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D E C I S I O N
of 29. November 2005

Case Number: T 0837/02 - 3.2.04

Application Number: 97121790.6

Publication Number: 0849448

IPC: F02B 23/06

Language of the proceedings: EN

Title of invention:
Piston having combustion bowl

Patentee:
Cummins Inc.

Opponent:
Mahle International GmbH

Headword:
-

Relevant legal provisions:
EPC R. 55(c), 56(1)

Keyword:
"Admissibility of opposition based on public prior use - no"

Decisions cited:
T 0222/85, T 0328/87, T 0093/89

Catchword:
-



Case Number: T 0837/02 - 3.2.04

D E C I S I O N
of the Technical Board of Appeal 3.2.04
of 29. November 2005

Appellant: Mahle International GmbH
(Opponent) Pragstr. 26-46
D-70376 Stuttgart (DE)

Representative: Pfusch, Volker
Patentanwälts-Partnerschaft
Rotermund + Pfusch
Waiblinger Strasse 11
D-70372 Stuttgart (DE)

Respondent: Cummins Inc.
(Proprietor of the patent) 500 Jackson Street
Columbus, IN 47201 (US)

Representative: Gesthuysen, von Rohr & Eggert
Patentanwälte
Postfach 10 13 54
D-45013 Essen (DE)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 7 June 2002
rejecting the opposition filed against European
patent No. 0849448 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: M. Ceyte
Members: M. Hatherly
H. Preglau

Summary of Facts and Submissions

- I. The opposition division's decision to reject the opposition against European patent No. 0 849 448 was posted on 7 June 2002.

On 31 July 2002 the appellant (opponent) filed an appeal and simultaneously paid the appeal fee, filing the statement of grounds on 3 September 2002.

- II. Claim 1 of the main request, i.e. as granted, reads:

"Piston for reciprocal movement within a combustion chamber (4) of an internal combustion engine (2) having a fuel injection system arranged to periodically inject fuel into the combustion chamber (4) through one or more injection orifices (21) arranged to form a predetermined spray plume (40) having a central axis (39), wherein the piston (8) comprises a piston crown (32) having a piston diameter CD and an upper face arranged to form one wall of the combustion chamber (4), wherein the piston crown (32) contains a combustion bowl (30) formed by an upwardly opening cavity having a maximum depth L and shaped as a surface of revolution having a bowl diameter BD and having a central axis coaxial with the central axis (39) of the spray plume (40), wherein the surface of revolution includes a centrally located raised floor section (42) having a concave curvilinear shape in diametric cross section with a relatively large radius of curvature R_1 from a point (44) adjacent the central axis (39) of the combustion bowl (30) to a point (46) adjacent the outer circumferential of the combustion bowl (30) and an upwardly flared outer bowl section (48) having a

concave curvilinear shape in cross section with radius of curvature R_2 substantially smaller than R_1 ;

wherein the ratio of BD/CD is greater than or equal to 0,54 and is less than or equal to 0,75; and/or

wherein the ratio of BD/L is greater than 6,2 and is less than or equal to 7,0; and/or

wherein the ratio of BD/R_1 is greater than or equal to 1,3 and is less than or equal to 3,4; and/or

wherein the ratio of R_2/R_1 is greater than 0,14 and is less than or equal to 0,32."

III. To initiate opposition proceedings the appellant filed a five page letter dated 13 December 2000, a payment form with a cheque, and

Drawing D1:

Mahle GmbH piston drawing No. OK 26969/2

Order D1:

Krupp MaK Maschinenbau GmbH order dated
1 August 1995 to Mahle GmbH for five pistons
OK 26969/2

Drawing D2:

Mahle GmbH piston drawing No. OK 28 822/4

Order D2:

Krupp MaK Maschinenbau GmbH order dated
24 February 1993 to Mahle GmbH for six pistons
OK 28822/4

D3: US-A-4 867 119

D4: DE-A-3 116 475

- IV. In his letter of reply dated 23 July 2001, the respondent (proprietor) requested that the opposition be found inadmissible and be rejected.

The opposition division found in its decision that the opposition was admissible but rejected the opposition as its grounds did not prejudice maintenance of the patent as granted.

The appellant appealed this decision and in reply the respondent again argued that the opposition was inadmissible.

- V. The parties were summoned to oral proceedings which took place on 29 November 2005 with the appellant and the respondent present.

- VI. The appellant requested that the decision under appeal be set aside and the patent revoked.

The respondent requested that the appeal be dismissed (main request) or in the alternative to set aside the decision under appeal and to maintain the patent on the basis of one of the first, second, third or fourth auxiliary requests.

Reasons for the Decision

1. The appeal is admissible.

2. *Admissibility of the opposition*

2.1 Under Rule 55(c) EPC the notice of opposition must contain three items: a statement of (1) the extent to which the European patent is opposed and (2) of the grounds on which the opposition is based as well as (3) an indication of the facts, evidence and arguments presented in support of these grounds.

It is the third requirement that is in dispute in the present appeal.

2.2 Although the respondent cited T 93/89 (OJ EPO 1992, 718) in support of his argument that the opposition was inadmissible, this decision concerns an allegation of public prior use that was not made until over 15 months after expiry of the opposition period. Thus T 93/89 is not relevant for deciding in the present appeal whether the allegations made before expiry of the opposition period are sufficient for the opposition to be deemed admissible.

2.3 According to the case law of the boards of appeal, if an opponent wishes to rely upon prior use as being part of the state of the art for the purpose of Article 54(2) EPC and as part of the legal and factual framework within which the substantive examination of the opposition is to be conducted, then the notice of opposition must indicate **within the opposition period** all the facts which make it possible to determine the

date of prior use, what has been used, and the circumstances relating to the prior use. Public prior use is only adequately substantiated if specific details are given of what was made available to the public, where, when, how and by whom - see decision T 328/87 (OJ 1992, 701).

- 2.4 Section I on page 2 of the appellant's letter of 13 December 2000 initiating the opposition proceedings is entitled "Citations" ("Entgegenhaltungen") and merely lists the drawings D1 and D2, the orders D1 and D2 and the prior art documents D3 and D4, without indicating that prior uses are alleged, let alone that they were made available to the public before the priority date of the contested patent. Section II is entitled "Inventive Step" and states under the sub-heading "Claim 1" that "A piston with largely identical geometric ratios is known from D1 and D2."

The appellant then cites five dimensions from the drawing D1, calculates four ratios from these cited dimensions and concludes that three of the four calculated ratios fall within the ranges set out in claim 1. The appellant then argues that it would be obvious for the skilled person to provide the fourth ratio, especially since this ratio is exhibited by D3 and D4. Similar calculations and reasoning are provided for drawing D2.

- 2.5 It is unclear from the submissions of 13 December 2000 whether it is drawings or pistons which are alleged to have been made available to the public.

2.6 Drawing D1 bears the amendment date of 22 July 1996 which is before the present priority date of 19 December 1996. However the drawing is marked "Property of MAHLE. Without written permission transmittal to others and any use except that for which it is loaned is prohibited" and there is no indication in the letter of 13 December 2000 that drawing D1 was **publicly** available before the priority date.

Also drawing D2 carries the above cited confidentiality wording. There is no indication in the letter of 13 December 2000 that this drawing was ever publicly available. Moreover drawing D2 bears the amendment date of 6 September 1999 which is **after** the present priority date. Although the appellant explained this amendment, he did so after the expiry of the opposition period.

2.7 Order D1 dated 1 August 1995 is from Krupp MaK Maschinenbau GmbH to Mahle GmbH for five pistons and bears various numbers e.g. 193874371 and OK 26969/2. There is no indication on order D1 of what these numbers are, they seem to be merely **piston** identification or item numbers.

Both the order D1 and the drawing D1 bear the number OK 26969/2. However there is no indication on order D1 or in the appellant's letter of 13 December 2000

- that Krupp knew at the time of the order D1 that OK 26969/2 was the number of a drawing, and
- that Krupp had ever seen a drawing with this number.

Moreover drawing D1 was amended on 22 July 1996 and so it (at least this version) could not be part of order D1 dated nearly a year earlier. Although the appellant explained the irrelevance of the amendment to the claimed subject-matter, he did so after the expiry of the opposition period.

Even if Krupp had seen an earlier version of drawing D1, there is no indication in the appellant's letter of 13 December 2000 that Krupp would not have considered itself bound to keep the content confidential, especially as drawing D1 is marked "transmittal to others ... prohibited."

2.8 Similar comments to those in section 2.7 above apply to order D2. There is no indication on order D2 or in the appellant's letter of 13 December 2000 that Krupp knew at the time of the order D2 that OK 28822/4 was the number of a drawing and that they had ever seen a drawing with this number. Drawing D2 was amended twice after the date of order D2 and, even if Krupp had seen an earlier version of the drawing, the letter of 13 December 2000 does not indicate that it would have been publicly available.

2.9 Section II on page 2 of the letter of 13 December 2000 states that "A piston with largely identical geometric ratios is known from D1 and D2" but does not state that such a piston was **publicly** known. There is no indication on the orders or on the drawings or in the letter of 13 December 2000 whether the pistons of orders D1 and D2 were ever delivered. If they were delivered there is no indication when they were delivered and whether they were then publicly available

or subject to a confidentiality agreement between Mahle and Krupp.

- 2.10 In the oral proceedings before the board the appellant argued that the wording "Abnahme: 4fach-Test: BV - GL - LRS - NV - Lieferantenselbstprüfung" on order D1 indicates that testing was to be carried out by e.g. the testing institution Germanischer Lloyd, this pointing to the five pistons ordered being not merely for internal but for public use. The appellant added that the wording "Verwend. Zweck Kundendienst" on order D2 indicates that the six pistons were replacements for pistons already in possession of a customer of Krupp.

These points were however first made during the oral proceedings before the board and were not part of the material submitted before the expiry of the opposition period. Said material made no mention of any parties other than Krupp and Mahle.

- 2.11 In decision T 222/85 (OJ EPO 1988, 128) the board of appeal held that the third requirement of Article 55(c) EPC was only satisfied if the contents of the notice of opposition were sufficient for the opponent's case to be properly understood on an objective basis. The board reasoned that the purpose of the third requirement (in combination with the first two requirements) was to ensure that the notice of opposition set out the opponent's case sufficiently so that both the patentee and the opposition division knew what that case was.

At the expiry of the opposition period in the present case, neither the respondent nor the opposition division was in a position to understand what the

appellant was alleging. The allegations were unclear as to what was known (e.g. pistons or drawings), when this occurred (e.g. at the time of the orders or of delivery of the pistons), and whether this was public. If the reader had surmised that perhaps the appellant was not alleging that the public was Krupp then the reader would not have known who this public might be and when and how this public received the piston information.

Thus the information provided during the opposition period about the alleged prior uses D1 and D2 is insufficient for the opposition to be deemed admissible.

2.12 The letter of 13 December 2000 also cites D3 and D4 but only as part of the attack based on D1 and D2. Starting in the third paragraph on page 4 of the letter, the appellant states that the fourth ratio (referred to in section 2.4 above) is known by measuring D3 and D4. There is no indication that D3 and D4 are cited for novelty or inventive step attacks in their own right. Thus the citation of D3 and D4 does not render the opposition admissible.

3. Therefore the opposition must be rejected as inadmissible under Rule 56(1) EPC and the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Magouliotis

M. Ceyte