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**Datasheet for the decision
of 23 October 2018**

Case Number: T 1816/14 - 3.2.03

Application Number: 99933142.4

Publication Number: 1026223

IPC: C10B57/04

Language of the proceedings: EN

Title of invention:

METHOD FOR PRODUCING METALLURGICAL COKE

Patent Proprietor:

JFE Steel Corporation

Opponent:

Tata Steel Nederland Technology BV

Headword:

Relevant legal provisions:

EPC Art. 83, 111(1)

Keyword:

Sufficiency of disclosure - undue burden (no)
Appeal decision - remittal to the department of first instance
(yes)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1816/14 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 23 October 2018

Appellant: JFE Steel Corporation
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Representative: Grünecker Patent- und Rechtsanwälte
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Respondent: Tata Steel Nederland Technology BV
(Opponent) Wenckebachstraat 1
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Representative: Blauw, Frans Gerard
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 2 July 2014
revoking European patent No. 1026223 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman G. Ashley
Members: B. Miller
G. Weiss

Summary of Facts and Submissions

- I. European patent No. 1 026 223 relates to a method for producing metallurgical coke.
- II. The opposition division revoked the patent on the ground of opposition pursuant to Article 100(b) EPC.
- III. This decision was appealed by the patent proprietor (the appellant).

The appellant requested that the decision under appeal be set aside and the case be remitted to the first instance for assessing patentability.

- IV. The opponent (the respondent) requested that the appeal be dismissed.
- V. The sole independent claim of the patent as granted reads as follows:

"A method of producing coke for metallurgy by blending plural brands of raw coals to form a coal blend and carbonizing it in a coke oven, wherein the coal blend comprises

60 - 95 wt% of one or more medium coking coals having
a mean reflectance (R_0) as a coalification degree
of 0.9 - 1.1%,
a maximum fluidity (MF) as a coking property of not
more than 3.0 log ddpm,
a content of inert component of not less than 30%,
and

5 - 40 wt% of:

a high coalification hard coking coal and/or a high coalification medium coking coal having a coalification degree higher than that of the medium coking coal, or

a middle-high fluidity hard coking coal and/or a middle-high fluidity medium coking coal having a maximum fluidity (MF) larger than that of the medium coking coal,

wherein the middle-high fluidity hard coking coal and medium coking coal are coals having a maximum fluidity (MF) of not less than 3.0 log ddpm."

Claims 2 to 3 relate to preferred embodiments of the method according to claim 1.

VI. State of the art

The following documents were cited in the appeal proceedings:

- A1: Decision in opposition proceedings of EP 1 142 978;
- A2: Patent specification EP 1 142 978 B1;
- A3: English translation of JP-53-108103;
- A4: Textbook "The Making, Shaping and Treating of Steel", pages 106 to 134;
- A5: Figures from the "Steel Handbook", third edition, 1979, with English translations;
- A6: English translation of JP-A-S54-1 17501;
- A7: The Monograph on Coal & Coke at Tata Steel, 1992;
- A8: Proceedings of the 3rd International Ironmaking Congress, Gent, Belgium, September 16 to 18, 1996;
- D1: "The Blending Design Using Many Kinds of Coal and the Evaluation System for Single Coal"; Myiazu, T., Okuyama, Y., Fukuyama, T., and Suzuki, N., Nippon

Kokan Technical Report - Overseas, December 1975;
D4: "COKE: Quality and Production", Roger Loison,
Pierre Foch, André Boyer, 2nd edition, 1989,
pages 201 to 217.

- VII. With the summons to oral proceedings, the Board issued a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA) indicating to the parties its preliminary, non-binding opinion of the case, in particular that the Board tends to consider that the method defined in claim 1 is sufficiently disclosed to enable the skilled person to obtain a blend of coal for producing metallurgical coke as defined in claim 1.
- VIII. With a letter dated 19 October 2018 the respondent informed the Board that it would not attend the oral proceedings scheduled for 23 October 2018 and would not make use of the opportunity to comment on any of the objections raised during the proceedings.
- IX. Oral proceedings were cancelled and the appeal proceedings continued in writing.
- X. The appellant's arguments can be summarised as follows.

Claim 1 was not directed to a method for producing coke having a specific strength, but referred to a method which was defined by the use of a specific coal blend. The contested patent provided detailed information for forming the coal blend. Moreover, for reworking the method of claim 1 any coking oven could be used and conventional coking conditions applied. The skilled person was therefore not confronted with an undue burden in reworking the method of claim 1.

XI. The respective arguments of the respondent can be summarised as follows.

The contested patent aimed at the provision of a high strength coke. The coke strength was influenced not only by the coal blend but also by the conditions applied during the coking step. The coking conditions were not defined in the contested patent. Therefore, the skilled person was confronted with an undue burden to select the appropriate conditions for achieving the required high strength coke.

Reasons for the Decision

1. Admissibility of D4

The respondent submitted D4 for the first time in appeal proceedings with its letter dated 20 March 2015. D4 is a textbook dealing with the scientific and technical basis of coke manufacture and provides a detailed account of the physical and chemical mechanism occurring in coke oven chambers. Hence it reflects the general knowledge of the skilled person on the technical subject-matter underlying the contested patent. Furthermore, D4 is filed in view of the assertions made by the appellant in its statement setting out the grounds of appeal as evident from the arguments presented by the respondent in the reply to appeal on pages 1 and 2.

Therefore, the Board sees no reason to hold D4 inadmissible under Article 12(4) RPBA. Consequently, it is admitted into the proceedings.

2. Article 100(b) EPC

2.1 The contested patent aims at the provision of a coke having high strength ([0012]). One important factor influencing the coke quality is the material to be used for the coking process. This is addressed by the contested patent by proposing in claim 1 a method for producing coke in which a specific coal blend is to be used.

2.2 In the impugned decision (point 3) it is concluded that the invention underlying the contested patent was insufficiently disclosed, since the coking oven operating conditions, which have an impact on the coke quality, were not disclosed. Therefore, in the absence of a specific complete working example, the skilled person was faced with an undue burden in trying to obtain a high strength coke. Likewise the respondent argues that the quality of the coke is not only influenced by the choice of coal but also by the coking conditions as evidenced by D4 (chapter 5).

2.3 However, claim 1 does not define a method of producing coke of a high strength or coke of a specific, absolute strength but defines a method for producing metallurgical coke in general. In fact the strength of the coke to be produced is not defined in claim 1 of the contested patent.

As a consequence thereof, when focusing on the reworkability of the method defined in claim 1, it is not relevant whether or not a coke of high strength can be produced, contrary to the arguments in the reasons of the contested decision.

2.4 The question which needs to be answered in view of the method as defined in claim 1 is whether or not the skilled person can obtain a blend of the various coals identified in claim 1 and can achieve a coke for metallurgy by using a standard oven and using standard coking conditions.

2.5 The contested patent describes in paragraphs [0020] to [0026] and in examples 1 to 3 in detail the coals to be selected for obtaining the specific coal blend according to claim 1. The respondent has not questioned in this regard that a blend of coals defined in claim 1 can be obtained.

The reasons presented in the contested decision do not cast any doubt that the ordinary expert in this field, i.e. an engineer with practical experience in the making of coke, is able to operate a conventional coking furnace, filled with the blend of coal defined by claim 1. Likewise, the respondent has not argued that the skilled person is unable to achieve a metallurgical coke in a conventional coking oven when using the coal blend defined in claim 1.

Considering documents, such as A4 submitted by the appellant or D4 submitted by the respondent, it becomes evident that the coking process is a well known process. Standard text books such as A4 and D4 provide guidance to the skilled person on how coking is carried out, and in particular which factors influence the properties of the coke obtained by the coking process.

Therefore, in line with established case law (see Case law of the Boards of Appeal, 8th edition, 2016, Chapter II.C.3.1) it is concluded by the Board that it is not

necessary to explain all possible details of the generally known coking process when describing a method of producing coke.

2.6 Apart from arguments that multiple factors contribute to the final strength of the coke, no further arguments have been presented by the respondent which can cast any doubt that a blend of coal as defined in claim 1 can be obtained by the skilled person and can be converted into coke.

2.7 Consequently, the Board judges that the method defined in claim 1 is sufficiently disclosed to enable the skilled person to produce metallurgical coke by using a blend of coal as defined in claim 1, and therefore that the subject-matter of the claims as granted fulfils the requirements of Article 83 EPC.

3. Remittal

The Board has only decided on the issue of sufficiency of disclosure, which was the basis of the impugned decision.

The opposition division has yet to decide upon the issues arising from the grounds of opposition pursuant to Article 100(a) EPC, namely novelty and inventive step.

Under these circumstances, it is not appropriate for the Board to conduct a complete appraisal for the first time of novelty and inventive step.

The Board therefore decides to remit the case to the opposition division for further prosecution pursuant to

Article 111(1) EPC following the request of the appellant.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



C. Spira

G. Ashley

Decision electronically authenticated