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**Datasheet for the decision  
of 30 June 2011**

**Case Number:** T 0388/10 - 3.2.08

**Application Number:** 03810483.2

**Publication Number:** 1567775

**IPC:** F16B 31/02

**Language of the proceedings:** EN

**Title of invention:**

Connecting piece comprising a gripping element on the outer surface for rotating the connecting piece

**Patentee:**

Uponor Innovation AB

**Opponent:**

REHAU AG & Co.

**Headword:**

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**Relevant legal provisions:**

-

**Relevant legal provisions (EPC 1973):**

EPC Art. 56

**Keyword:**

"Inventive step (yes) - after amendments"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 0388/10 - 3.2.08

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.08  
of 30 June 2011

**Appellant:** REHAU AG & Co.  
(Opponent) Rheniumhaus  
D-95111 Rehau (DE)

**Representative:** -

**Respondent:** Uponor Innovation AB  
(Patent Proprietor) Industrivägen  
SE-513 81 Fristad (SE)

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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 14 December 2007  
rejecting the opposition filed against European  
patent No. 1567775 pursuant to Article 101(2)  
EPC.

**Composition of the Board:**

**Chairman:** T. Kriner  
**Members:** M. Alvazzi Delfrate  
U. Tronser

## Summary of Facts and Submissions

- I. By a decision posted on 14 December 2009 the opposition division rejected the opposition against European patent No. 1 567 775.
- II. The appellant (opponent) lodged an appeal against this decision on 24 February 2010, paying the appeal fee on the same day. The statement setting out the grounds for appeal was filed on 21 April 2010.
- III. Oral proceedings before the board of appeal were held on 30 June 2011.

The appellant (opponent) requested that the appealed decision be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the patent be maintained in amended form on the basis of claims 1 to 5 according to auxiliary request 3 submitted with a letter dated 27 August 2010 (now main request), description pages 2 and 3 submitted during oral proceedings, page 4 as granted, and Figures 1 to 3 as granted.

- IV. The claims comprise two independent claims. Independent claim 1 reads as follows:

"A connecting piece, intended for connecting at least two elements (2,3), whereby a first element (2) is connected to a first end of the connecting piece (1) and a second element (3) is connected to a second end of the connecting piece (1), the body (4) of the connecting piece (1) being mainly of plastic and a

metal insert provided with a thread (6) being arranged at at least one end of the connecting piece (1), whereby at least one element (2, 3) is connectable to the connecting piece (1) with threaded connection and there is at least one gripping element on the outer surface of the connecting piece (1) for rotating the connecting piece (1) or keeping it still upon making the threaded connection, characterized in that the gripping element comprises at least two straight portions (10) such that two straight portions (10) on opposite sides of the connecting piece (1) are parallel, the straight portions (10) forming gripping surfaces for a tool, that the gripping element is formed of two or more ribs (9) disposed circumferentially around the connecting piece and that there is a portion which is arranged smooth between adjacent straight portions (10), whereby the gripping element is formed such that the tool round the gripping element slips before the thread (6) and/or the basic structure of the connecting piece (1) gets damaged."

Independent claim 4 reads as follows:

"A connecting piece, intended for connecting at least two elements (2, 3), whereby a first element (2) is connected to a first end of the connecting piece (1) and a second element (3) is connected to a second end of the connecting piece (1), the body (4) of the connecting piece (1) being mainly of thermoplast and a thread (6) being formed at at least one end of the connecting piece (1), whereby at least one element (2, 3) is connectable to the connecting piece (1) with threaded connection and there is at least one gripping element on the outer surface of the connecting piece

(1) for rotating the connecting piece (1) or keeping it still upon making the threaded connection, characterized in that the gripping element comprises at least two straight portions (10) such that two straight portions (10) on opposite sides of the connecting piece (1) are parallel, the straight portions (10) forming gripping surfaces for a tool, that the gripping element is formed of two or more ribs (9) disposed circumferentially around the connecting piece, and that there is a portion which is arranged smooth between adjacent straight portions (10), whereby the gripping element is formed such that the tool round the gripping element slips before the thread (6) of the connecting piece (1) gets damaged."

V. The following documents are relevant for the present decision:

D1: EP-A- 870 970;

D2: DE-A- 2 052 985; and

D3: DE-U- 8 121 348.

VI. The arguments of the appellant can be summarised as follows:

D1, which represented the most relevant prior art, disclosed a connecting piece with all the features according to the pre-characterising portion of claim 1. Starting from D1, the object to be achieved by the claimed invention was to avoid breaking or damaging the thread part. This object was achieved in that the gripping element had a portion arranged smooth between adjacent straight portions and was formed such that the

tool round the gripping element slipped before the thread of the connecting piece got damaged.

D2 taught that the problem of avoiding damaging a thread part was solved by a gripping element as shown in Figure 1. This element exhibited a portion (8) which could be considered as arranged smooth between adjacent straight portions. Moreover, as explained in the paragraph bridging pages 3 and 4, the gripping element was formed such that a tool round the gripping element slipped before the thread of the connecting piece got damaged. Therefore, it was obvious to provide the connecting device according to D1 with a gripping element which had a portion arranged smooth between adjacent straight portions and which was formed such that the tool round the gripping element slipped before the thread of the connecting piece got damaged, as suggested by D2. The same applied when considering D3 instead of D2.

No further object was achieved by the claimed invention, since the feature that the gripping element was formed of two or more ribs disposed circumferentially around the connecting piece had no recognisable technical effect. As this feature was merely one of the obvious design possibilities available for realising a gripping element, the subject-matter of claim 1 did not involve an inventive step.

On the basis of the same considerations, the subject-matter of claim 4 did not involve an inventive step either.

VII. The arguments of the respondent can be summarised as follows:

Starting from D1, the claimed invention not only achieved the object of not breaking or damaging the thread part, but also reduced the stress on the plastic part. The latter effect was achieved by the feature according to which the gripping element was formed of two or more ribs disposed circumferentially around the connecting piece, as explained in column 3, lines 34-41 of the patent specification.

As the prior art did not disclose a gripping element of this kind, the subject-matter of claim 1 involved an inventive step at least for this reason.

The same applied in respect of the subject-matter of claim 4.

### **Reasons for the Decision**

1. The appeal is admissible.
2. Inventive step
  - 2.1 D1 undisputedly discloses a connecting piece (1), intended for connecting at least two elements (5, 3), whereby a first element is connected to a first end of the connecting piece and a second element is connected to a second end of the connecting piece, the body (6) of the connecting piece being mainly of plastic (see column 2, lines 2-5) and a metal insert (7) provided with a thread (4) being arranged at at least one end of

the connecting piece, whereby at least one element is connectable to the connecting piece with threaded connection, and there is a gripping element on the outer surface of the connecting piece for rotating the connecting piece or keeping it still upon making the threaded connection (see Figure 1).

2.2 It is also undisputed that, starting from the connecting piece shown in D1, the invention according to claim 1 achieves the object of not breaking or damaging the thread (see paragraph [0008]).

2.3 However, contrary to the view of the appellant, the invention according to claim 1 achieves also the further object of reducing the stress on the plastic part. This object is achieved by the gripping element being formed of two or more ribs disposed circumferentially around the connecting piece. This arrangement has the advantage that, when the connecting piece is injection-moulded, the plastic part of the connecting piece cools relatively quickly and no stresses are generated inside the plastic piece during casting. Further, the ribs strengthen the wall structure, so it is not necessary to make the wall of the plastic piece very thick. Since the wall does not need to be thick, virtually no thick points are formed in the plastic piece during casting which could generate suction points in the plastic material during casting or cavities in the finished piece (see column 3, lines 34-41 of the patent specification).

Hence, contrary to the appellant's argument, the provision of the ribs as defined in claim 1 cannot be considered as an obvious design possibility.



2.4 The prior art does not disclose a gripping element with ribs according to claim 1, let alone in order to achieve the technical effects mentioned above.

2.5 Therefore, although the board concurs with the appellant that it was obvious to achieve the first object mentioned above by means of a gripping element with a portion arranged smooth between adjacent straight portions and formed such that the tool round the gripping element slips before the thread of the connecting piece gets damaged, the subject-matter of claim 1 involves an inventive step.

For the same reasons this conclusion applies also to the subject-matter of claim 4.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent on the basis of the following documents:

claims 1 to 5 according to auxiliary request 3 submitted with the letter dated 27 August 2010 (now main request);

description pages 2 and 3 filed during oral proceedings, page 4 as granted; and

Figures 1 to 3 as granted.

The Registrar:

The Chairman:

V. Commare

T. Kriner