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D E C I S I O N
of 6 June 2000

Case Number: T 0316/98 - 3.2.1
Application Number: 92201124.2
Publication Number: 0509610
IPC: B21K 1/28, B60B 3/02

Language of the proceedings: EN

Title of invention:
Procedure for production of vehicle wheels

Patentee:
NORSK HYDRO A/S

Opponent:
THYSSEN INDUSTRIE AG

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
-



Case Number: T 0316/98 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 6 June 2000

Appellant: THYSSEN INDUSTRIE AG
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Representative: Pollmeier, Felix, Dipl.-Ing.
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Respondent: NORSK HYDRO A/S
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Representative: Bleukx, Luc
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 27 January 1998
rejecting the opposition filed against European
patent No. 0 509 610 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: F. Gumbel
Members: S. Crane
J. van Moer

Summary of Facts and Submissions

- I. European patent No. 0 509 610 was granted on 13 December 1995 on the basis of European patent application No. 92 201 124.2.

Claim 1 of the granted patent reads as follows:

"A procedure for producing a one-piece light metal vehicle wheel (18) consisting of hub (19) and a rim portions (14,15), where in a first step a substantially disc-shaped crude material is produced from a cast billet or a similar rounded, solid (1) metal body, in a third step splitting off of the outer portion of a preformed material (2), and in a fourth step forming the rim surface (14,15) by spin forging the outer, split-off rim (14,15) portions (10,11), characterized in that the second step includes heating crude material (1) to a hot rolling temperature and subsequently orbitally rolling the crude billet so as to obtain the rotationally symmetric preformed material (2)."

Dependent claims 2 to 4 relate to preferred embodiments of the procedure according to claim 1.

- II. The granted patent was opposed by the present appellants on the grounds that its subject-matter lacked inventive step (Article 100(a) EPC). They requested revocation of the patent in its entirety. As state of the art they relied upon *inter alia*:

(D1) Technical Information 1/88 of Thyssen Maschinenbau GmbH entitled "Precision forgings produced on axial closed-die rolling lines".

(D3) US-A-3 822 458.

- III. With its decision posted on 27 January 1998 the Opposition Division rejected the opposition.
- IV. A notice of appeal against this decision was filed on 27 March 1998 and the fee for appeal paid at the same time. The appellants (opponents) requested that the decision of the Opposition Division be set aside and the patent revoked in its entirety.

The statement of grounds of appeal was filed on 8 June 1998.

The appellants argued that in the light of document D1 and common general knowledge it was obvious to replace the hot pressing step of the method known from document D3, on which the preamble of claim 1 was based, by orbital rolling at a hot rolling temperature as defined in the characterising clause of the claim.

The appellants submitted as further evidence of what was generally known to the person skilled in the art of working metals the document D6/I to D6/IV and D7.

- V. In a short reply received on 18 December 1998 the respondents (proprietors of the patent) stated that the prior art cited in the notice of opposition had been discussed at length in the contested decision and that there was no need at this juncture to repeat this argumentation. The request to maintain the patent in unamended form was maintained. For the case that the newly cited documents were considered as being of such relevance that the contested decision should be reversed, it was requested that the matter be remitted

to the Opposition Division.

- VI. In a communication posted on 15 November 1999 the Board explained its preliminary view that there was no doubt that document D1 belonged to the state of the art and that having regard to this document and document D3 the subject-matter of claim 1 lacked inventive step. Revocation of the patent by way of a written procedure would therefore have to be reckoned with.

The respondents did not reply to this communication.

Reasons for the Decision

1. The appeal complies with the formal requirements of Articles 106 to 108 and Rules 1(1) and 64 EPC. It is therefore admissible.

2. In the method according to document D3, on which the preamble of granted claim 1 is based, the preform shown in Figure 5 is formed in two steps from a cylindrical cast blank, see column 5, lines 33 to 42. In the first of these steps the cast blank is hot pressed into a bowl- or plate-shaped blank with a thickened rim. In the second of the steps the latter blank is die pressed into the desired preform configuration. That second step is equivalent to the optional step portrayed in Figures 2(a) and 2(b) of the present patent which may be employed between the orbital rolling and the rim splitting step. Thus the issue of inventive step resolves to the question of whether it was obvious to use orbital rolling at a hot rolling temperature to replace the hot pressing step of document D3. Here the appellants rely on document D1, which is a technical

information bulletin concerning their axial closed-die rolling machines which use the principle of orbital rolling as defined in the patent. The Board can see no reason to doubt that this bulletin (numbered 1/88) was freely available to the potential customers of the appellants before the priority date of the present patent, see for example the letter to a customer dated 31 July 1989 in which the bulletin is mentioned as being enclosed, and therefore belongs to the state of the art. On the basis of the information given in the bulletin it can be seen that orbital rolling, which is inherently a hot forming process, was an eminently suitable technical option for making rotationally symmetrical preforms which was at the disposal of the person skilled in the art. The selection of this technique for use at the relevant stage in the overall manufacturing method proposed in document D3 was therefore an obvious choice for the person skilled in the art and accordingly does not involve an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

S. Fabiani

F. Gumbel