

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 30 September 2021**

Case Number: T 0334/18 - 3.2.03

Application Number: 11745999.0

Publication Number: 2598830

IPC: F42B1/032

Language of the proceedings: EN

Title of invention:

IMPROVEMENTS IN AND RELATING TO OIL WELL PERFORATORS

Patent Proprietor:

Qinetiq Limited

Opponent:

DynaEnergetics Europe GmbH

Headword:

Relevant legal provisions:

EPC Art. 108, 56

RPBA Art. 12(4)

RPBA 2020 Art. 13(1), 13(2)

Keyword:

Admissibility of appeal - appeal sufficiently substantiated
(yes)

Inventive step - neighbouring field - obvious combination of
known features

Late-filed evidence - admitted (yes)

Amendment to appeal case (no)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0334/18 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 30 September 2021

Appellant: Qinetiq Limited
(Patent Proprietor) Cody Technology Park
Ively Road
Farnborough, Hampshire GU14 OLX (GB)

Representative: Denholm, Anna Marie
QinetiQ Ltd
Intellectual Property
Malvern Technology Centre
St Andrew's Road
Malvern, Worcestershire WR14 3PS (GB)

Respondent: DynaEnergetics Europe GmbH
(Opponent) Kaiserstr. 3
53840 Troisdorf (DE)

Representative: Zimmermann & Partner
Patentanwälte mbB
Josephspitalstr. 15
80331 München (DE)

Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 28 November 2017 revoking European patent No. 2598830 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairwoman E. Kossonakou
Members: B. Miller
R. Baltanás y Jorge

Summary of Facts and Submissions

I. European patent No. 2 598 830 (the "patent") relates to a reactive shaped charge liner for a perforator for use in perforating and fracturing subterranean well completions.

II. An opposition against the patent was filed on the grounds of Article 100(b) EPC and Article 100(a) EPC together with Articles 54 and 56 EPC. The opposition division concluded that the ground for opposition under Article 100(a) EPC prejudiced the maintenance of the patent and revoked it.

This decision was appealed by the patent proprietor (the "appellant").

III. State of the art

(a) The following documents already cited during the opposition proceedings are of particular importance for the present decision:

D4: WO 2008/102110 A1;

D5: WO 2005/035939 A1;

D12: D.E. Eakins, N.N. Thadhani, "Mesoscale simulation of the configuration-dependent shock-compression response of Ni+ Al powder mixtures", Acta Materialia 56, 2008, pages 1496 to 1510;

D13: E. Dunbar, N. N. Thadhani, R. A. Graham, "High-pressure shock activation and mixing of nickel-aluminum powder mixtures"; Journal of Materials Science 28, 1993, pages 2903 to 2914.

(b) The following document, which had not been admitted during the opposition proceedings, was cited by the opponent (the "respondent") again in the appeal proceedings:

D14: Deposition of Philip Duncan Church, Washington, D.C., Thursday, 17 August 2017; 8:59 a.m.; Job No.: 175678; Huseby Inc.; www.huseby.com.

(c) In its letter of reply to the appeal, the respondent further cited the following document:

D15: P. Church, R. Claridge, P. Ottley, I. Lewtas, N. Harrison, P. Gould, C. Braithwaite, D. Williamson, "Investigation of a Nickel-Aluminum Reactive Shaped Charge Liner", Journal of Applied Mechanics, vol. 80, May 2013, pages 031701-1 to 0310701-13

(d) With a letter dated 5 November 2019, the appellant filed the following further documents:

D16: Expert declaration by J.T. Hardesty dated 22 August 2019;

D17: Third-party observations by QinetiQ in regard to the applications EP17828873.4 and EP17835626.7, dated 20 August 2019;

D17a: D15

D17b: D.E. Eakins, N.N. Thadhani, "Shock compression on reactive powder mixtures", International Materials Reviews, vol. 54, 2009, pages 181 to 213.

IV. With the summons to oral proceedings, the Board sent a communication pursuant to Articles 15(1) and 17(2) of the Rules of Procedure of the Boards of Appeal (RPBA

2020) informing the parties of its preliminary opinion on the case.

- V. By letter dated 26 August 2021, the appellant submitted further arguments in relation to inventive step.
- VI. Oral proceedings were held on 30 September 2021 by videoconference with the parties' consent.

At the end of the oral proceedings, the appellant requested that the decision under appeal be set aside and that the patent be maintained according to the main request (filed by letter of 30 January 2017) or auxiliary request 5 (filed by letter of 8 September 2017), i.e. one of the two requests which had been the subject of the contested decision.

The respondent requested that the appeal be rejected as inadmissible, or alternatively that the appeal be dismissed.

- VII. Wording of claim 1 of the requests at issue in this decision

(a) Claim 1 of the main request reads:

"A reactive oil and gas well shaped charge perforator liner comprising a reactive composition of at least two metals wherein the liner is a compacted particulate composition comprising a spherical metal particulate and a non-spherical metal particulate, wherein the at least two metals are selected such that they produce, upon activation of the shaped charge liner, an electron compound."

(b) Claim 1 of auxiliary request 5 reads:

"A method of completing an oil or gas well using one or more shaped charge perforators, wherein one or more shaped charge perforators comprise a reactive oil and gas well shaped charge perforator liner comprising a reactive composition of at least two metals wherein the liner is a compacted particulate composition comprising a spherical metal particulate and a non-spherical metal particulate, wherein the at least two metals are selected such that they produce, upon activation of the shaped charge liner, an electron compound."

VIII. The appellant's arguments, as far as they are relevant for this decision, can be summarised as follows.

(a) Admissibility of the appeal

The appeal was admissible, since the statement setting out the grounds of appeal directly addressed the reasons given in the contested decision in relation to inventive step and the admissibility of the auxiliary requests, and why they were incorrect.

(b) Admittance of document D14

The opposition division had been right not to admit D14 into the proceedings due to its lack of relevance. For the same reason it should not be admitted into the appeal proceedings either.

D16 provided proof that the performance of the shaped charge liners was dependent on many parameters. Hence, it supported the argument that the skilled person would not consider the teaching of D12 and D13 when starting from D5.

(c) Admittance of the arguments concerning inventive step starting from D5

In the statement setting out the grounds of appeal, the arguments relating to inventive step were presented in the context of the reasoning in the contested decision and thus in relation to D5 as the closest prior art. In particular, the grounds of appeal focused on the incompatibility of the disclosure in D12 and D13 with the technical field of the patent. Hence, the arguments concerning inventive step should be considered in the appeal proceedings.

(d) Inventive step - main request

The core of the invention lay in the "empirical arts" and "unpredictable arts", since the fundamental processes in controlled shock-induced chemical reactions were not yet understood by the skilled person. The term "reactive" in claim 1 had to be interpreted in this context.

The patent was based on the realisation of the technical problem. The approach adopted by the opposition division was based on hindsight. The formulation of the objective technical problem to be solved should be based on all effects described in the patent.

Starting from D5 as the closest prior art, the skilled person would not take into account the teaching of D12 and D13, since these documents did not relate to a shaped charge liner. This was confirmed by D16, according to which the skilled person would not consider modifying the teaching of D5 without explicit teaching for this being provided by D12 and D13.

When starting from D5 and taking into consideration the teaching of D12 and D13, there was no reasonable expectation of success in terms of achieving all the surprising advantageous effects described in the patent in paragraphs [0012] and [0061].

D4 proposed various alternative solutions for solving the underlying problem and taught away from the invention as defined in claim 1.

(e) Inventive step - auxiliary request 5

Contrary to claim 1 of the main request, claim 1 of auxiliary request 5 did not define a shaped charge perforator liner but rather referred to a method of completing an oil or gas well using one or more shaped charge perforators. The skilled person using the reactive oil and gas well shaped charge perforator liner was different from the skilled person developing it. Due to the change in claim category the objective technical problem also had to be reformulated.

IX. The respondent's counter-arguments can be summarised as follows.

(a) Admissibility of the appeal

The appeal was inadmissible. The statement setting out the grounds of appeal did not address the core of the opposition division's decision leading to the revocation of the patent. In particular, the appellant did not explain how the opposition division had erroneously applied the problem-solution approach starting from D5.

(b) Admittance of document D14 and D16

D14 was highly relevant for the case, since it demonstrated that it was not possible to obtain a functioning shaped charge liner over the whole scope of protection (Article 83 EPC) or at least to obtain an improved charge liner (Article 56 EPC).

The late-filed declaration D16 should not be admitted into the appeal proceedings. It had been drafted for a different situation and addressed the question of whether the skilled person would change the reactive components in a shaped charge liner. It was therefore not relevant for the present case.

(c) Admittance of the arguments concerning inventive step starting from D5

In the statement setting out the grounds of appeal, D5, which was the closest prior art according to the contested decision, was not addressed at all by the appellant.

Therefore, all late-filed arguments relating to inventive step starting from D5 amounted to a change to the appellant's appeal case and should not be taken into account.

(d) Inventive step - main request

The patent did not render it plausible that the use of a reactive composition comprising spherical and non-spherical particles as defined in claim 1 provided an unexpected effect over the whole scope of protection.

Taking the teaching in paragraph [0012] of the patent into account for formulating the objective technical

problem, the claimed subject-matter was nevertheless rendered obvious when starting from D5 as the closest prior art.

D12 and D13 belonged - like D5 and the patent - to the field of shock-induced reactions. The reactive compositions proposed in D5 and discussed in D12 and D13 were identical. Starting from a shaped charge liner as disclosed in D5, the skilled person would therefore take into account the teaching of D12 and D13.

D12 and D13 taught that mixing flaky nickel and spherical aluminium particles reduced the activation energy and increased the reactivity of the reaction forming NiAl. This teaching in D12 and D13 applied to shock-induced reactions in general and was independent of the intended use of the reaction. Hence, the subject-matter of claim 1 of the main request was obvious when starting from D5 and considering D12 and D13.

(e) Inventive step - auxiliary request 5

D5 disclosed a method of completing an oil or gas well using one or more shaped charge perforator liners. Hence, the feature distinguishing the subject-matter of claim 1 from the disclosure of D5 was the same one as in claim 1 of the main request. Thus, the same arguments applied as for the main request.

Reasons for the Decision

1. Admissibility of the appeal (Article 108 EPC)

1.1 The decision to revoke the patent is based primarily on the finding of the opposition division that the subject-matter of the main request and of auxiliary request 5, which were both discussed at the oral proceedings, lacks an inventive step when starting from D5 as the closest prior art; see points II.19 and II.21 of the reasoning.

It was further decided by the opposition division not to admit auxiliary requests 5e and 6 into the proceedings, based on considerations of:

- fairness; see point II.22 of the contested decision, and
- procedural economy; see point II.23.3 of the contested decision.

1.2 The appellant has provided detailed arguments against the non-admittance of auxiliary request 5e and has therefore provided sufficient reasons for the purpose of considering the appeal admissible.

Moreover, the statement setting out the grounds of appeal focuses essentially on the definition of the invention as an "invention of problem". It therefore appears to challenge the definition of the problem to be solved as formulated in the contested decision. Albeit rather perfunctory and, at least at first glance, not specifically tailored to the reasoning in the contested decision, the arguments concerning inventive step presented in the statement setting out

the grounds of appeal demonstrate the appellant's reasons for considering the decision to be incorrect. What can be deduced from those arguments, at least, is that the appellant disagrees that the teaching of D12 and D13 is relevant for the technical field to which the patent belongs. Whether this argument is fully comprehensible and convincing is a question of merit and not of admissibility.

Hence, the arguments concerning inventive step, even when considered independently of the further arguments concerning the non-admittance of auxiliary request 5e, can nevertheless be regarded as sufficient for the purpose of considering the appeal admissible.

1.3 It follows that the appeal is admissible pursuant to Article 108 EPC.

2. Admittance of D14 to D17 into the appeal proceedings

2.1 Applicable Rules of Procedure of the Boards of Appeal

The appeal was filed before the entry into force of the revised version of the Rules of Procedure of the Boards of Appeal (RPBA 2020) on 1 January 2020. In accordance with the transitional provisions laid down in Article 25 RPBA 2020, the RPBA 2020 is applicable to appeals already pending on the date of entry into force as well as to appeals filed after that date (Article 25(1) RPBA 2020).

Pursuant to Article 25(2) RPBA 2020, Article 12(4) and (6) RPBA 2020 does not apply to statements of grounds of appeal filed before its entry into force or to replies to them which are filed in due time. Instead, Article 12(4) RPBA 2007 continues to apply.

The admittance of amendments to a party's appeal case after it has filed its grounds of appeal or reply is governed by Article 13(1) RPBA 2020.

2.2 Both parties submitted further documents in the appeal proceedings.

D15 was filed with the reply to the statement setting out the grounds of appeal, whereas D17 was filed after this statement had been filed. Neither party objected to the admittance of D15 and D17.

D14 was filed by the respondent during the opposition proceedings. The document was not admitted by the opposition division, and the respondent contested this in its reply to the appeal, in which it also provided arguments based on this document. It is concerned with the question of whether the morphology of the particles as broadly defined in claim 1 of the main request allows a functioning shaped charge liner to be achieved (Article 83 EPC) or an improvement to be obtained (Article 56 EPC) over the whole scope of protection.

D16 was filed by the appellant after the statement setting out the grounds of appeal, in order to demonstrate that the skilled person starting from D5 would not consult D12 or D13. It is intended to provide proof that the performance of the shaped charge liners is dependent on many parameters.

Hence, both D14 and D16 are used to demonstrate the general knowledge and expectations of a skilled person working in the technical field of shaped charge liners, thereby supplementing the arguments already presented in the opposition proceedings.

The respondent's re-filing of D14 on appeal and the appellant's submission of D16 can therefore both be regarded as reactions to the reasoning in the contested decision.

Exercising its discretion under Articles 12(4) RPBA 2007 and 13(1) RPBA 2020, the Board therefore admits documents D14 to D17 into the appeal proceedings.

3. Admittance of the appellant's arguments concerning inventive step starting from D5

Although the statement setting out the grounds of appeal does not address the closest prior art D5 at all, it explains why the appellant considers the reasoning in the contested decision based on D5 as the closest prior art to be incorrect. In its view:

- the teaching of D12 and D13 is not relevant for the technical field the patent belongs to;
- the core of the invention lies in the "empirical arts" and "unpredictable arts";
- the term "reactive" in claim 1 has to be interpreted in the right context.

Although D5 was explicitly addressed as the closest prior art for the first time in the letter dated 26 August 2021, the arguments of the appellant remain essentially unchanged when making the case for inventive step specifically in relation to D5 as the closest prior art.

The main arguments concerning inventive step were therefore not submitted late in the appeal proceedings but in essence had already been presented in the statement setting out the grounds of appeal.

Moreover, the arguments of the appellant essentially correspond to the arguments presented in the opposition proceedings and summarised in point II.19.2 of the contested decision and so are essentially the same as those on which the contested decision is based. In view of the primary object of the appeal proceedings, which is to review the decision under appeal in a judicial manner, an argument discussed in the contested decision cannot be considered to be a change of case.

Moreover, the respondent and the Board were able to address the supplementary arguments of the appellant during the oral proceedings without any difficulty.

Hence, there is no reason for the Board to hold the arguments of the appellant with regard to D5 as the closest prior art inadmissible under Article 13(1) or (2) RPBA 2020.

4. Article 100(a) EPC in combination with Article 56 EPC - main request
- 4.1 D5 discloses in claim 1 a reactive shaped charge liner and thus relates to exactly the same purpose as the contested patent. The Board therefore sees no reason to deviate from the finding in point II.19 of the contested decision and the arguments of both parties that D5 is a suitable starting point for the assessment of inventive step.
- 4.2 D5 discloses in claims 1 to 4 and on page 13, lines 4 to 15, a reactive shaped charge liner comprising a pressed particulate composition comprising aluminium and nickel or palladium. The shaped charge perforator liner according to D5 therefore makes use of the same

"reactive" metal components as are preferably to be used according to the example of the patent. It follows that D5 discloses a "reactive" shaped charge liner within the meaning of claim 1.

Hence, the term "reactive" does not distinguish the claimed subject-matter from the disclosure of D5.

- 4.3 The subject-matter of claim 1 of the main request therefore differs from the shaped charge liner disclosed in D5 in that the particulate composition comprises a spherical metal particulate and a non-spherical metal particulate.
- 4.4 According to point II.19.3.3 of the contested decision the objective technical problem to be solved by the patent in view of D5 can be formulated as being to reduce the activation threshold of the reactive composition as stipulated by paragraph [0012] of the patent.
- 4.5 The appellant contests this definition of the technical problem by arguing that:
- a) the invention is, rather, the discovery of the underlying problem and
 - b) the problem defined by the opposition division is based on hindsight.
- 4.6 These arguments are not convincing.
- 4.6.1 D5 addresses the problem of increasing the reactivity of the shaped charge liner and its solution by increasing the surface area of the compressed metal powder:

"Thus, in accordance with a first aspect of the invention, there is provided a reactive shaped charge liner, wherein the liner comprises a composition capable of an exothermic reaction upon activation of the shaped charge liner" (page 4, lines 12-15, of D5).

"Advantageously, if the particle diameter size of the metal or metals (...) in the composition of a reactive liner is less than 10 microns, (...) the reactivity and hence the rate of exothermic reaction of the liner will be significantly increased, due to the large increase in surface area" (page 8, lines 7 to 11, of D5).

Hence, the findings in paragraph [0012] of the patent cannot be considered to be based on the discovery of a new technical problem, since D5 also addresses the reactivity of the composition and inherently also its consequences, such as a higher energy output.

- 4.6.2 Moreover, the Board cannot see how the formulation of the objective technical problem by the opposition division can be considered to be based on hindsight. It is standard practice that the objective technical problem is defined in relation to the distinguishing feature and the effect indicated in the patent.

Exactly this approach was adopted by the opposition division. Moreover, the problem of lowering the activation threshold does not contain a pointer to its solution of using spherical and non-spherical particulates. The mere fact that a solution to an objective technical problem might be known from a further document does not demonstrate that the formulation of the problem as such already contains a pointer to its solution.

4.7 Referring to the teaching in paragraphs [0012] and [0061] of the patent, the appellant further argues that the formulation of the objective technical problem should be based on all effects allegedly obtained by the patent: reduction of the activation threshold of the reactive composition, increasing completion of the reaction, energy output and penetration depth.

With regard to paragraph [0061], the Board observes that this paragraph does not refer to the morphology of the particulates as defined in claim 1. Hence, the effects described in that paragraph are not linked to the distinguishing feature and cannot be taken into account for formulating the objective technical problem.

Although it is undisputed that the patent indeed discloses in paragraph [0012] that the use of particulates having the morphology defined in claim 1 leads to a reduction of the required activation energy and to a higher energy output due to a more complete reaction, the respondent, referring to D14, calls into question that the effects indicated in paragraph [0012] can be achieved over the whole scope of the protection defined in broad terms by claim 1.

This point of discussion, however, does not need to be settled, since it will be shown in the following that the subject-matter of claim 1 is obvious in view of D5 as the closest prior art even when the arguments of the appellant are accepted.

4.8 Thus, if, for the sake of argument, the arguments of the appellant are accepted, the objective technical problem can be formulated as the provision of a shaped charge liner requiring less activation energy and

achieving a higher energy output due to a more complete reaction.

4.9 The activation energy required to start a chemical reaction and the amount of energy achievable by the reaction is a general property of the reactants and does not depend on the intended use of the reaction. Hence, the skilled person confronted with the above problem would not merely consult documents dealing with shaped charge liners but would also consult documents dealing in general with the same type of chemical reaction, i.e. documents referring to shock-induced reactions of Ni and Al, such as D12 and D13.

4.10 Document D12 relates in general to the same field of shock-induced reactions and discloses the use of the same material combination (Ni, Al) as the closest prior art D5. Thus, contrary to what the appellant contends, D12 would be considered by the skilled person.

This assessment is also confirmed by the documents submitted by the appellant in the appeal proceedings, since document D12 was cited as reference [2] in the context of shaped charge liners in post-published document D17a (i.e. D15).

D12 particularly aims at promoting the energetic response of shock-induced chemical reactions between Ni and Al; see the last paragraph of chapter 3. It describes in chapter 6.2, first two paragraphs, in general the same advantages as those referred to in paragraph [0012] of the patent. D12 in particular teaches that the tendency for reaction is increased when a particulate composition of irregular morphology is used, due to "smearing" of the spherical Al-particles by the flake-shaped harder Ni-particles; see

also the left-hand column on page 1497, third paragraph, and chapter 7, "Conclusions".

A similar teaching is provided in chapter 5.1 of D13 in the same technical context of shock-induced reactions by particulate compositions comprising Ni and Al:

"These results, consistent with the present observations, indicate that an irregular type of powder morphology (flaky powders) **reacts more readily** than a regular, more uniform type of powder morphology (i.e. rounded or spherical type). With the increased flow and mixing seen in the irregular morphology, the **tendency for reaction is increased**" (emphasis added by the Board).

- 4.11 For the skilled person starting from D5 and confronted with the problem of increasing the reactivity of the reactive charge, D12 and D13 therefore provide at least a strong incentive to use spherical aluminium particles and flaky nickel particles in order to increase the surface area of aluminium and, as a consequence,
- a) reduce the energy required to start the reaction,
 - b) achieve a more complete reaction and, as the immediate consequence of that,
 - c) obtain a higher energy output.
- 4.12 The appellant argues in this regard that the patent and D5 belong to the field of "unpredictable arts" and that the skilled person would therefore not expect it to be possible to simply apply the teaching of D12 and D13 in the context of D5.
- 4.12.1 However, shock-induced reactions are known in the art and D12 and D13, as well as the post-published document D15 (D17a; see, in particular, page 031701-1, right-

hand column, second paragraph), demonstrate that in particular the shock-induced reaction of nickel and aluminium is known to and well understood by the skilled person. Therefore, contrary to the appellant's argument, the chemical reaction underlying the working principle of D5 and the patent is not completely unpredictable.

- 4.12.2 The appellant contended that the skilled person would not take into account the teaching of D12 or D13 since the effects they report have been observed with bulk material and not with a compressed green body required for a shaped charge liner.

However, D13 and D12 report that the experiments were performed with a compacted powder mixture having a density of 60% (see D12, page 1500, left-hand column, lines 5 and 6; TMD stands for Theoretical Maximum Density) and 65% (see D13, page 2906, right-hand column, lines 8 and 9), which corresponds to the density of 60% used for the example of the patent in paragraph [0067] illustrating a shaped charge liner. Hence, the specific experimental details leading to the conclusions in the patent on the one hand and in the prior art D12 and D13 on the other do not contradict each other either.

- 4.12.3 Furthermore, the appellant has not identified any major difference between the test equipment described in the example of the contested patent and that reported in the experimental section of D12 and D13 which could possibly give rise to any doubt that the effects reported in D12 and D13 could be used in the context of shaped charge liners.

4.12.4 D16 indicates in paragraph 37 that the skilled person is well aware that the performance of a shaped charge liner is dependent on various parameters. This expert opinion reported in D16 is presented in the context of the question of whether it would be obvious to incorporate 40 wt.-% of at least one other metal into a reactive liner material.

The situation addressed in D16 thus fundamentally differs from the one at issue here. After all, D5, D12 and D13 all belong to the same technical field of shock-induced reactions and refer to exactly the same chemical reactants. Applying the teaching of D12 and D13 to a shaped charge liner according to D5 therefore does not require any fundamental change to the reactive system, in particular a change to the composition of the reactive components of the shaped charge liner, contrary to the case discussed in D16.

4.12.5 Hence, the appellant has not demonstrated by verifiable facts that the skilled person could not expect, in view of common general knowledge or a specific teaching in D12 or D13, that the effects disclosed in D12 and D13 can be achieved in a shaped charge liner according to D5.

4.13 The appellant further pointed out that D4 discloses further options to influence the activation energy. However, the mere fact that another document such as D4 proposes further obvious ways of solving a possible technical problem does not change the argument starting from D5 in view of D12 and D13. An obvious solution to a problem remains obvious even if further solutions might also exist.

4.14 In summary, the arguments of the appellant do not cast doubt on the finding in the contested decision that the subject-matter of claim 1 of the main request is obvious in view of D5 as the closest prior art.

5. Article 100(a) EPC in combination with Article 56 EPC - auxiliary request 5

Claim 1 of auxiliary request 5 refers to a method of completing an oil or gas well using perforators comprising the liner of the main request.

Similarly, D5 refers in claim 24 to the following method:

"A method of completing an oil or gas well using one or more shaped charge liner according to any one of claims 1-20".

Hence, the features distinguishing the subject-matter of claim 1 of auxiliary request 5 from the method disclosed in D5 are the same ones as in the corresponding product claim 1 of the main request.

The appellant argued, in line with the summary of its arguments in point II.21.2 of the contested decision, that, due to the change of claim category, the skilled person and the objective technical problem would also change.

This argument is not convincing, however. No reason has been provided as to why the imaginary skilled person aiming at a method of completing an oil or gas well using one or more shaped charge liners should have fundamentally different knowledge from the skilled person providing the shaped charge liner.

Moreover, the Board cannot see any reason why, when starting from the same closest prior art and confronted with the same distinguishing feature, the objective technical problem would significantly change when considering a method of completing an oil or gas well using one or more shaped charge liners according to claim 1 of auxiliary request 5 instead of a reactive oil and gas well shaped charge perforator liner according to claim 1 of the main request.

It follows that the objective technical problem to be solved by claim 1 of auxiliary request 5, which is to be derived from the distinguishing feature, is essentially the same as for the main request.

The subject-matter of claim 1 of auxiliary request 5 therefore lacks an inventive step for the same reasons as claim 1 of the main request, in line with the finding in point II.21.3 of the contested decision.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairwoman:



C. Spira

E. Kossonakou

Decision electronically authenticated