

Internal distribution code:

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

**Datasheet for the decision
of 6 February 2024**

Case Number: T 1239/20 - 3.2.06

Application Number: 10816814.7

Publication Number: 2479407

IPC: F01D25/28

Language of the proceedings: EN

Title of invention:

MOUNTING/DISMOUNTING JIG FOR COMBUSTOR TAIL PIPE AND TAIL PIPE
INSTALLATION METHOD

Patent Proprietor:

Mitsubishi Hitachi Power Systems, Ltd.

Opponent:

Ansaldo Energia Switzerland AG

Headword:

Relevant legal provisions:

EPC Art. 123(2), 54(3)

Keyword:

Amendments - added subject-matter (no)
Novelty - implicit disclosure (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 1239/20 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 6 February 2024

Appellant: Ansaldo Energia Switzerland AG
(Opponent) Römerstrasse 36
5401 Baden (CH)

Representative: DREISS Patentanwälte PartG mbB
Postfach 10 37 62
70032 Stuttgart (DE)

Respondent: Mitsubishi Hitachi Power Systems, Ltd.
(Patent Proprietor) 3-1, Minatomirai 3-chome
Nishi-ku
Yokohama-shi, Kanagawa 220-8401 (JP)

Representative: Henkel & Partner mbB
Patentanwaltskanzlei, Rechtsanwaltskanzlei
Maximiliansplatz 21
80333 München (DE)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
20 March 2020 concerning maintenance of the
European Patent No. 2479407 in amended form.**

Composition of the Board:

Chairman P. Cipriano
Members: M. Dorfstätter
J. Hoppe

Summary of Facts and Submissions

- I. An appeal was filed by the appellant (opponent) against the interlocutory decision of the opposition division finding, account being taken of the amendments made by the patent proprietor during the opposition proceedings, that European patent No. 2 479 407 met the requirements of the EPC.
- II. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent be revoked.
- III. The respondent (patent proprietor) requested that the appeal be dismissed (main request) or, as an auxiliary measure, that the patent be maintained in amended form based on auxiliary request 1 or 2, filed with the reply to the grounds of appeal.
- IV. The following documents are relevant for the present decision:
- | | |
|----|--------------------|
| D1 | EP 2 256 318 A1 |
| D2 | W0 2009/119 149 A1 |
- V. The Board issued a summons to oral proceedings and a subsequent communication in which it indicated, *inter alia*, that claim 1 of the main request seemingly did not contain subject-matter that extended beyond the content of the application as filed. Furthermore, it provisionally saw D1 and D2 as not depriving claims 1 and 7 of novelty. The Board also stated that it failed to see any relevance of the discussion of the validity

of the priority of the contested patent in view of it possibly not being the first filing.

- VI. Oral proceedings were held before the Board on 6 February 2024.
- VII. At the close of the oral proceedings, the parties confirmed their requests.
- VIII. Claim 1 of the main request reads as follows (with the feature-by-feature analysis as referred to in the statement of grounds of appeal):
 - F1 "A tail cylinder attaching and detaching fixture (10; 110) for attaching and detaching a tail cylinder (3) of a combustor (1) to and from a casing (4) of a gas turbine (200), the tail cylinder attaching and detaching fixture (10; 110) comprising:
 - F1.1 a guide portion (11; 70; 80; 111) of which a front end (11f; 111a) is arranged to be disposed inside the casing (4)
 - F1.2 and the front end (11f; 111a) and a base end (11g; 111b) are respectively arranged to be supported by the casing (4),
 - F1.3 wherein the guide portion (11; 70; 80; 111) is arranged to support the tail cylinder (3) so as to be movable in the axial direction (L) of the combustor (1),
 - F1.4 an advancing and retracting mechanism (13; 50; 113) that is arranged to advance and retract the tail cylinder (3) supported by the guide portion (11; 70; 80; 111) in the axial direction (L), and
 - F1.5.1 a support pin (22)

- F1.5.2 that is provided in the front end (11f; 111a) of the guide portion (11; 70; 80; 111) and
- F1.5.3 is arranged to be fitted to a concave portion (4c) provided inside the casing (4) and
- F1.5.4 to support the front end (11f; 111a) of the guide portion (11; 70; 80; 111) when the support pin (22) is fitted to the concave portion (4c)."

IX. Claim 7 of the main request reads as follows (with the feature-by-feature analysis as referred to in the statement of grounds of appeal):

- F7 "A tail cylinder attaching method of inserting a tail cylinder (3) of a combustor (1) into a casing (4) so that a front end of the tail cylinder (3) is connected to an inlet portion (203a) of a combustion gas passageway (203), the tail cylinder attaching method comprising:
 - F7.1 inserting a guide portion (11; 70; 80; 111), which is arranged to support and to move the tail cylinder (3) in the axial direction (L) of the combustor (1), from the front end (11f; 111a) of the guide portion (11; 70; 80; 111) into the casing (4);
 - F7.2 supporting the front end (11f; 111a) and a base end (11g; 111b) of the guide portion (11; 70; 80; 111) to the casing (4) so that
 - F7.3 the guide portion (11; 70; 80; 111) extends in the axial direction (L) of the combustor (1),
 - F7.3.1 where a support pin (22) is provided in the front end (11f; 111a) and is fitted to a concave portion (4) provided inside the casing (4);

- F7.4 attaching the tail cylinder (3) to the guide portion (11; 70; 80; 111);
- F7.5 moving the tail cylinder (3) along the guide portion (11; 70; 80; 111) toward the front end (11f; 111a) thereof; and
- F7.6 connecting the tail cylinder (3) to the inlet portion (203a) of the combustion gas passageway (203)."

X. The appellant's arguments may be summarised as follows.

Claim 1 did not fulfil the requirement of Article 123(2) EPC as it defined subject-matter extending beyond the content of the application as filed. From the original application, it could not be derived that the pin supported the front end of the guide portion.

In addition, the subject-matter of claim 1 was not novel over D1 or D2.

D1 implicitly disclosed feature F1.4 as it was clear to a skilled person that a crane with wires was normally present in a machine room in which the fixture of D1 was to be used. Such a crane and wire was encompassed by feature F1.4 and was in fact shown in Figure 32 of the contested patent as an embodiment of the invention.

Furthermore, feature F1.5.3 did not require that the concave portion be present on the claimed fixture. It could reasonably be considered that the pin of D1 could be fitted in a concave portion. In any case, D1 implicitly disclosed a concave portion into which the pin was fitted.

The subject-matter of claim 7 was not novel over D1 or D2. With regard to feature 7.3.1, D1 implicitly

disclosed a casing with a support having a concave portion, the pin being fitted into the concave portion.

D2 was the PCT publication from which D1 originated. Since D2 already showed all features of claims 1 and 7 of the contested patent, this was not the first filing, and the priority right had already been exhausted. The priority of the opposed patent was thus invalid, and D2 constituted prior art under Article 54(2) EPC.

XI. The respondent's arguments may be summarised as follows.

Claim 1 of the main request did not contain subject-matter extending beyond the content of the application as filed. Claim 1 was effectively a combination of the features of originally filed claims 1 and 2. It was clear from the term "support pin" alone that the pin 22 had a supporting function. Guiding was only an additional function of the pin.

The subject-matter of claims 1 and 2 of the main request was novel over D1 and D2. None of features F1.3, F1.4 and F7.3.1 was shown in D1 or D2.

The figures of D1 and D2 were highly schematic. Neither the structure of the holding member 54 nor the structure of the guide jig support 41 could be derived from these drawings. Nor were any details thereof described in D1 or D2. D1 did not disclose that the guide jig support 41 comprised a concave portion to which the pin was fitted. Feature F7.3.1 was therefore not disclosed in D1 or D2.

Furthermore, an advancing and retracting mechanism was not an implicit part of the fixture of D1. Feature F1.4 was therefore not disclosed in D1 or D2.

Since the subject-matter of claims 1 and 7 was novel over the disclosure of D1 and D2, the contested patent was the first filing, and the priority right was not exhausted.

Reasons for the Decision

Main request

1. Article 123(2) EPC - claim 1

Claim 1 of the main request does not contain subject-matter which extends beyond the content of the application as filed.

- 1.1 The appellant argued that feature F1.5 of claim 1 of the main request defined that it was the support pin that supported the front end of the guide portion and that this was not derivable from the application as filed. Paragraph [0011] of the originally filed description referred to a first embodiment which did not have a pin, while paragraph [0013] related to a further embodiment with pins, but it was nowhere suggested that the pin supported the front end of the guide portion. Instead, and as explained in paragraph [0014], the pins were provided as an easy way to attach the front end evenly inside a narrow casing. The pin thus merely had a guiding function.

This is not convincing. The fact that the support pin has an additional guiding function does not exclude

that, first and above all, the support pin acts as a support, as is already suggested by its designation as a "support pin". It is true that (as argued by the appellant) there is no explicit mention in paragraph [0013] of a support function of the support pin. This is, however, not the alleged basis for claim 1 of the main request, at least not the only one. In contrast, the Board finds basis in claim 2 as filed, as is explained below.

1.2 As argued by the respondent, the subject-matter of claim 1 of the main request is unambiguously derivable from claims 1 and 2 as filed. Being formulated in the passive voice, the additional features of claim 2 as filed do not include an explicit statement as to which part actually supports the front end of the guide portion. The following statements are made:

- a support pin is provided in the front end of the guide portion
- [the support pin being provided] so as to be fitted to a concave portion provided inside the casing
- the front end of the guide portion is supported ...
- ... in a manner such that the support pin is fitted to the concave portion

These statements must not, however, be read in isolation. They complement each other, leading the Board to the understanding that it must be the support pin that supports the front end of the guide portion for the following reasons.

1.2.1 The formulation "so as to be fitted to a concave portion" relates to the provision of the support pin in the front end of the guide portion for a particular purpose, namely the fitting to a concave portion. As mentioned above, this neither defines nor excludes a further purpose of the support pin.

- 1.2.2 The formulation "supported in a manner such that" relates how the front end of the guide portion is supported to its result, namely that the support pin is fitted to the concave portion. Again, this neither defines a support function of the support pin nor excludes it.
- 1.2.3 In other words, without an explicit statement in claim 2 on what supports the front end of the guide portion, the claim leaves it to the reader to interpret why the support pin was given a designation relating to some kind of support. One interpretation is, of course, that the support pin was given its name because it supports the front end of the guide portion. To regard this interpretation as an implicit feature, it must be clear that there is no other interpretation possible. If an alternative interpretation were feasible, this interpretation could not be regarded as implicit.
- 1.3 The Board is unable to find an alternative interpretation of the term "support pin" other than that the support pin supports the front end of the guide portion. Upon having been asked during the oral proceedings before the Board what else the function of the support pin could be, the appellant came up with a threefold answer: it stated that it could act as a stop, it could act as a guide having a centring function, or it could support the entire device.

This does not change the Board's finding. Firstly, acting as a stop or a guide is not contradictory to having a further support function. To the contrary, to work as a stop or a guide, the pin would necessarily abut against the concave portion and thus also have a supporting function. Secondly, if the support pin were

provided to support the entire device, this would inevitably result in it supporting the front end of the guide portion since this is the location at which the support pin is provided, as is defined in feature F1.5.2.

- 1.4 The Board's understanding is also corroborated by the description. As referred to by the respondent, the following is stated in paragraph [0014] of the application as filed (after the support pin was introduced in the preceding paragraph):

"In this case, since the support pin of the front end of the guide portion inserted into the casing is only inserted and fitted to the concave portion in order to support the front end of the guide portion, it is possible to easily attach the front end of the guide portion even inside the narrow casing" (emphasis by the Board).

The appellant further argued that the word "only" limited the function of the support pin to the support of the front end of the guide portion, while the respondent interpreted that "only" related to "inserted and fitted". Be that as it may, the Board considers that this part of the interpretation is not relevant for deciding the case and can be left unanswered because in any case paragraph [0014] unmistakably relates the support pin to the function of supporting the front end of the guide portion. As this is anyway how claim 2 of the application as filed is interpreted by the Board, paragraph [0014] merely confirms this understanding, independently of whether the word "only" refers to "inserted and fitted" or "in order to support".

1.5 The Board thus concludes that although the function of the support pin to support the front end of the guide portion is not explicitly defined in claim 2 as filed, this claim nevertheless unambiguously discloses this function due to its designation as a "support pin", its interrelation with the other features of claim 1 as filed and the explanations in paragraph [0014] corroborating this understanding.

1.6 The requirement of Article 123(2) EPC is thus fulfilled.

2. Novelty - claim 1

D1 does not deprive the subject-matter of claim 1 of novelty (Article 54(3) EPC) as it lacks the disclosure of an advancing and retracting mechanism (feature F1.4).

2.1 The appellant's argument that D1 implicitly disclosed feature F1.4 is not accepted. The Board acknowledges that it may be clear to a skilled person that a crane with wires, such as the one disclosed in Figure 32 of the patent specification, is *normally* present in a machine room in which the fixture of D1 is to be used. The Board also acknowledges that such a crane and wire is encompassed by feature F1.4. However, there is no *direct and unambiguous* disclosure of a crane or a wire in D1, neither explicitly nor implicitly.

2.2 The appellant further argued that the skilled person was aware that the components of D1 were so big that they were not moved by hand, an advancing and retracting mechanism thus being implicit.

This, however, is not the standard for implicit disclosure. When reading in D1 the several junctures at which it is stated that the combustor transition piece 33 is "moved", a skilled person might think of how they could do this. They might think of a mechanism which would reduce the individual force or the number of workers needed for moving the heavy component. This thinking is, however, not part of the disclosure of D1 but would require a further consideration involving the knowledge of the skilled person reading D1. The use of a mechanism is not the only possibility that the skilled person is aware of when thinking of a way to move the combustor transition piece in D1. From a technical point of view, moving the heavy component manually is not excluded. It may not be the most sensible choice for the skilled person, but if no other means is available, or in an emergency situation, it is technically feasible that several workers could team up to move the combustor transition piece 33 along the guide jig 50.

- 2.3 The appellant further argued that D1 implicitly defined that the combustor transition piece was moved by a mechanical means by referring to a control scheme in paragraphs [0046], [0049] and [0050].

This is not accepted either. D1 describes a method of attaching a combustor transition piece to a combustor casing. It refers to the method steps as being part of this method. The mere reference to a "control" does not imply the use of a particular means. Controlling can also be done by a person supervising the workers on site.

- 2.4 The strict standard for implicit disclosure that nothing else other than moving the combustor transition

piece by an advancing and retracting mechanism could potentially form part of the subject-matter disclosed in D1 is thus not fulfilled.

2.5 As regards feature F1.5.3, the Board considers this to be present in D1. Claim 1 merely defines that the support pin is "arranged to be fitted to a concave portion provided inside the casing". Neither the casing nor the concave portion form part of the claimed entity (this being a fixture). The Board thus interprets feature F1.5.3 ("arranged to be...") as merely relating to the suitability of the support pin to be fitted to a concave portion. The Board is unable to arrive at a shape or type of pin which would not be apt for this purpose such that it concludes that the protrusion referred to as "combustor-casing side support 56" in D1 constitutes a "support pin" that is "arranged to be fitted to a concave portion provided inside the casing". The respondent has also not suggested any. This finding is independent of whether there is a concave portion inside the casing shown in D1.

2.6 The Board thus concludes that the subject-matter of claim 1 is novel over D1 due to D1 not disclosing feature F1.4.

2.7 D2 is the publication of the PCT application that originated D1. The appellant did not present separate arguments on novelty over D2. The Board considers the disclosure of D2 to be identical to the disclosure of D1 and thus arrives at the same conclusion that the subject-matter of claim 1 is also novel over D2.

3. Novelty - claim 7

D1 does not deprive the subject-matter of claim 7 of novelty (Article 54(3) EPC) as it lacks unambiguous disclosure of a support pin fitted to a concave portion provided inside the casing (feature F7.3.1).

3.1 The appellant's argument that D1 implicitly disclosed a casing with a support having a concave portion is not accepted. The Board acknowledges that in D1 the guide jig support 41 (as, *inter alia*, depicted in Figures 7 and 10A) interacts with the combustor-casing side support 56. This combustor-casing side support 56 is regarded as representing a support pin as in claim 1 of the contested patent. However, it cannot be derived from D1 whether the guide jig support 41 has a concave portion. No statement can be found in the description about the shape of the guide jig support. As argued by the respondent, it could be flat or in the form of a bottomless ring, neither of which would be considered "concave" by the skilled person.

The Board concurs with the respondent that the term "concave portion" implies a hollow shape having a bottom. However, from the drawings of D1, it can neither be deduced whether the guide jig support 41 is hollow nor whether it has, if it were hollow, a bottom. In fact, and contrary to the arguments of the appellant, a support having a concave portion or any detail of the internal structure of the guide jig support 41 cannot be derived from these drawings at all.

3.2 With no concave portion being directly and unambiguously derivable from D1, feature F7.3.1

defining that the support pin is fitted to the concave portion is not present in D1.

3.3 The Board thus concludes that the subject-matter of claim 7 is novel over D1.

3.4 The parties did not present separate arguments on novelty over D2. The Board considers the disclosure of D2 identical to D1 and thus arrives at the same conclusion that the subject-matter of claim 7 is also novel over D2.

4. Priority

4.1 The appellant argued on page 11 of its statement of grounds of appeal that the priority of claim 1 of the main request was invalid due to it not being the first filing of its subject-matter. D2 was thus prior art under Article 54(2) EPC.

This is not convincing. As explained in point 6 of the Board's communication, and since the Board found the subject-matter of claim 1 of the main request to be novel over D1 and D2, these documents cannot be considered the first filing of such subject-matter. Therefore, the appellant's arguments cannot cast doubt on the validity of the priority of claim 1 of the main request.

4.2 As a consequence, D1 and D2 are prior art under Article 54(3) EPC only. They are thus only relevant for novelty.

5. None of the objections on which the appellant based its appeal is thus convincing. The subject-matter of claims 1 and 7 of the main request meets the requirements of

Article 54 EPC, and the main request is therefore allowable.

Auxiliary requests

6. Since the respondent's main request is allowable, there is no need to deal with the auxiliary requests.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



D. Grundner

P. Cipriano

Decision electronically authenticated