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**Datasheet for the decision  
of 12 October 2022**

**Case Number:** T 1483/20 - 3.2.04

**Application Number:** 12168437.7

**Publication Number:** 2527656

**IPC:** F04C28/28, F04C28/08, F04B49/00

**Language of the proceedings:** EN

**Title of invention:**  
Method for calculating the probability of moisture build-up in  
a compressor

**Patent Proprietor:**  
Clark Equipment Company

**Opponent:**  
Strawman Limited

**Headword:**

**Relevant legal provisions:**  
EPC Art. 54(2), 56, 84, 123(2)  
RPBA 2020 Art. 11

**Keyword:**

Novelty - (no)

Inventive step - (no)

Claims - clarity (no)

Amendments - allowable (no)

Remittal - (no)

**Decisions cited:**

**Catchword:**



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Case Number: T 1483/20 - 3.2.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.04**  
**of 12 October 2022**

**Appellant:** Strawman Limited  
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**Respondent:** Clark Equipment Company  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
20 April 2020 concerning maintenance of the  
European Patent No. 2527656 in amended form.**

**Composition of the Board:**

**Chairman** A. de Vries  
**Members:** G. Martin Gonzalez  
T. Bokor

## **Summary of Facts and Submissions**

- I. The appeal was filed by the appellant (opponent) against the interlocutory decision of the Opposition Division to maintain the patent in amended form.

The Division held amongst other things that claims 1 and 8 of the main request were new and inventive.

- II. In preparation for oral proceedings the Board issued a communication setting out its provisional opinion on the relevant issues.

With letter of 22 August 2022 the respondent (proprietor) stated that they would not attend the oral proceedings. The Board then cancelled the oral proceedings.

- III. The appellant (opponent) requests that the decision under appeal be set aside and the patent revoked in its entirety, and, as an auxiliary request, to summon to oral proceedings.

The respondent (proprietor) requests to dismiss the appeal and thus to maintain the patent as upheld by the Opposition Division (main request) or auxiliarily remittal of the case for consideration of auxiliary requests 1-3, filed on 12 January 2021 with the reply to the appeal and which are identical to those filed on 15 April 2019 before the Opposition Division, or if the request for remittal is not accepted maintenance of the patent according to auxiliary requests 1-3. In their reply of 12 January 2021 the respondent auxiliarily requested oral proceedings.

IV. The wording of claim 1 of the different requests reads as follows:

(a) Main request (as upheld)

"A method for calculating the probability of moisture build-up in a compressor (24), said method comprising the steps of:

sensing (101) a temperature of the ambient air;

sensing (101) a discharge pressure of the compressor;

sensing (101) a temperature of the compressor;

processing (102) the ambient air temperature and the discharge pressure sensed with a controller (8) to obtain a required temperature at which condensation will form;

and

comparing (103) the temperature of the compressor (24) to the required temperature;

the method characterised by the step of:

calculating a moisture register variable based upon the comparison of the temperature of the compressor to the required temperature;

wherein calculating comprises adding (104) a value to the moisture register variable when the temperature of the compressor is less than the required temperature."

(b) First auxiliary request.

Claim 1 as in the main request with the following features added at the end of the claim:

"...and subtracting (106) a value from the moisture register variable when the temperature of the

compressor (24) is greater than or equal to the required temperature."

(c) Second auxiliary request:

Claim 1 as in the main request with the following features added at the end of the claim:

"...; and wherein the moisture register variable is a counter variable."

(d) Third auxiliary request.

Claim 1 as in the main request with the following features added at the end of the claim:

"...; and  
wherein the value added is one; or  
wherein the value added is based upon a difference between the sensed temperature of the compressor and the required temperature."

V. In the present decision, reference is made to the following documents:

(OP4) JP 9-222087  
(OP4a) Translation of OP4

VI. The appellant's arguments can be summarised as follows:

Claim 1 of all requests is not novel or lacks an inventive step in the light of OP4/OP4a.

VII. The respondent's arguments can be summarised as follows:

The independent claims of all requests are new and involve an inventive step over the cited prior art.

Remittal for consideration of the first to third auxiliary requests by the Opposition Division is appropriate, given that these requests were not considered at first instance.

### **Reasons for the Decision**

1. The appeal is admissible.
2. In accordance with established case law, see CLBA, 10th edition, 2022, III.C.4.3.2 when oral proceedings have been scheduled at the request of a party, who then announces they will not attend, such a statement is generally interpreted as a withdrawal of their request for oral proceedings. By announcing their non-attendance they forgo the opportunity of further comment on any issues that they can expect to be discussed at the oral proceedings and which might be decided against them, cf. CLBA, III.C.5.1. This concerns in particular the issues of clarity, added subject-matter, novelty and inventive step for the requests on file, and for which the Board gave an unfavourable provisional opinion for the respondent in its communication, as well as the outstanding issue of remittal. The respondent declined further comment on any of these issues, and therefore a cancellation of the oral proceedings will not affect their position. The Board is thus satisfied that the right to be heard (Article 113(1) EPC) has been observed and that the case is ready to decide.

3. Background

The invention relates to a system and method for inhibiting moisture build-up in compressors, see specification paragraph [0001]. Moisture build-up may occur at starting periods of the compressor when the compressor's temperature is still low. The system estimates the likelihood of moisture build-up. It does so by measuring ambient-air temperature, discharge pressure of the compressor and temperature of the compressor. The system processes the ambient air temperature and the discharge pressure sensed to obtain a required temperature below which condensation will form. Based on this required temperature the system further calculates a moisture register variable (MRV). This is a cumulative value. Its calculation comprises periodically adding a value to the MRV while the measured temperature of the compressor is below the required temperature, see specification paragraphs [0003]-[0004].

4. Main request

4.1 In its written communication, section 9, the Board gave its provisional opinion that claim 1, if interpreted broadly, appeared to lack novelty over OP4. In the more restrictive interpretation of the Opposition Division and the respondent, its subject-matter appeared to lack an inventive step. Thus:

*"9. Main request - Novelty and inventive step*

*9.1 While upheld claim 1 concerns a method for calculating the probability of moisture build-up, it appears from the features of the claim and also from the embodiments of the description that the term*



*probability must be understood in a broad sense. Neither the claim features nor the examples in the description indicate that the parameter MRV (moisture register variable) is a probability in its strict sense, e.g. a percentage or a number between 0 and 1. It rather appears that MRV is an approximate indication of moisture build-up, cf. para [0020].*

*In this broad interpretation of the parameter MRV variable, a basic time counter registering the time or duration that the temperature of the compressor is below the required temperature appears to anticipate this feature as claimed. Indeed, claim 1 merely requires calculating the MRV variable by adding a value to the MRV when the temperature of the compressor is less than the required temperature, without further specifying which value is added, whether it is a single value, say, or (one of a) sequence of incremental values.*

9.2 *Turning to OP4/OP4a, it is not in dispute that the embodiment of paragraph [0024] discloses a method for calculating an amount of drain water, which is calculated from the operation time until a boundary temperature (required temperature in the claim wording) is reached. The boundary temperature is in turn determined from the measured air suction temperature (ambient-air temperature) and a discharge output detected by a pressure sensor (discharge pressure), as in the claimed method. As described in paragraph [0024] of OP4/OP4a, the operation time until the boundary temperature is reached needs to be counted and registered in the known method. This anticipates the MRV feature as claimed.*

9.3 Thus upheld claim 1 appears to lack novelty over OP4/OP4a.

9.4 The Opposition Division adopts the more restrictive view that the claimed MRV can only be anticipated by the calculated amount of drain water  $Q_d$  of paragraph [0024] of OP4a, and not by the timer. Adopting this view, it appears to the Board that claim 1 lacks inventive step. Figure 7 of OP4/OP4a shows what is explained in paragraph [0021] and is common general knowledge for the skilled person that the drain water amount  $Q_d$  during compressor start-up is a variable that increases monotonically with time, until the boundary temperature is reached,  $T = 2$  min. in the shown example, see figure 6. It appears to the Board that periodically adding a value until that temperature is reached is a straightforward practical realisation, known from common general knowledge, of the calculations needed to put in practice the teachings of OP4/OP4a."

4.2 Absent any further submissions from the respondent the Board sees no reason to change its point of view. It thus holds the claimed subject-matter to be not new, Article 54(2) EPC.

5. Remittal

According to Article 11 RPBA 2020, the Board shall not remit a case to the department whose decision was appealed for further prosecution, unless special reasons present themselves for doing so. Whether "special reasons" present themselves is to be decided on a case-by-case basis. The boards should not normally remit a case if they can decide all the issues without undue burden, see CLBA, 10th edition 2022, V.A.9.1.2.

In this case the respondent requests remittal for consideration of the first to third auxiliary requests by the Opposition Division for the sole reason that these requests were not considered at first instance.

However, this does not of itself constitute a special reason in the sense of Article 11 RPBA. In this case the Opposition Division decided on all grounds of opposition. This fact alone normally speaks against remittal, especially if undecided auxiliary requests can be considered within the same legal and factual framework. Nor is there an entitlement to two instances for every request. Here the Board establishes that it can decide the auxiliary requests without undue burden. Either it can do so within the existing legal and factual framework as for the main request, namely (novelty and) inventive step in the light of document OP4/OP4a, extensively discussed in opposition and again in both parties' submissions in appeal. Or the Board can decide these requests on the basis of issues of clarity and added subject-matter that have been validly raised and substantiated by the appellant against amendments that must be examined for compliance with the requirements of the Convention under Article 103(3) EPC. Under that provision the respondent proprietor must expect such an examination. Nor are those issues so complex as to warrant remittal.

The Board therefore sees no special reasons in the sense of Art 11 RPBA 2020 for remitting the case.

6. Auxiliary requests

6.1 As noted by the Board in its written communication none of the auxiliary requests was considered allowable.

They failed for lack novelty or inventive step in the light of OP4/OP4a, lack of clarity or added subject-matter:

"10. *Auxiliary requests*

10.1 *Paragraph [0024] of OP4/OP4a together with figures 6 and 7 and paragraph [0021] disclose calculating an evaporating time and also teach that the amount of moisture  $Q_d$  decreases with time while the compressor temperature is above the boundary temperature. It appears that subtracting a value from the MRV variable, as claimed in auxiliary request 1, whether the time counted or  $Q_d$ , is also an obvious practical realisation of the teachings of OP4/OP4a for the skilled person.*

...

10.3 *The meaning, scope and original basis of the new feature that the MRV is a counter variable in auxiliary request 2 may need to be discussed. In the Board's preliminary view this further specification of the nature of the MRV is neither clear nor clearly supported by the original disclosure, Art 84 and 123(2) EPC. Thus it is unclear what is meant by "counter variable". If it is meant to denote something other than calculating MRV by adding values, then there appears to be no direct and unambiguous original disclosure. If not, the same conclusions in respect of novelty and inventive step above apply.*

10.4 *Clarity and added subject-matter of auxiliary request 3 may need to be discussed. It appears that adding a value of one to MRV is implicitly disclosed by OP4/OP4a when the time counted is regarded as MRV. As*

*regards the other added, alternative feature that the value added to the MRV is based upon a difference between the compressor temperature and the boundary temperature, this feature does not appear to limit the claimed subject-matter against OP4/OP4a. Adding a value while the compressor temperature is below the boundary value meets the added feature. Thus the above novelty and inventive step comments for the main request hold for this auxiliary request."*

- 6.2 Absent any further submissions from the respondent proprietor the Board sees no reason to change its point of view. It thus holds that claim 1 of the first auxiliary request lacks an inventive step, Article 56 EPC; claim 1 of the second auxiliary request is not clear, adds subject-matter and lacks novelty, Articles 84, 123(2) and 54(2) EPC; while claim 1 of the third auxiliary request is not new, Article 54(2) EPC.
  
7. For the above reasons the Board finds that the decision was wrong in concluding novelty and inventive step for the granted claims and it must therefore set it aside. Furthermore, taking into consideration the amendments made by the respondent proprietor, the patent and the invention to which it relates do not meet the requirement of the Convention and the patent must be revoked pursuant to Article 101(3)(b) EPC. As the Board accedes to the main request of the appellant opponent, there is no need to arrange oral proceedings. Although, as reflected in its preliminary written opinion, the Board did not identify any violation of the appellant-opponent's right to be heard, it need not formally decide this issue. The question of a violation of the right to be heard was alleged by the appellant in their arguments against sufficiency but it formulated no requests in relation to this issue.

**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:



G. Magouliotis

A. de Vries

Decision electronically authenticated