METS IGNITED IP MASTERCLASS

OCTIMINE PATENT SEARCH REPORT

A brief summary of the Search Report has been set out in the IP Masterclass presentation.

The brief given for this Search was:

"A rock drilling machine that can be used for reinforcing the rock surfaces of mines by injecting suitable grouting material through the rock drilling machine and the drilling bits"

A more comprehensive Search Report follows.

SEARCH REPORT

Entered Text:

A rock drilling machine that can be used for reinforcing the rock surfaces of mines by injecting suitable grouting material through the rock drilling machine and the drilling bits

Selected Main Areas

Electrical Engineering, Instruments, Chemistry, Mechanical Engineering, Consumer Goods and Other Fields

Note:
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Database Statistics:

Period Covered Since:	11/03/1884	**Last Update:**	01/03/2018
Nr. of Patents Screened:	108.315.992	**Nr. of Patent Families Screened:**	58.275.746

Selected Top 25 Results:

#1	DE4200580A1	Similarity: 726
Title:	Rock-Drilling Bit	
Abstract:	The rock-drilling bit disclosed has cutter assemblies (4) detachably mounted at equal distances apart round the end of the bit (1), a hardmetal alignment spike (6) located in the centre of the end of the bit (1), a shaft (3) round the curved surface of which is spline toothing (16) by means of which the bit (1) can be fitted to a percussion drill (15) operating in the hole, so that it can move longitudinally, and a longitudinal scavenging-air duct (11) through which scavenging air is passed from the rear end (12) of the shaft to the head of the bit (1). In order to ensure a continuous flow of scavenging air, the air duct (11) is connected, by means of at least one radial air-inlet bore (13), to an air space (14) surrounding the rear end (12) of the bit shaft.	
IPC4:	E21B, B28D	
IPC Class:	B28D1/14, E21B, E21B10/38, E21B10/40, E21B10/56, E21B17/07	
Applicants:	HAUSHERR & SOEHNE RUDOLF	
Inventors:	BROEKER BERND, SCHOENEWEISS ROLF, AGRICOLA MICHAEL DIPL	
Priority Date:	1991-09-13	
Publication Date:	1993-03-18	

#2	EP3327247A1	Similarity: 701
Title:	Drilling Device And Method For Rock Drilling	
Abstract:	The invention relates to a drilling apparatus and a method for drilling rock, in particular hard rock, with a drill pipe and at least one first electrode and at least one second electrode between which an electrical voltage is generated, wherein rock material is removed by voltage discharge between the electrodes. According to the invention it is provided that a plurality of first electrodes and a plurality of second electrodes are arranged in pairs to each other and that the plurality of electrode pairs of first electrode and second electrode are arranged annularly along a lower edge of the drill pipe.	
IPC4:	E21B	
IPC Class:	E21B10/02, E21B7/15, E21B25/10	
Applicants:	BAUER MASCH	
Inventors:	BAUER SEBASTIAN	
Priority Date:	2016-11-23	
Publication Date:	2018-05-30	

#3	DE102007006943A1	Similarity: 690
Title:	Cutting Element For A Rock Drill And Method For Producing A Cutting Element For A Rock Drill	
Abstract:	The invention relates to a cutting element for a rock drill and to a method for producing a cutting element for a rock drill.	
IPC4:	C22C, B21K, E21B, B22F, B23B, B28D	
IPC Class:	B28D1/14, E21B10/46, B23B51/00, B22F7/06, B21K5/02, C22C29/08, E21B10/00	
Applicants:	BOSCH ROBERT, KOLJAKA FRANC, LOCKHART ZANE JR	
Inventors:	KOLJAKA FRANC, LOCKHART JR ZANE	
Priority Date:	2007-02-13	
Publication Date:	2008-08-14	

#4	EP2818289A1	Similarity: 687
Title:	Rock drill shaft and method of production thereof	
Abstract:	The invention relates to a rock drill shaft having at the upper end a drill head (2), at the lower end an insertion portion (3) and between a helix (4), wherein the helix (4) is at least two-start and corresponding to at least two Abfuhrnuten (5, 6) and wherein the drill head (2) has an end-side receiving groove (8) for receiving a cutting insert (1 a). It is suggested that at the drill head (2) have followed, the first coil portion (4a) and, further to the insertion portion (3), a second coil portion (4b) are provided, that the average core diameter (d	
IPC4:	B23C, B24B, B28D	
IPC Class:	B28D1/14, B23C3/32, B24B19/04	
Applicants:	HELLER TOOLS	
Inventors:	LAMPE RAINER, THIEL TORSTEN	
Priority Date:	2013-06-25	
Publication Date:	2014-12-31	

#5	AP201609458D0	Similarity: 621

Title: Grouted Rock Support Testing Apparatus And Method

Abstract: The invention relates to apparatus and a method for testing the grout quality around a rock anchor (100) grouted into a drill hole (102). First and second conductors are grouted into the hole with exposed conductive portions supported in known spaced apart. The second conductor is preferably provided by an elongate body (108) of a rock anchor and the first conductor by an insulated wire (12) with an exposed portion at an inner end. An electrical current through the conductors and the resistivity of the grout between the conductors is calculated using a suitably calibrated measuring device (34). The resistivity readings provide an indication of the grout integrity of the anchor installation.

IPC4: G01N27, E02D
IPC Class: G01N27/04, E02D33/00
Applicants: BARNARD ANDRIES JACOBUS
Inventors:
Priority Date: 2014-02-28
Publication Date: 0001-01-01

#6	NO20042426D0	Similarity: 606

Title: Device For A Rock Drilling Machine

Abstract: A device for a rock drilling machine including a drilling head (2) connected via a drill string (4) to a feeding device (6), the drilling head (2) being provided with at least two drill bits (24, 26), at least one of the drill bits (24, 26) rotating at a different speed relative to other drill bits (24, 26).

IPC4: E21B, E21D
IPC Class: E21B7/00, E21B10/26, E21B4/16, E21D, E21B7/00, E21D9/10, E21D9/10
Applicants: SIRA KVINA KRAFTSELSKAP, HAUGHOM PER OLAV
Inventors: HAUGHOM PER OLAV
Priority Date: 2004-06-11
Publication Date: 2004-06-11

#7	FI902279A0	Similarity: 586

Title: Method Of Installing A Rock Bolt And A Rock Bolt

Abstract: Method of installing a rock bolt (1) by means of a two-component or multi-component grout in a drill hole (7), and a rock bolt (1) intended to be secured by means of the method. In order to store grout and to feed it into the drill hole, the bolt (1) comprises for each grout component a storage space (1a, 1b) having substantially the same length as the bolt and being separate from the other grout component spaces (1a, 1b). On installing the rock bolt (1) in the drill hole, it is first inserted into the hole (7), whereafter the grout components are forced out of the rock bolt (1) into a gap between the bolt and the drill hole (7) by introducing pressure fluid into the grout component storage spaces (1a, 1b) so that they flow out of the bolt (1) at substantially equal rate, being thus mixed with each other at the end of the rock bolt (1) so that the grout hardens.

IPC4: E21D
IPC Class: E21D20/02, E21D20/02, E21D21/00, E21D21/00, E21D
Applicants: TAMPELLA AB
Inventors: LEPPAENEN JARMO
Priority Date: 1990-05-07
Publication Date: 1990-05-07

#8	GB9024141D0	Similarity: 564

Title: Additive For A Drilling Fluid

Abstract: Additive for drilling fluid, comprising a composition which is at least dispersible in said drilling fluid at ambient temperatures, and has a solubility in the drilling fluid to drill temperatures that is less than its solubility at said ambient temperatures. When dispersed in water, the composition has a higher affinity than water for the surface of the drilled rock.

IPC4: C09K
IPC Class: C09K7/02, C09K7/02, E21B43/25, E21B33/138, C09K8/24, C09K8/508, C09K8/88
Applicants: MOBIL NORTH SEA
Inventors:
Priority Date: 1990-11-06
Publication Date: 1990-12-19

#9	SE1450188A1	Similarity: 563

Title: Rock Drilling Machine, Method For Rock Drilling And Rock Drill Rig

Abstract: A rock drilling machine (2) which is adapted to intermittently produce shock wave pulses for transfer over a drill string (3) to a rock disintegrating drill bit (6). The rock drilling machine includes: a force setting unit (8) which is arranged to periodically subject the drill string (3) to a setting force in said drilling direction, and a control unit (11) which is arranged to activate the force setting unit to initiate said setting force before a point of time for producing at least a selection of said shock wave pulses in order to ensure enhanced rock contact of the drill bit (6) when performing an impact. The invention also concerns a method and a rock drill rig.

IPC4: E21B, B25D
IPC Class: B25D9/16, E21B44/02, E21B7/02
Applicants: ATLAS COPCO ROCK DRILLS AB
Inventors: LARSSON PER-ERIK, JAKOBSSON ERIK
Priority Date: 2014-02-18
Publication Date: 2015-08-19

#10	EP2826580A1	Similarity: 550

Title: Drill bit with stepped drilling part

Abstract: Axially of elongated drill pin (1) having a step-shaped drilling (D) and an axially viewed behind the drilling area (D) arranged in the fastening region (B) for fastening the drill pin (1) in a Drill holder (2), wherein the fastening region (B) thread (3) or a cross-sectionally polygonal peripheral formation (4), wherein the thread (3) or the polygonal peripheral formation (4) in the assembled state of the drill pin (1) on Drill holder (2) for torque transmission with an on Drill holder (2) complementarily shaped region cooperating (H).

IPC4: B23B, B25B
IPC Class: B23B31/00, B23B51/00, B25B27/18, B23B49/00, B23B31/11
Applicants: WERKZEUG PICHLER
Inventors: JENEWEIN ANDREAS
Priority Date: 2013-07-17
Publication Date: 2015-01-21

#11	KR101500571B1	Similarity: 548

Title: Apparatus And Method For Testing Drilling Efficiency Of Drill Bit

Abstract: An apparatus and a method for testing drilling efficiency of a drill bit, according to the present invention, calculate an amount of fractured rock according to a button arrangement, thereby obtaining an optimum button arrangement.

IPC4: G01M, G01F, E21B, G01N3, G01L

IPC Class: E21B10/36, G01L5/00, E21B12/00, G01N3/303, G01F22/00, E21B10/43, G01M99/00, E21B10/42

Applicants: KOREA IND TECH INST

Inventors: OH JOO YOUNG, LEE JAE WOOK, KIM HYE, CHO JUNG WOO, JEONG MYEONG SIK, PARK JIN YOUNG

Priority Date: 2014-01-03

Publication Date: 2015-03-10

#12	SE0100915D0	Similarity: 547

Title: A Method For Stabilization Of Rock And Soil Masses, And A Rock Bolt For Practicing The Method

Abstract: The invention relates to a method for rock and/or soil reinforcement, comprising drilling of a hole for cement or corresponding grouting material to be injected about a rock bolt that is to be grouted in the hole. The invention suggests a hollow rock bolt to be formed in one end with a male thread and a female thread in the other end; a drill bit formed with a male thread and supported in the female threaded end of the rock bolt; the hole being drilled with the female threaded end of the rock bolt facing the drilling direction, and the rock bolt being anchored by a nut connected in the male threaded end of the rock bolt. An extensible, drilling rock bolt is suggested for carrying out the method, the rock bolt comprising a hollow shank formed with external threads, one end of the rock bolt being formed with a male thread and a female thread being formed in the other end, the female threaded end supporting a drill bit formed with a male thread.

IPC4: E21D

IPC Class: E21D21/00, E21D20/00, E21D21/00, E21D

Applicants: ATLAS COPCO ROCK DRILLS AB, ARVIDSSON THOMAS, SCOLARI FEDERICO

Inventors: ARVIDSSON THOMAS, SCOLARI FEDERICO

Priority Date: 2001-03-15

Publication Date: 2001-03-15

#13	NO20093134A1	Similarity: 545

Title: Rock Drilling Machine

Abstract: A rock drilling machine (1) comprising a drill portion (4) with a drill bit (8) and an associated gear (14) and driving motor (16), a string portion (6) and also pipes and lines (42) for supply of drilling fluid and power, wherein the string portion (6), at a distance from the drill bit (8), is provided with a self-driven reamer (28) with a reamer bit (46), a gear (48) and a driving motor (50).

IPC4: E21B

IPC Class: E21B4/04, E21B7/04, E21B10/26, E21B4/00, E21B7/06

Applicants: NORWEGIAN HARD ROCK DRILLING, KNUTSEN KJELL

Inventors: KNUTSEN KJELL, HAUGHOM SIGURD KJELL

Priority Date: 2009-10-13

Publication Date: 2011-04-14

#14	FI20105185A0	Similarity: 543

Title: Rock Drilling Rig, Method For Rock Drilling, And Control System Of Rock Drilling Rig

Abstract: The invention relates to a rock drilling rig, a method for rock drilling and a control system of a rock drilling rig. The rock drilling rig (1) comprises a drilling unit (6) for drilling drill holes (21) as a drill hole pattern. The location of the drilling unit is determined and the control unit (16) is arranged to control by means of a control member (19), on the basis of the given target position, actuators (19) influencing the position of the drilling unit. Each individual direction of motion of the control member is arranged to influence the target position in relation to only one coordinate or direction angle. Further, the directions of motion of the control member are arranged to be intuitive in relation to the directions of motion of the drilling unit.

IPC4: G06F, E21B, G05G, E21D

IPC Class: E21B7/00, G06F3/14, G06F, E21D9/00, E21B44/00, E21D, E21B7/02, G05G9/047, E21B, G05G, E21D20/00

Applicants: SANDVIK MININGNSTR

Inventors: PUURA JUSSI

Priority Date: 2010-02-25

Publication Date: 2010-02-25

#15 WO1997049896A1 Similarity: 543

Title: Method and arrangement for controlling rock drilling

Abstract: A method and an arrangement for controlling rock drilling on the basis of a pressure acting in a pressure conduit of a rotation motor of a drill rod. In the method, the pressure acting in the pressure fluid conduit of the rotation motor is measured during the rotation when the drill bit does not touch the rock to be drilled, and the control is carried out thereafter on the basis of the difference between the pressure value measured during the drilling and the idle pressure value. In the arrangement, the rock drilling machine comprises a control unit that measures the pressure acting in the pressure fluid conduit of the rotation motor when the drill rod is rotated so that it does not touch the rock to be drilled and stores it in the memory and controls the rock drilling machine during the drilling on the basis of the difference between the pressure value measured during the drilling and the idle pressure.

IPC4: E21C, E21B, B23Q

IPC Class: E21B19/086, E21B19/08, E21B44/06, B23Q5/20, E21C5/16, E21C, E21C5/16, E21B44/00

Applicants: TAMROCKPOEYSTI TAPANIHUHDANMAEKI TAPANI

Inventors: POEYSTI TAPANI, HUHDANMAEKI TAPANI

Priority Date: 1996-06-25

Publication Date: 1997-12-31

#16 DE4101458A1 Similarity: 542

Title: Drilling Bit For A Rock Drill With Axial Pressure And Axial Percussion

Abstract: In the bit proposed, the hard-metal pins (6) set in the face (3) of the bit are inclined at an angle of about 20 towards the direction of motion with respect to the longitudinal axis. The pins (6) are also inclined slightly, by about 5, towards the centre of the bit. This significantly increases the drilling efficiency of the bit for an unchanged drill drive power.

IPC4: E21B

IPC Class: E21B10/56, E21B10/58

Applicants: WOLF THOMAS, KLAUER RAINER

Inventors: KLAUER RAINER

Priority Date: 1991-01-19

Publication Date: 1992-07-23

#17	AT517114A4	Similarity: 540
Title:	Insert For A Drilling Machine	
Abstract:	Insert (1, 2, 3) for a drilling machine (4) comprising: a fastening means (5) for fastening the insert (1, 2, 3) to the drilling machine (4), at least one air duct (6) fixed by fastening the Insert (1, 2, 3) on the drill (4) in fluid communication with at least one air-conveying portion (7) of the drill (4) can be brought and at least one stop (8, 9, 10) for a core (11) or parts a drill core, wherein the at least one air duct (6) is connected to at least one air inlet opening (13), which is aligned obliquely to the longitudinal axis (12) of the insert (1, 2, 3).	
IPC4:	E21B, B23B, B23Q, B28D	
IPC Class:	B23B47/34, B28D1/14, B23B51/04, B23Q11/00, E21B25/00, B28D7/02, B28D1/04, B23B51/12	
Applicants:	TYROLIT -HLEIFMITTELWERKE SWAROVSKI K G	
Inventors:		
Priority Date:	2015-09-17	
Publication Date:	2016-11-15	

#18	EP3222377A1	Similarity: 529
Title:	Drill Bit	
Abstract:	A drill 1 has in a direction of impact 9 successively on a drill axis 6 a face 5, a conveyor section 3 and a drill head 2. The conveyor section 3; 26 is set up for conveying cuttings in the direction of impact 9.	
IPC4:	B23B, B28D	
IPC Class:	B28D1/14, B23B51/02	
Applicants:	HILTI	
Inventors:	LINDNER NORBERT, HARTMANN MARKUS, BRUNNER MICHAEL, KAPS HELENE, HAMMERS THILO	
Priority Date:	2016-03-23	
Publication Date:	2017-09-27	

#19	EP3296046A1	Similarity: 529

Title: DRILL BIT

Abstract: A drill has a spigot, a helix and a drill head. A drill axis 6 passes through the insertion end, the helix and the drill head. The helix has a conveying flank 25, which is inclined relative to the drill axis 6, which faces the drill head and which extends helically about the drill axis 6. The conveying flank 25 has a recess 32 running helically around the drill axis 6.

IPC4: B23B, B28D
IPC Class: B28D1/14, B23B51/02
Applicants: HILTI
Inventors: SCHROEDER FLORIAN, DOMANI GUENTER, PETERS CARSTEN
Priority Date: 2016-09-19
Publication Date: 2018-03-21

#20	EP3296045A1	Similarity: 529

Title: Drill Bit

Abstract: The invention relates to a drill (100) having a drill bit (10) and a shaft (30), between which a force transmission element (20). About the power transmission element introduced to the shaft forces are at least partially transferred to the drill head. The force transmission element has at least one, preferably at least two markers (2, 4) on a radially outwardly facing surface of the force tragungselements, which is visible upon rotation of the force transfer member.

IPC4: B28D, B23B
IPC Class: B23B51/00, B28D1/14, B23B49/00
Applicants: DREBO WERKZEUGFAB
Inventors: STUMPP MARTIN, SCHECK DAVID, EGGERS RAINER, ZUERN ALEXANDER
Priority Date: 2016-09-19
Publication Date: 2018-03-21

#21	EP2832480A1	Similarity: 529

Title: Drill bit

Abstract: The invention comprises a drill having a cutting body (18) made of hard metal, through which extends a drill axis (20). This is firmly anchored via a solder (40) in a body receptacle, wherein between the hard metal plate and the body receiving a soldering gap is formed. The soldering gap (42) changes from a drill axis (20) in the radial direction in its cross section, in particular in its width.

IPC4: E21B, B28D, B23B
IPC Class: E21B10/58, B23B51/00, B28D1/14, E21B10/52
Applicants: DREBO WERKZEUGFAB
Inventors: SUTEJ OLIVER
Priority Date: 2013-07-31
Publication Date: 2015-02-04

#22	EP3235581A1	Similarity: 529

Title: DRILL BIT

Abstract: A drill for the mining of mineral materials has on a longitudinal axis 6 successively a drill head 2, a coil 3, a spigot 4 and a striking surface 7 on a side facing away from the drill head 2 end of the spigot 4 for receiving blows along a direction of impact 8. The drill head 2 has at least two cutting edges 13 and at least two blades 20. The cutting edges 13 each have a rake surface 16 and an open surface 17. The blades 20 are parallel to the longitudinal axis 6 and adjoin the cutting edges 13. The blades 20 each have a radially projecting tooth 24, which adjoins the chip surface 16 and not or only partially adjacent to the free surface 17. An axial dimension 29 of the tooth 24 is less than an axial dimension 25 of the blade 20.

IPC4: B23B, B28D
IPC Class: B28D1/14, B23B51/02
Applicants: HILTI
Inventors: FOSER ROLAND, DOMANI GUENTER, PLUEMACHER BASTIAN
Priority Date: 2016-04-21
Publication Date: 2017-10-25

#23 EP3006748A1 Similarity: 529

Title: Drill Bit

Abstract: A drilling screw (5) with a screw head (10) and a shank (20) which is provided with a thread (22) is characterized in that a drill section (30th) of the shank (5) faces away from the shank (20)), which is provided with a cutting edge (34) and with thread sections (50), and that on the screw head (10) facing away from the end of the drilling portion (30) has a centering syringe (32) is provided.

IPC4: F16B
IPC Class: F16B25/10, F16B25/02, F16B25/00
Applicants: BERNER TRADINGG
Inventors: RUNGE ERICH, LEBSACK BORIS
Priority Date: 2014-10-09
Publication Date: 2016-04-13

#24 EP2845672A1 Similarity: 529

Title: Drill bit

Abstract: The invention relates to a drill with a drill helix (12) in which mutually symmetrical webs (20) extend helically around a core, wherein between the webs grooves (18) remain whose width (72) the back width (24) of the webs (20) and wherein the grooves (18) have at their groove bottom a convex core reinforcement (22). According to the invention, the width (24) of the webs (20) at the drill head end (16) is smaller than at the shaft end (14) of the webs (20) and increases at least in some areas. The core reinforcement (22) at the drill head end (16) is more spherical than at the shaft end (14), so has larger radii (40, 42).

IPC4: E21B, B23B, B28D
IPC Class: B28D1/14, B23B51/02, E21B10/00
Applicants: DREBO WERKZEUGFAB
Inventors: BERG TOBIAS, STUMPP MARTIN, KEHRLE PETER, ZUERN ALEXANDER
Priority Date: 2013-09-06
Publication Date: 2015-03-11

#25 EP0054721A1 Similarity: 528

Title: Drill bit, especially rock drill bit

Abstract: A drill bit is intended for rotary percussion drilling and is to be used as a rock drill bit. It has a shank with a hole drilling head which carries a cutting rim. So that the percussion energy applied to the drill shank is transmitted to the cutting rim as fully as possible, the drill bit is of hole design in the transition area between the shank and the cylindrical wall of the hole drilling head, and an inner wall of this hole drill-bit section forms a hole-cutting- base tapered in the direction of the drill-bit shank. <IMAGE>

IPC4: B23B, E21B, B28D
IPC Class: E21B10/36, B28D1/04, B23B51/04, B28D1/14, E21B10/02, E21B10/36, B28D1/14, E21B10/02, B23B45/16
Applicants: HAWERA PROBST HARTMETALL
Inventors: PEETZ WOLFGANG DIPL-ING, KLAISSLE SIEGFRIED, HAUSSMANN AUGUST
Priority Date: 1980-12-24
Publication Date: 1982-06-30