



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/010,615	07/24/2009	5474142	NOV-2RE:142	8642

21897 7590 03/27/2010

THE MATTHEWS FIRM
2000 BERING DRIVE
SUITE 700
HOUSTON, TX 77057

EXAMINER

ART UNIT	PAPER NUMBER
----------	--------------

DATE MAILED: 03/27/2010

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



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

DO NOT USE IN PALM PRINTER

(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

David W. Boyd
TOWNSEND and TOWNSEND and CREW, LLP
Two Embarcadero Center, Eighth Floor
San Francisco, CA 94111-3834

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. 90/010,615.

PATENT NO. 5,474,142.

ART UNIT 3993.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

**Notice of Intent to Issue
Ex Parte Reexamination Certificate**

Control No.

90/010,615

Patent Under Reexamination

5,474,142

Examiner

PETER C. ENGLISH

Art Unit

3993

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

1. ☒ Prosecution on the merits is (or remains) closed in this *ex parte* reexamination proceeding. This proceeding is subject to reopening at the initiative of the Office or upon petition. Cf. 37 CFR 1.313(a). A Certificate will be issued in view of
- (a) ☒ Patent owner's communication(s) filed: 22 March 2010.
- (b) ☐ Patent owner's late response filed: _____.
- (c) ☐ Patent owner's failure to file an appropriate response to the Office action mailed: _____.
- (d) ☐ Patent owner's failure to timely file an Appeal Brief (37 CFR 41.31).
- (e) ☐ Other: _____.
- Status of *Ex Parte* Reexamination:
- (f) Change in the Specification: ☐ Yes ☒ No
- (g) Change in the Drawing(s): ☐ Yes ☒ No
- (h) Status of the Claim(s):
- (1) Patent claim(s) confirmed: 14 and 15.
- (2) Patent claim(s) amended (including dependent on amended claim(s)): 1-8 and 11-13
- (3) Patent claim(s) cancelled: _____.
- (4) Newly presented claim(s) patentable: _____.
- (5) Newly presented cancelled claims: _____.
- (6) Patent claim(s) ☐ previously ☐ currently disclaimed: _____.
- (7) Patent claim(s) not subject to reexamination: 9 and 10.
2. ☒ Note the attached statement of reasons for patentability and/or confirmation. Any comments considered necessary by patent owner regarding reasons for patentability and/or confirmation must be submitted promptly to avoid processing delays. Such submission(s) should be labeled: "Comments On Statement of Reasons for Patentability and/or Confirmation."
3. ☐ Note attached NOTICE OF REFERENCES CITED (PTO-892).
4. ☐ Note attached LIST OF REFERENCES CITED (PTO/SB/08 or PTO/SB/08 substitute.).
5. ☐ The drawing correction request filed on _____ is: ☐ approved ☐ disapproved.
6. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have
- ☐ been received.
- ☐ not been received.
- ☐ been filed in Application No. _____.
- ☐ been filed in reexamination Control No. _____.
- ☐ been received by the International Bureau in PCT Application No. _____.
- * Certified copies not received: _____.
7. ☐ Note attached Examiner's Amendment.
8. ☐ Note attached Interview Summary (PTO-474).
9. ☐ Other: _____.

Peter C. English
Primary Examiner
Art Unit 3993

cc: Requester (if third party requester)

U.S. Patent and Trademark Office
PTOL-469 (Rev.6-06)

Notice of Intent to Issue Ex Parte Reexamination Certificate

Part of Paper No 20100324

0001

STATEMENT OF REASONS FOR PATENTABILITY AND/OR CONFIRMATION

1. The following is an examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

Claim 1 has been amended to define over the LeCompte et al. reference (US 1,891,329) taken alone. Specifically the claim has been amended to recite that the drill string controller responds to a decrease in drilling fluid pressure by affecting an increase in the rate of release of the drill string *with direct effect at the drill bit*, and the drill string controller responds to an increase in drilling fluid pressure by affecting a decrease in the rate of release of the drill string *with direct effect at the drill bit*. As argued by the patent owner, this amendment defines over LeCompte et al. LeCompte et al. controls the rate of release of the upper drill string portion, but the drill bit is isolated from the upper drill string portion by a telescopic section positioned between the upper drill string portion and the lower drill string portion. As a result, the control of the rate of release of the upper drill string portion in LeCompte et al. does not take place with direct effect at the drill bit, as required by the claim.

With respect to the Bowden '359 reference (US 3,265,359) taken together with Dillon et al. (US 2,005,889) and Hobhouse (US 3,550,697), the patent owner has provided a detailed showing of secondary considerations as evidence of non-obviousness; thereby overcoming the rejection of claims 1, 5 and 11-15 under 35 USC 103(a). See the detailed explanation in item 3 of the final Office action mailed on 22 February 2010.

Claim 2 is patentable because of its dependency from claim 1. This claim is also patentable because the cited prior art patents and printed publications fail to teach an automatic drilling system for automatically regulating the rate of release of a drill string based upon input from a drilling fluid pressure sensor, drilling fluid pressure regulator and drilling fluid pressure relay, as defined in independent claim 1, and also automatically regulating the rate of release of the drill string based upon input from a bit weight sensor, a bit weight regulator coupled to the bit weight sensor for measuring changes in bit weight and outputting an output signal representing those changes, and a bit weight relay coupled to the bit weight regulator and responsive to the output signal to supply a drill string control signal, the automatic regulation

Art Unit: 3993

based on bit weight being effected by a controller coupled to the bit weight relay, wherein a decrease in bit weight causes the controller to effect an increase in the rate of release of the drill string and an increase in bit weight causes the controller to effect a decrease in the rate of release of the drill string.

Claim 3 is patentable because of its dependency from claim 1. This claim is also patentable because the cited prior art patents and printed publications fail to teach an automatic drilling system for automatically regulating the rate of release of a drill string based upon input from a drilling fluid pressure sensor, drilling fluid pressure regulator and drilling fluid pressure relay, as defined in independent claim 1, and also automatically regulating the rate of release of the drill string based upon input from a drill string torque sensor, a drill string torque regulator coupled to the drill string torque sensor for measuring changes in drill string torque and outputting an output signal representing those changes, and a drill string torque relay coupled to the drill string torque regulator and responsive to the output signal to supply a drill string control signal, the automatic regulation based on drill string torque being effected by a controller coupled to the drill string torque relay, wherein a decrease in drill string torque causes the controller to effect an increase in the rate of release of the drill string and an increase in drill string torque causes the controller to effect a decrease in the rate of release of the drill string.

Claim 4 is patentable because of its dependency from claim 1. This claim is also patentable because the cited prior art patents and printed publications fail to teach an automatic drilling system for automatically regulating the rate of release of a drill string based upon input from a drilling fluid pressure sensor, drilling fluid pressure regulator and drilling fluid pressure relay, as defined in independent claim 1, and also automatically regulating the rate of release of the drill string based upon input from a drill string RPM sensor, a drill string RPM regulator coupled to the drill string RPM sensor for measuring changes in drill string RPM and outputting an output signal representing those changes, and a drill string RPM relay coupled to the drill string RPM regulator and responsive to the output signal to supply a drill string control signal, the automatic regulation based on drill string RPM being effected by a controller coupled to the drill string RPM relay, wherein an increase in drill string RPM causes the controller to effect an increase in the rate of release of the drill string and a decrease in drill string RPM causes the controller to effect a decrease in the rate of release of the drill string.

Claim 5 is patentable because of its dependency from claim 1. This claim is also patentable because the prior rejection of this claim under 35 USC 103(a) has been overcome by the patent owner's showing of secondary considerations as evidence of non-obviousness.

Claims 6, 7 and 8 are patentable because of their dependency from claims 2, 3 and 4, respectively.

Claim 11 has been amended to define over the LeCompte et al. reference (US 1,891,329) taken alone. Specifically the claim has been amended to recite the step of controlling the drill string controller to increase the rate of release of the drill string *with direct effect at the drill bit* in response to a decrease in drilling fluid pressure, and to decrease the rate of release of the drill string *with direct effect at the drill bit* in response to an increase in drilling fluid pressure. As argued by the patent owner, this amendment defines over LeCompte et al. LeCompte et al. controls the rate of release of the upper drill string portion, but the drill bit is isolated from the upper drill string portion by a telescopic section positioned between the upper drill string portion and the lower drill string portion. As a result, the control of the rate of release of the upper drill string portion in LeCompte et al. does not take place with direct effect at the drill bit, as required by the claim. Further, claim 11 is patentable because the prior rejection of this claim under 35 USC 103(a) has been overcome by the patent owner's showing of secondary considerations as evidence of non-obviousness.

Claims 12 and 13 are patentable because of their dependency from claim 11. These claims are also patentable because the prior rejection of these claims under 35 USC 103(a) has been overcome by the patent owner's showing of secondary considerations as evidence of non-obviousness.

Claims 14 and 15 are confirmed as patentable because the prior rejection of these claims under 35 USC 103(a) has been overcome by the patent owner's showing of secondary considerations as evidence of non-obviousness.

2. Any comments considered necessary by PATENT OWNER regarding the above statement must be submitted promptly to avoid processing delays. Such submission by the patent owner should be labeled: "Comments on Statement of Reasons for Patentability and/or Confirmation" and will be placed in the reexamination file.

Art Unit: 3993

Not All Claims Reexamined

3. This reexamination proceeding was directed only to the claims for which reexamination was requested. With respect to such claims, requester alleged a substantial new question of patentability (SNQ), and upon review, it was determined that the alleged SNQ was in fact present for claims 1-8 and 11-15. No determination was made with respect to the existence or nonexistence of a SNQ with respect to claims 9 and 10 for which reexamination was not specifically requested. Accordingly, claims 9 and 10 were not reexamined.

Remarks

4. Responses to this Office action may be submitted by facsimile and should be directed to the Central Reexamination Unit using facsimile number 571-273-9900. A confirmation of receipt will be generated automatically for all papers transmitted via this facsimile number.

All responses to be delivered by the United States Postal Service (USPS) should be addressed as follows:

Mail Stop Ex Parte Reexam
Central Reexamination Unit
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be labeled "Attn: Central Reexamination Unit" and delivered to:

Customer Service Window
Randolph Building, Lobby Level
401 Dulany Street
Alexandria, VA 22314


Submissions for reexamination proceedings may also be submitted through EFS-Web (the USPTO's web-based document submission system).

5. Any document filed by either the patent owner or third party requester ***must be served*** on the other party (or parties in a merged proceeding) in the reexamination proceeding in the manner provided by 37 CFR 1.248. See 37 CFR 1.550(f) and MPEP 2266.03.


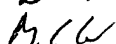
Art Unit: 3993

6. Any inquiry concerning this communication or earlier communications from the Reexamination Examiner should be directed to Peter English whose telephone number is 571-272-6671. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andres Kashnikow, can be reached at 571-272-4361.

For general information regarding reexamination proceedings please call the Central Reexamination Unit at 571-272-7705. For guidance on reexamination practice and procedure please call the Office of Patent Legal Administration at 571-272-7703. Information regarding this reexamination proceeding may be obtained from the Patent Application Information Retrieval (PAIR) system. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.


Peter C. English 3/24/10
Primary Examiner
Central Reexamination Unit

Conferees:

pe

24 March 2010