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**Datasheet for the decision
of 13 February 2023**

Case Number: T 1451/21 - 3.2.01

Application Number: 15724596.0

Publication Number: 3146144

IPC: E21B33/127, E21B33/13,
E21B43/10, E21B7/20, E21B21/00,
E21B17/05

Language of the proceedings: EN

Title of invention:
DOWNHOLE STRING FOR DRILLING THROUGH A LOW PRESSURE ZONE

Applicant:
Welltec Oilfield Solutions AG

Headword:

Relevant legal provisions:

EPC Art. 84, 83
RPBA 2020 Art. 11

Keyword:

Claims - main request - clarity - support in the description
(yes)
Sufficiency of disclosure - enabling disclosure (yes)
Remittal - special reasons for remittal - (yes)

Decisions cited:

Catchword:



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Case Number: T 1451/21 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 13 February 2023

Appellant: Welltec Oilfield Solutions AG
(Applicant) Baarerstrasse 96
6300 Zug (CH)

Representative: Dragsted Partners A/S
Rådhuspladsen 16
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 22 March 2021
refusing European patent application No.
15724596.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: A. Wagner
P. Guntz

Summary of Facts and Submissions

I. The appeal was filed by the applicant against the decision of the examining division to refuse the patent application No. 15724596.0 pursuant to Article 97(2) EPC.

II. The examining division refused the application under Article 84 EPC. In the decision under appeal the examining division concluded that the subject-matter of claim 1 of the main request and of the sole auxiliary request, both filed with letter dated 7 January 2021, was not supported by the description.

In an obiter dictum the examining division added objections under Article 84/83 EPC and under Article 56 EPC against both requests.

III. With the statement of the grounds of appeal the appellant (applicant) requested to set aside the decision under appeal and to remit the application to the first instance on the basis of the main request underlying the impugned decision and filed again with the statement of grounds of appeal.

IV. In the present decision reference is made to the following documents:

D1: US 2006/185857

D6: US 2008/264690

D7: US 4,869,323 (cited in the obiter dictum)

V. The main request comprises two independent claims. Claim 1 of the main request reads as follows:

A downhole string (1) for drilling through a low pressure zone (Z_{low}) in a formation (45) in a well (3), comprising:

- a drawdown casing (2) having a first end (4) closest to a top (5) of the well and a second end (6), and
- an operational tool (8) connected to the second end of the drawdown casing,

wherein the downhole string further comprises an annular barrier (10) having an expandable metal sleeve (11) surrounding the drawdown casing, each end of the expandable metal sleeve being connected with the drawdown casing, and the expandable metal sleeve being adapted to contact a wall (16) of a borehole (17) or another casing so that the drawdown casing can rotate and slide in relation to the annular barrier after expansion of the expandable sleeve, and the downhole string further comprises a swivel (29) mounted as part of the drawdown casing, dividing the drawdown casing into a first casing part (41) and a second casing part (43) for rotating the first casing part in relation to the second casing part, the second casing part is connected with the operational tool (8) and the annular barrier (10).

Claim 11 reads as follows:

A downhole method for drilling past a low pressure zone in a formation in a well, comprising the steps of:

- drilling a borehole in the formation by means of the downhole string according to any of the preceding claims 1-7,
- determining a low pressure zone in the formation,
- expanding an annular barrier above the low pressure zone in relation to a top of the borehole,
- providing cement above the annular barrier in an annulus between the casing and a wall of the borehole,

- oscillating or rotating at least part of the casing above the swivel in relation to the annular barrier while cementing, after expansion of the expandable sleeve, and
- drilling past the low pressure zone.

Reasons for the Decision

1. Article 84 EPC

- 1.1 The main request meets the requirements of Article 84 EPC.
- 1.2 The examining division was of the opinion that the description did not support a downhole string with a swivel that allowed the drawdown casing to rotate and slide in relation to the annular barrier after expansion of the expandable sleeve.
 - 1.2.1 The examining division based their argumentation on the disclosure on page 9, lines 25 to 37, of the A2-publication WO2015/177122 referring to the embodiment shown in figures 11 and 13. For this embodiment - comprising a swivel - it was described that "*once the expandable metal sleeve 11 of the annular barrier is expanded, the second part of the drawdown casing 2 is fixedly fastened to the wall 16 of a borehole 17, as shown in Fig. 12.*".
 - 1.2.2 The examining division concluded that none of the embodiments, in particular the embodiment shown in figures 11 and 12, could be an embodiment according to claim 1. If the second part 43 of the drawdown casing 2 was fixedly fastened, the casing 2 could not rotate and slide in relation to the annular barrier as required by

claim 1.

1.3 The board does not agree. The description does not exclude that the second casing part 43 - together with the first casing part 41 - can rotate and slide in relation to the expanded annular barrier 10. Instead, the application as a whole supports the argument of the appellant (applicant) that the structure of the annular barrier as shown e.g. in figures 5 and 6, is the same for all embodiments and allows the casing 2 of the embodiment shown in figures 11 and 12 to rotate and slide after expansion of the expandable sleeve in the same way as described for the embodiment of figures 1 to 3 (page 7, lines 6 to 14).

1.3.1 The passage referred to by the examining division has to be seen in relation to the cementing operation mentioned therein. Lines 33, 34 of page 9 recites: "*By having a swivel 29, the first casing part 41 is able to rotate during the cement job without rotating the second casing part 43.*"

Consequently, the swivel is used during cementing with the advantage of having the second part of the drawdown casing being fixedly fastened to the wall 16 of a borehole 17 while the first casing part rotates.

1.3.2 This arrangement is described as being advantageous for the cementing operation because a seal of the annular barrier, which is connected to the second casing part 43, is maintained and not jeopardized by a rotation of the second casing part 43 (page 9, lines 33 to 37).

1.3.3 The mentioned annular barrier with a seal used for the embodiment with a swivel is described on page 8, lines 20 to 22. This passage refers to the annular barrier 10 as shown in figure 6. This same annular barrier is also

used for the embodiment of a downhole string without a swivel as shown in figures 1 to 3 and undisputedly allows the casing 2 to slide and rotate in relation to the annular barrier after expansion of the sleeve.

- 1.3.4 Furthermore the passage on page 7, lines 6 to 11, describes that after expansion of the metal sleeve, it is possible to carry out a subsequent operation, e.g. cementing or continuing the drilling operation. These two operations are available for all embodiments of the application. Although a further drilling operation is not explicitly mentioned in the context of the embodiment shown in figure 11, it has to be kept in mind that it is common practise in patent applications to only describe the differences to previous embodiments without repeating the features in common.
- 1.3.5 This understanding of the application is supported by the provided object of the invention and the original claims. The application in suit aims *"to provide an improved completion or drilling system which renders it possible to continue drilling past the above-mentioned low pressure zone"* (see page 1, lines 22 to 24). Moreover, the original claims 1, 2 and 5, now incorporated into claim 1 of the main request, indicate that the swivel including the functionality of rotating the first casing part relative to the second casing part, is a feature in addition to the feature that the casing can rotate and slide in relation to the annular barrier after expansion of the expandable metal sleeve.
- 1.4 Consequently, all embodiments with or without a swivel comprise the same annular barrier 10 and therefore provide the same functionality in order to enable further drilling instead of cementing (page 7, lines 6 to 14). The subject-matter of claim 1 is therefore

supported by the description.

2. Article 83 EPC

2.1 The main request meets the requirements of Article 83 EPC.

2.2 In an obiter dictum the examining division found that the feature "*so that the drawdown casing can rotate and slide in relation to the annular barrier after expansion of the expandable sleeve*" defined the subject-matter of claim 1 in terms of a result to be achieved. The application did not sufficiently disclose how the person skilled in the art could carry out a reliable annular barrier while allowing the casing to rotate and slide within the annular barrier in a well environment.

2.3 However this objection of insufficient disclosure does not raise serious doubts, supported by verifiable facts, as to why the skilled person cannot put the claimed downhole string into practice.

2.4 The board agrees with the argumentation of the appellant (applicant) that e.g. the following passages of the A1-publication WO 2015/177122 of the application include sufficient information for a skilled person on how the objected feature can be put in practice.

2.4.1 Page 7, lines 11 to 14, discloses that "*the expandable metal sleeve 11 is made of metal providing the rigidity necessary for allowing the drawdown casing 2 to move relative to the annular barrier 10.*"

2.4.2 With reference to figures 4 and 6, page 8, lines 17 to 22, describes that "*the expandable metal sleeve 11 is*

connected to the outer face 12 of the drawdown casing by means of first and second connection parts 34, 35 in the form of ring-shaped elements. In order to increase the sealing between the drawdown casing 2 and the expandable metal sleeve ends or the connection parts, sealing elements 36 may be arranged, as shown in Fig. 6."

2.4.3 With reference to figure 7 it is further explained on page 8, lines 33 to 35 that *"the drawdown casing 2 is capable of sliding between two adjacent casing collars 39 connecting two casing sections 40 from which the drawdown casing is mounted."*

2.4.4 Information about the expansion is derivable from page 2, line 31 to page 3, line 2, from page 7, lines 33 to 36, or from page 8, lines 4 to 6. An annular space in the annular barrier is pressurized by a fluid or expanded by activating a compound.

3. Article 11 RPBA 2020

3.1 The board grants the appellant's (applicant's) request to remit the case to the first instance.

3.2 In the obiter dictum, the examining division provided a negative opinion on Article 56 EPC. It was argued that when starting from D1, *"just out of its general knowledge the skilled person is aware of the possibility of introducing a swivel... a swivel is typical for cementing operations ...and is disclosed in D6 (page 9, lines 26 to 29) ... and well-known in the art and this is confirmed by D7"*. The combination of D1 with general knowledge or with D6 or D7 would, thus, result in the claimed subject-matter without applying

any inventive skills.

3.3 However, D7 was cited for the first time in the obiter dictum and the appellant (applicant) could not comment on D7 during first instance proceedings. Furthermore the cited passage of D6 (page 9, lines 26 to 29) does not refer to a swivel or to a cementing operation.

3.4 Under these circumstances, the board considers that there are special reasons in the sense of Article 11 RPBA for remitting the case to the first instance.

Order

For these reasons it is decided that:

1. The decision is set aside.
2. The case is remitted to the department of first instance for further prosecution.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated