon minerals	E21B 43/241
---	-------------

***Informative references****Attention is drawn to the following places, which may be of interest for search:*

Using steerable or laterally extendable nozzles	E21B 43/292
---	-------------

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**E21B 43/295**

Insert: The following new References/Limiting references sections.

**References**

***Limiting references***

*This place does not cover:*

Enhanced recovery methods for obtaining hydrocarbons using heat, the combustion being in situ	<a href="#">E21B 43/243</a>
---	-----------------------------

**E21B 44/00**

Delete: The entire Special rules of classification section.

**E21B 47/00**

**Definition statement**

Insert:      Bullet points into the existing Definition statement text so that it reads as follows.

- Sensors or devices for obtaining data relative to the wellbore itself.
- Means for sending information from the well to the surface or from the surface into the well.

**References**

**Limiting references**

Delete:      The following row from the Limiting references table.

Testing of formations and obtaining samples of fluids or of borehole walls	E21B 49/00
--	------------

**Informative references**

Insert:      The following new row into the Informative references table.

Testing of formations and obtaining samples of fluids or of borehole walls	<a href="#">E21B 49/00</a>
--	----------------------------

Insert:      The following new Glossary of terms section.

**Glossary of terms**

*In this place, the following terms or expressions are used with the meaning indicated:*

Borehole	An unlined shaft drilled into the ground, typically for the purposes of extracting water, crude oil or natural gas. This is often referred to as the wellbore.
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**E21B 49/00**

Insert: The following new Special rules of classification section.

**Special rules of classification**

Reference [G01N1/00](#) is non-limiting in the main group [E21B49/00](#). CPC will be corrected once this inconsistency is resolved in IPC.

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3. REVISION CONCORDANCE LIST (RCL)

<b>Type*</b>	<b>From CPC Symbol (existing)</b>	<b>To CPC Symbol(s)</b>
C	E21B 1/00	E21B 1/00, E21B 1/12, E21B 1/14, E21B 1/16, E21B 1/18, E21B 1/20, E21B 1/22, E21B 1/24, E21B 1/26, E21B 1/28, E21B 1/30, E21B 1/32, E21B 1/34, E21B 1/36, E21B 1/38
C	E21B 1/02	E21B 1/02, E21B1/04, E21B 1/36, E21B 1/38
Q	E21B 1/12	E21B 1/02, E21B 1/04, E21B 1/12, E21B 1/14, E21B 1/16, E21B 1/18, E21B 1/20, E21B 1/22, E21B 1/24, E21B 1/26, E21B 1/28, E21B 1/30, E21B 1/32, E21B 1/34, E21B 1/36, E21B 1/38
C	E21B 3/00	E21B 3/00, E21B 3/02, E21B 3/022, E21B 3/025, E21B 3/03, E21B 3/035, E21B 3/04, E21B 3/045, E21B 3/06
C	E21B 3/02	E21B 3/02, E21B 3/022
D	E21B 2003/05	<Administrative transfer to E21B 3/025 INV>
C	E21B 7/26	E21B 7/26, E21B 7/267
C	E21B 7/265	E21B 7/265, E21B 7/267
D	E21B 2010/225	<Administrative transfer to E21B 10/25 INV>
D	E21B 2010/243	<Administrative transfer to E21B 10/23 INV>
C	E21B 10/26	E21B 10/26, E21B 10/265
C	E21B 10/28	E21B 10/28, E21B 10/265
C	E21B 10/30	E21B 10/30, E21B 10/265
C	E21B 10/32	E21B 10/32, E21B 10/265
C	E21B 10/322	E21B 10/322, E21B 10/265
C	E21B 10/325	E21B 10/325, E21B 10/265
C	E21B 10/327	E21B 10/327, E21B 10/265
C	E21B 10/34	E21B 10/34, E21B 10/265
C	E21B 10/345	E21B 10/345, E21B 10/265
C	E21B 10/42	E21B 10/42, E21B 10/62, E21B 10/627, E21B 10/633
D	E21B 2010/425	<Administrative transfer to E21B 10/43 INV>
C	E21B 10/43	E21B 10/43, E21B 10/62, E21B 10/627, E21B 10/633
D	E21B 2010/545	<Administrative transfer to E21B 10/55 INV>
D	E21B 2010/561	<administrative transfer to E21B 10/567 INV>
D	E21B 2010/562	<administrative transfer to E21B 10/5673 INV>
D	E21B 2010/563	<administrative transfer to E21B 10/5676 INV>
D	E21B 2010/564	<administrative transfer to E21B 10/573 INV>
D	E21B 2010/565	<administrative transfer to E21B 10/5735 INV>
D	E21B 2010/566	<administrative transfer to E21B 10/5671 INV>
C	E21B 10/567	E21B 10/567, E21B 10/5671
C	E21B 10/5673	E21B 10/5673, E21B 10/5671
D	E21B 2010/607	<administrative transfer to E21B 10/61 INV>
D	E21B 2010/622	<administrative transfer to E21B 10/627 INV>
D	E21B 2010/624	<administrative transfer to E21B 10/633 INV>
C	E21B 11/00	E21B 11/00, E21B 11/04
C	E21B 11/005	E21B 11/005, E21B 7/028
C	E21B 17/02	E21B 17/02, E21B 17/041
C	E21B 17/028	E21B 17/028, E21B 17/0283, E21B 17/0285
C	E21B 17/04	E21B 17/04, E21B 17/041
C	E21B 17/046	E21B 17/046, E21B 17/0465
C	E21B 17/085	E21B 17/085, E21B 17/0853
C	E21B 19/08	E21B 19/08, E21B 19/081, E21B 19/083, E21B 19/084, E21B 19/086, E21B 19/087, E21B 19/089, E21B 19/09

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<b>Type*</b>	<b>From CPC Symbol (existing)</b>	<b>To CPC Symbol(s)</b>
C	E21B 19/10	E21B 19/10, E21B 19/102
C	E21B 21/00	E21B 21/00, E21B 21/001, E21B 21/002, E21B 21/003, E21B 21/01, E21B 21/012, E21B 21/015, E21B 21/019, E21B 21/02, E21B 21/06, E21B 21/062, E21B 21/063, E21B 21/065, E21B 21/066, E21B 21/067, E21B 21/068, E21B 21/07, E21B 21/08, E21B 21/082, E21B 21/085, E21B 21/10, E21B 21/103, E21B 21/106, E21B 21/12, E21B 21/14, E21B 21/16, E21B 21/18
C	E21B 21/001	E21B 21/001, E21B 21/082
D	E21B 2021/005	<administrative transfer to E21B 21/16 INV>
D	E21B 2021/006	<administrative transfer to E21B 21/085 INV>
D	E21B 2021/007	<administrative transfer to E21B 21/01 INV>
D	E21B 2021/008	<administrative transfer to E21B 21/015 INV>
C	E21B 21/01	E21B 21/01, E21B 21/019
C	E21B 21/015	E21B 21/015, E21B 21/019
D	E21B 2021/061	<administrative transfer to E21B 21/07 INV>
C	E21B 21/08	E21B 21/08, E21B 21/082, E21B 21/085
D	E21B 23/002	<administrative transfer to E21B 23/12>
D	E21B 2023/008	<administrative transfer to E21B 23/001 INV>
C	E21B 23/03	E21B 23/03, E21B 23/12
C	E21B 23/04	E21B 23/04, E21B 23/0411, E21B 23/04115, E21B 23/0412, E21B 23/0413, E21B 23/0414, E21B 23/0415, E21B 23/0416, E21B 23/0417, E21B 23/0418, E21B 23/0419, E21B 23/042, E21B 23/0421, E21B 23/0422, E21B 23/0423, E21B 34/142
C	E21B 27/00	E21B 27/00, E21B 11/04, E21B 31/08
C	E21B 31/00	E21B 31/00, E21B 31/08
C	E21B 31/03	E21B 31/03, E21B 31/035
C	E21B 33/00	E21B 33/00, E21B 2200/00, E21B 2200/01, E21B 2200/02, E21B 2200/03, E21B 2200/04, E21B 2200/05, E21B 2200/06, E21B 2200/08, E21B 2200/09, E21B 2200/20, E21B 2200/22
D	E21B 2033/005	<administrative transfer to E21B 2200/01>
C	E21B 33/035	E21B 33/035, E21B 33/0353, E21B 33/0387
C	E21B 33/0355	E21B 33/0355, E21B 33/0353
C	E21B 33/037	E21B 33/037, E21B 33/0353
C	E21B 33/0375	E21B 33/0375, E21B 33/0353
C	E21B 33/038	E21B 33/038, E21B 33/0353
C	E21B 33/0385	E21B 33/0385, E21B 33/0353
C	E21B 33/0422	E21B 33/0422, E21B 33/0353
D	E21B 2033/105	<administrative transfer to E21B 41/0042 INV>
C	E21B 33/16	E21B 33/16, E21B 33/165, E21B 33/167
D	E21B 2034/002	<administrative transfer to E21B 2200/04>
D	E21B 2034/005	<administrative transfer to E21B 2200/05>
D	E21B 2034/007	<administrative transfer to E21B 2200/06>
C	E21B 34/02	E21B 34/02, E21B 34/025
C	E21B 34/04	E21B 34/04, E21B 34/025
C	E21B 34/045	E21B 34/045, E21B 34/025
C	E21B 34/14	E21B 34/14, E21B 34/142
C	E21B 40/00	E21B 40/00, E21B 40/001
C	E21B 41/00	E21B 41/00, E21B 41/0099
D	E21B 2041/0028	<administrative transfer to E21B 2200/22>
F	E21B 41/0092	E21B 41/00, E21B 43/00, E21B 43/16, G06Q 10/06



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<b>Type*</b>	<b>From CPC Symbol (existing)</b>	<b>To CPC Symbol(s)</b>
D	E21B 2043/0115	<administrative transfer to E21B 41/0099 INV>
C	E21B 43/017	E21B 43/017, E21B 43/0175
C	E21B 43/119	E21B 43/119, E21B 43/1193
C	E21B 43/121	E21B 43/121, E21B 43/13
C	E21B 43/122	E21B 43/122, E21B 43/13
C	E21B 43/123	E21B 43/123, E21B 43/1235, E21B 43/13
C	E21B 43/124	E21B 43/124, E21B 43/13
D	E21B 2043/125	<administrative transfer to E21B 43/127 INV>
C	E21B 43/126	E21B 43/126, E21B 43/13
C	E21B 43/127	E21B 43/127, E21B 43/13
C	E21B 43/128	E21B 43/128, E21B 43/13
C	E21B 43/129	E21B 43/129, E21B 43/13
C	E21B 43/26	E21B 43/26, E21B 43/2605, E21B 43/2607, E21B 43/27
C	E21B 43/34	E21B 43/34, E21B 43/35
C	E21B 43/36	E21B 43/36, E21B 43/35
C	E21B 43/38	E21B 43/38, E21B 43/35
C	E21B 43/385	E21B 43/385, E21B 43/35
C	E21B 43/40	E21B 43/40, E21B 43/35
C	E21B 47/00	E21B 47/00, E21B 47/006
D	E21B 47/0001	<Administrative transfer to E21B 47/001>
D	E21B 47/0002	<Administrative transfer to E21B 47/002>
D	E21B 47/0003	<Administrative transfer to E21B 47/003>
D	E21B 47/0005	<Administrative transfer to E21B 47/005>
D	E21B 47/0006	<Administrative transfer to E21B 47/007>
D	E21B 47/0007	<Administrative transfer to E21B 47/008>
D	E21B 47/0008	<Administrative transfer to E21B 47/009>
Q	E21B 47/002	E21B 47/002, E21B 47/0025
C	E21B 47/01	E21B 47/01, E21B 47/013
D	E21B 47/011	<Administrative transfer to E21B 47/017>
Q	E21B 47/017	E21B 47/017, E21B 47/013, E21B 47/0175
D	E21B 47/02208	<Administrative transfer to E21B 47/0224>
D	E21B 47/02216	<Administrative transfer to E21B 47/0228>
D	E21B 47/02224	<Administrative transfer to E21B 47/0232>
D	E21B 47/02232	<Administrative transfer to E21B 47/0236>
D	E21B 47/042	<Administrative transfer to E21B 47/047>
D	E21B 47/044	<Administrative transfer to E21B 47/053>
D	E21B 47/065	<Administrative transfer to E21B 47/07>
D	E21B 47/082	<Administrative transfer to E21B 47/085>
D	E21B 47/0905	<Administrative transfer to E21B 47/092>
D	E21B 47/091	<Administrative transfer to E21B 47/095>
D	E21B 47/0915	<Administrative transfer to E21B 47/098>
C	E21B 47/10	E21B 47/10, E21B 47/113, E21B 47/114
D	E21B 47/1005	<Administrative transfer to E21B 47/103>
D	E21B 47/101	<Administrative transfer to E21B 47/107>
D	E21B 47/1015	<Administrative transfer to E21B 47/11>
D	E21B 47/102	<Administrative transfer to E21B 47/113>
D	E21B 47/1025	<Administrative transfer to E21B 47/117>
Q	E21B 47/11	E21B 47/11, E21B 47/111
Q	E21B 47/113	E21B 47/113, E21B 47/114
C	E21B 47/12	E21B 47/12, E21B 47/138

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<b>Type*</b>	<b>From CPC Symbol (existing)</b>	<b>To CPC Symbol(s)</b>
D	E21B 47/121	<Administrative transfer to E21B 47/125>
D	E21B 47/122	<Administrative transfer to E21B 47/13>
D	E21B 47/123	<Administrative transfer to E21B 47/135>
D	E21B 47/124	<Administrative transfer to E21B 47/26>
D	E21B 47/182	<Administrative transfer to E21B 47/20>
D	E21B 47/185	<Administrative transfer to E21B 47/22>
D	E21B 47/187	<Administrative transfer to E21B 47/24>
C	E21B 49/081	E21B 49/081, E21B 49/0813, E21B 49/0815
C	E21B 49/083	E21B 49/083, E21B 49/0813, E21B 49/0815
D	E21B 2049/085	<administrative transfer to E21B 49/0875 INV>
C	E21B 49/087	E21B 49/087, E21B 49/0875
D	E21C 1/00	<Administrative transfer to E21B 3/00>
D	E21C 1/10	<Administrative transfer to E21B 19/08>
D	E21C 3/00	<Administrative transfer to E21B 1/00>
D	E21C 3/02	<Administrative transfer to E21B 1/36>
D	E21C 3/04	<Administrative transfer to E21B 1/38>
D	E21C 3/06	<Administrative transfer to E21B 1/12>
D	E21C 3/16	<Administrative transfer to E21B 1/22>
D	E21C 3/18	<Administrative transfer to E21B 1/34>
D	E21C 3/24	<Administrative transfer to E21B 1/30>
D	E21C 3/26	<Administrative transfer to E21B 1/32>
D	E21C 5/00	<Administrative transfer to E21B 19/08>
D	E21C 5/08	<Administrative transfer to E21B 19/08>
D	E21C 5/10	<Administrative transfer to E21B 19/08>
D	E21C 7/00	<Administrative transfer to E21B 21/011>
D	E21C 7/04	<Administrative transfer to E21B 21/012>
D	E21C 7/08	<Administrative transfer to E21B 21/013>
D	E21C 7/10	<Administrative transfer to E21B 21/0135>
D	E21C 7/12	<Administrative transfer to E21B 21/014>
D	E21C 11/00	<Administrative transfer to E21B 15/006>
D	E21C 43/00	<Administrative transfer to E21B 43/295>

\* C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed.

## NOTES:

- Only C, D, F, and Q type entries are included in the table above.
- When multiple symbols are included in the “To” column, do not use ranges of symbols.
- For administrative transfer of documents, the following text should be used: “< administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“To”) symbol, however it is required to specify “<no transfer>” in the “To” column for such cases.
- RCL is not needed for finalisation projects.

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4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

<b><u>CPC</u></b>	<b><u>IPC</u></b>	<b><u>Action*</u></b>
E21B 1/12	E21B 1/12	NEW
E21B 1/14	E21B 1/14	NEW
E21B 1/16	E21B 1/16	NEW
E21B 1/18	E21B 1/18	NEW
E21B 1/20	E21B 1/20	NEW
E21B 1/22	E21B 1/22	NEW
E21B 1/24	E21B 1/24	NEW
E21B 1/26	E21B 1/26	NEW
E21B 1/28	E21B 1/28	NEW
E21B 1/30	E21B 1/30	NEW
E21B 1/32	E21B 1/32	NEW
E21B 1/34	E21B 1/34	NEW
E21B 1/36	E21B 1/36	NEW
E21B 1/38	E21B 1/38	NEW
E21B 3/022	E21B 3/02	NEW
E21B 2003/05		DELETE
E21B 7/267	E21B 7/26	NEW
E21B 2010/225		DELETE
E21B 2010/243		DELETE
E21B 10/265	E21B 10/26	NEW
E21B 2010/425		DELETE
E21B 2010/545		DELETE
E21B 2010/561		DELETE
E21B 2010/562		DELETE
E21B 2010/563		DELETE
E21B 2010/564		DELETE
E21B 2010/565		DELETE
E21B 2010/566		DELETE
E21B 10/5671	E21B 10/567	NEW
E21B 2010/607		DELETE
E21B 2010/622		DELETE
E21B 2010/624		DELETE
E21B 11/04	E21B 11/04	NEW
E21B 17/0283	E21B 17/02	NEW
E21B 17/0285	E21B 17/02	NEW
E21B 17/041	E21B 17/04	NEW
E21B 17/0465	E21B 17/046	NEW
E21B 17/0853	E21B 17/08	NEW
E21B 19/102	E21B 19/10	NEW
E21B 2021/005		DELETE
E21B 2021/006		DELETE
E21B 2021/007		DELETE

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<b><u>CPC</u></b>	<b><u>IPC</u></b>	<b><u>Action*</u></b>
E21B 2021/008		DELETE
E21B 21/011	E21B 21/01	NEW
E21B 21/013	E21B 21/01	NEW
E21B 21/0135	E21B 21/01	NEW
E21B 21/014	E21B 21/01	NEW
E21B 21/019	E21B 21/01	NEW
E21B 2021/061		DELETE
E21B 21/082	E21B 21/08	NEW
E21B 21/085	E21B 21/08	NEW
E21B 23/001	E21B 23/00	NEW
E21B 23/002		DELETE
E21B 2023/008		DELETE
E21B 23/0411	E21B 23/04	NEW
E21B 23/04115	E21B 23/04	NEW
E21B 23/0412	E21B 23/04	NEW
E21B 23/0413	E21B 23/04	NEW
E21B 23/0414	E21B 23/04	NEW
E21B 23/0415	E21B 23/04	NEW
E21B 23/0416	E21B 23/04	NEW
E21B 23/0417	E21B 23/04	NEW
E21B 23/0418	E21B 23/04	NEW
E21B 23/0419	E21B 23/04	NEW
E21B 23/042	E21B 23/04	NEW
E21B 23/0421	E21B 23/04	NEW
E21B 23/0422	E21B 23/04	NEW
E21B 23/0423	E21B 23/04	NEW
E21B 23/12	E21B 23/12	NEW
E21B 31/035	E21B 31/00	NEW
E21B 31/08	E21B 31/08	NEW
E21B 2033/005		DELETE
E21B 33/0353	E21B 33/035	NEW
E21B 33/0387	E21B 33/035	NEW
E21B 2033/105		DELETE
E21B 33/165	E21B 33/16	NEW
E21B 33/167	E21B 33/16	NEW
E21B 2034/002		DELETE
E21B 2034/005		DELETE
E21B 2034/007		DELETE
E21B 34/025	E21B 34/02	NEW
E21B 34/142	E21B 34/14	NEW
E21B 40/001	E21B 40/00	NEW
E21B 2041/0028		DELETE
E21B 41/0099	E21B 41/00	NEW
E21B 2043/0115		DELETE
E21B 43/0175	E21B 43/017	NEW

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E21B 43/1193	E21B 43/119	NEW
E21B 43/1235	E21B 43/12	NEW
E21B 2043/125		DELETE
E21B 43/13	E21B 43/12	NEW
E21B 43/2605	E21B 43/26	NEW
E21B 43/2607	E21B 43/26	NEW
E21B 43/27	E21B 43/27	NEW
E21B 43/35	E21B 43/34	NEW
E21B 47/0001		DELETE
E21B 47/0002		DELETE
E21B 47/0003		DELETE
E21B 47/0005		DELETE
E21B 47/0006		DELETE
E21B 47/0007		DELETE
E21B 47/0008		DELETE
E21B 47/001	E21B 47/001	NEW
E21B 47/002	E21B 47/002	NEW
E21B 47/0025	E21B 47/002	NEW
E21B 47/003	E21B 47/003	NEW
E21B 47/005	E21B 47/005	NEW
E21B 47/006	E21B 47/00	NEW
E21B 47/007	E21B 47/007	NEW
E21B 47/008	E21B 47/008	NEW
E21B 47/009	E21B 47/009	NEW
E21B 47/011		DELETE
E21B 47/013	E21B 47/013	NEW
E21B 47/017	E21B 47/017	NEW
E21B 47/0175	E21B 47/017	NEW
E21B 47/02208		DELETE
E21B 47/02216		DELETE
E21B 47/02224		DELETE
E21B 47/02232		DELETE
E21B 47/0224	E21B 47/0224	NEW
E21B 47/0228	E21B 47/0228	NEW
E21B 47/0232	E21B 47/0232	NEW
E21B 47/0236	E21B 47/0236	NEW
E21B 47/042		DELETE
E21B 47/044		DELETE
E21B 47/047	E21B 47/047	NEW
E21B 47/053	E21B 47/053	NEW
E21B 47/065		DELETE
E21B 47/07	E21B 47/07	NEW
E21B 47/082		DELETE
E21B 47/085	E21B 47/085	NEW
E21B 47/0905		DELETE

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<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
E21B 47/091		DELETE
E21B 47/0915		DELETE
E21B 47/092	E21B 47/092	NEW
E21B 47/095	E21B 47/095	NEW
E21B 47/098	E21B 47/098	NEW
E21B 47/1005		DELETE
E21B 47/101		DELETE
E21B 47/1015		DELETE
E21B 47/102		DELETE
E21B 47/1025		DELETE
E21B 47/103	E21B 47/103	NEW
E21B 47/107	E21B 47/107	NEW
E21B 47/11	E21B 47/11	NEW
E21B 47/111	E21B 47/11	NEW
E21B 47/113	E21B 47/113	NEW
E21B 47/114	E21B 47/113	NEW
E21B 47/117	E21B 47/117	NEW
E21B 47/121		DELETE
E21B 47/122		DELETE
E21B 47/123		DELETE
E21B 47/124		DELETE
E21B 47/125	E21B 47/125	NEW
E21B 47/13	E21B 47/13	NEW
E21B 47/135	E21B 47/135	NEW
E21B 47/138	E21B 47/12	NEW
E21B 47/182		DELETE
E21B 47/185		DELETE
E21B 47/187		DELETE
E21B 47/20	E21B 47/20	NEW
E21B 47/22	E21B 47/22	NEW
E21B 47/24	E21B 47/24	NEW
E21B 47/26	E21B 47/26	NEW
E21B 49/0813	E21B 49/08	NEW
E21B 49/0815	E21B 49/08	NEW
E21B 2049/085		DELETE
E21B 49/0875	E21B 49/08	NEW
E21B 2200/00	CPCONLY	NEW
E21B 2200/01	CPCONLY	NEW
E21B 2200/02	CPCONLY	NEW
E21B 2200/03	CPCONLY	NEW
E21B 2200/04	CPCONLY	NEW
E21B 2200/05	CPCONLY	NEW
E21B 2200/06	CPCONLY	NEW
E21B 2200/08	CPCONLY	NEW
E21B 2200/09	CPCONLY	NEW

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<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
E21B 2200/20	CPCONLY	NEW
E21B 2200/22	CPCONLY	NEW
E21C 1/00		DELETE
E21C 1/10		DELETE
E21C 3/00		DELETE
E21C 3/02		DELETE
E21C 3/04		DELETE
E21C 3/06		DELETE
E21C 3/16		DELETE
E21C 3/18		DELETE
E21C 3/24		DELETE
E21C 3/26		DELETE
E21C 5/00		DELETE
E21C 5/08		DELETE
E21C 5/10		DELETE
E21C 7/00		DELETE
E21C 7/04		DELETE
E21C 7/08		DELETE
E21C 7/10		DELETE
E21C 7/12		DELETE
E21C 11/00		DELETE
E21C 43/00		DELETE

\*Action column:

- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with “NEW.”
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with “UPDATED.”
- For a (D) CPC entry or indexing entry complete the Action column with “DELETE.” IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with “NEW”.
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with “CPCONLY” and complete the action column with “NEW”.

NOTES:

- F symbols are not included in the CICL table above.
- T and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.

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5. CROSS-REFERENCE LIST (CRL)

Scheme references impacted by this revision project

<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Action; New reference symbol; New text</u>
B28D1/14	E21C1/00	<u>Replace:</u> The existing symbol with the new symbol <a href="#">E21B 3/00</a> .
E21C35/22	E21C7/00	<u>Replace:</u> The existing reference symbols and text “(removing dust while drilling E21C7/00; picks with arrangement of fluid-spraying nozzles E21C35/187)” with the new reference shown below.  (picks with arrangement of fluid-spraying nozzles <a href="#">E21C35/187</a> ; {removing dust while drilling <a href="#">E21B 21/011</a> })
E21F5/20	E21C7/00	<u>Replace:</u> The existing reference symbol and text “dust-removing while drilling E21C7/00” with the following new reference.  {dust-removing while drilling <a href="#">E21B 21/011</a> }

Definitions references impacted by this revision project

<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Section of definition</u>	<u>Action; New reference symbol; New text</u>
B28D1/00	E21C1/00	Application-oriented references	<u>Replace:</u> The existing table row with the following new text and symbol.  Rotary drilling machines <a href="#">E21B 3/00</a>
G01F17/00	E21B47/0003	Informative references	<u>Replace:</u> The existing symbol with the new symbol <a href="#">E21B 47/003</a> .
G01F23/00	E21B47/042	Informative references	<u>Replace:</u> The existing symbol with the new symbol <a href="#">E21B 47/047</a> .



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<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Section of definition</u>	<u>Action; New reference symbol; New text</u>
G01K11/00	E21B47/065	Application-oriented references	<u>Replace</u> : The existing symbol with the new symbol <a href="#">E21B 47/07</a> .
G02B6/00	E21B47/123	Informative references	<u>Replace</u> : The existing symbol with the new symbol <a href="#">E21B 47/135</a> .

NOTES:

- The CRL tables above are used for changes to locations **outside** of the project scope. Changes to references in scheme titles or definitions **inside** the project scope will be reflected in the “scheme change” template or one of the “definition” templates.
- In addition to other changes proposed in the tables above, in the column titled “Referenced subclass or group to be changed,” **referenced D** symbols should indicate an action of “delete” or should indicate a replacement symbol and **referenced F** symbols should indicate a replacement symbol.
- When a reference is deleted, text related to that reference will also be deleted unless other references or a range of references associated with the same text remain.