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Datasheet for the decision of 8 September 2025

Case Number: T 0957/24 - 3.5.07

Application Number: 21173641.8

Publication Number: 3903571

IPC: A01G25/16, H01F7/18

Language of the proceedings: EN

Title of invention:
A two-wire controlling and monitoring system for in particular irrigation of localized areas of soil

Applicant:
Crysberg Holding ApS

Headword:
Two-wire controlling and monitoring system/CRYSBERG HOLDING

Relevant legal provisions:
EPC Art. 56, 111(1)
EPC R. 103(1)(a), 111(2)
RPBA 2020 Art. 11

Keyword:
Appealed decision - sufficiently reasoned (no)
Remittal to the department of first instance - fundamental deficiency in first instance proceedings (yes)

Decisions cited:
T 0278/00, T 1309/05

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 0957/24 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 8 September 2025

Appellant: (Applicant)	Crysberg Holding ApS Oldenvej 6, Munkegårde 3490 Kvistgård (DK)
Representative:	Budde Schou A/S Dronningens Tvaergade 30 1302 Copenhagen K (DK)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 13 March 2024 refusing European patent application No. 21173641.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair	M. Jaedicke
Members:	R. de Man
	E. Mille

Summary of Facts and Submissions

I. The applicant appealed against the decision of the examining division refusing European patent application No. 21173641.8. The application is a divisional application of application 18188757.1, which itself is a divisional application of application 13726507.0, filed as WO 2013/178774 (the root application).

II. The contested decision cited the following documents:

D1: US 2009/0222140 A1, 3 September 2009;
D2: US 2008/0211307 A1, 4 September 2008;
D3: AU 733 334 B1, 10 May 2001.

The examining division refused the application because the subject-matter of claims 1 and 2 either was not sufficiently disclosed within the meaning of Article 83 EPC or did not involve an inventive step within the meaning of Article 56 EPC.

III. In its statement of grounds of appeal, the appellant maintained the set of claims on which the decision under appeal was based.

IV. In a communication issued under Rule 100(2) EPC, the board informed the appellant of its intention to set aside the decision under appeal, to remit the case to the examining division for further prosecution and to order reimbursement of the appeal fee under Rule 103(1)(a) EPC. In response, the appellant consented to remittal without oral proceedings before the board.

V. The appellant requests that the decision under appeal be set aside and that a patent be granted on the basis of the claims considered in the contested decision.

VI. Independent claim 1 reads as follows:

"A method for controlling and monitoring in particular irrigation of localized areas of soil and comprising the following steps of:

providing a water pipeline (16) providing water to said localized areas of soil,

providing a first plurality of controllable irrigation valves (42), each positioned at a specific area of said localized areas of soil, each connected to said water pipeline (16) for providing watering or non-watering of said specific area of said localized areas of soil and each having a pair of valve control inputs,

providing a second plurality of localized irrigation control units (18, 202,204, 234, 236, 238, 240), each comprising a line decoder (44, 216, 224) having a pair of valve control outputs (50) connected to said pair of valve control inputs of a specific controllable irrigation valve of said first plurality of controllable irrigation valves (42) for providing valve control signals to said first plurality of controllable irrigation valves (42),

said line decoder (44, 216, 224) further each having a pair of control and power supply inputs for communicating with a controller and power supply (30, 202) over a two-wire cable (28, 206), said specific controllable irrigation valve of said first plurality of controllable irrigation valves (42) comprising a

solenoid connected to said valve control inputs, a core operable between a first position and a second position, and a piston connected to said core,

defining in said line decoder (44, 216, 224) an inrush DC voltage level signal (102) for forcing said core into said second position,

defining in said line decoder (44, 216, 224) a hold DC voltage level signal (104) for retaining said core in said second position,

determining by means of said line decoder (44, 216, 224), said first position or said second position of said core,

measuring a self inductance value and a resistance value of said solenoid,

and characterized by
transmitting by means of said line decoder (44, 216, 224) said self inductance value and said resistance value to said controller and power supply (30, 202) via said two-wire cable (28, 206) or
alternatively monitoring said self inductance value and said resistance value and signals in said controller and power supply (30, 202) in case any of said self inductance value and said resistance value is outside a predetermined range, and

- if said resistance and said self induction have decreased: said controller determining and reporting that said solenoid has degenerated,
- if said resistance has increased, while said self induction is substantially unchanged: said controller determining and reporting a likely connection fault

between said localized irrigation control unit and said solenoid."

Independent claim 2 reads as follows:

"A two-wire controlling and monitoring system for in particular irrigation of localized areas of soil and comprising:

a water pipeline (16) providing water to said localized areas of soil,

a first plurality of controllable irrigation valves (42), each positioned at a specific area of said localized areas of soil, each connected to said water pipeline (16) for providing watering or non-watering of said specific area of said localized areas of soil and each having a pair of valve control inputs,

a second plurality of localized irrigation control units (18, 202, 204, 234, 236, 238, 240), each comprising a line decoder (44, 216, 224) having a pair of valve control outputs connected to said pair of valve control inputs of a specific controllable irrigation valve of said first plurality of controllable irrigation valves (42) for providing valve control signals to said first plurality of controllable irrigation valves (42), said line decoder (44, 216, 224) further each having a pair of control and power supply inputs for communicating with a controller and power supply (30, 202) over a two-wire cable (28, 206),

said specific controllable irrigation valve of said first plurality of controllable irrigation valves (42) comprising a solenoid connected to said valve control inputs, a core operable between a first position and a second position, and a piston connected to said core,

said line decoder (44, 216, 224) defining an inrush DC voltage level signal (102) for forcing said core into said second position,

said line decoder (44, 216, 224) defining a hold DC voltage level signal (104) for retaining said core in said second position,

said line decoder (44, 216, 224) determining said first position or said second position of said core, measuring a self inductance value and a resistance value of said solenoid, and characterized by

said line decoder (44, 216, 224) transmitting said self inductance value and said resistance value to said controller and power supply (30, 202) via said two-wire cable (28, 206) or alternatively monitors said self inductance value and said resistance value and signals said controller and power supply (30, 202) in case any of said self inductance value and said resistance value is outside a predetermined range, and

- If said resistance and said self induction have decreased: said controller is adapted to determining and reporting that said solenoid has degenerated,
- If said resistance has increased, while said self induction is substantially unchanged: said controller is adapted to determining and reporting a likely connection fault between said localized irrigation control unit and said solenoid."

Reasons for the Decision

1. The application relates to an irrigation system.

2. *The reasoning of the decision under appeal*

2.1 Under Rule 111(2) EPC, decisions of the European Patent Office which are open to appeal must be reasoned. The reasoning given has to enable the parties and the board of appeal to examine whether the decision was justified (decision T 278/00, OJ EPO 2003, 526, Reasons 2). It

should therefore discuss in detail the facts, evidence and arguments which are essential to the outcome of the decision. The written decision has to contain a logical chain of reasoning which led to the relevant conclusion. In particular, a decision refusing an application should not leave it to the applicant and the board to speculate as to which were the decisive reasons for the refusal (decision T 1309/05, Reasons 3.5).

2.2 Under the heading "Grounds for refusal", the decision under appeal states:

"The application does not meet the requirements of Article 52(1) EPC, because **claims 1+2** are
- either not sufficiently disclosed under Article 83 EPC, or
- not inventive under Article 56 EPC."

Since sufficiency of disclosure within the meaning of Article 83 EPC is not one of the patentability requirements mentioned in Article 52(1) EPC, the board understands this statement to mean that the application was refused because:
- either the application did not sufficiently disclose the subject-matter of claims 1 and 2 as required by Article 83 EPC,
- or the subject-matter of claims 1 and 2 was not patentable within the meaning of Article 52(1) EPC for lack of an inventive step within the meaning of Article 56 EPC.

2.3 However, a decision to refuse a request to grant a patent on a set of application documents should clearly state the ground or grounds on which the request is refused. While it is entirely acceptable to refuse a

request on multiple independent grounds, a decision cannot be based on **either** a first ground **or** a second ground, leaving it to the applicant and the board to speculate as to which of the two grounds is the basis for the refusal. For this reason alone, the decision under appeal is insufficiently reasoned, contrary to Rule 111(2) EPC.

2.4 The decision's reasoning contains a number of further deficiencies, as explained below.

2.5 Point 9.1.1 of the reasons for the decision reads as follows:

"Claims 1+2 specify a known irrigation system in very general terms, with 2 additional features:

1. a bi-directional de- and encoder for a two-wire bus, and
2. actions of the central controller based on measurements transmitted over that bus."

The board notes that the "known irrigation system" is apparently the irrigation system disclosed in document D1, Figures 1 and 2 (see points 9.1.4 and 9.1.10 of the reasons for the decision under appeal).

Point 9.1.2 adds the following statement:

"These features solve 2 different problems, i.e. the transmission of data vs control actions. This is a juxtaposition according to GL G-VII 7, and we address the features independently of each other."

2.6 Neither independent method claim 1 nor independent system claim 2 includes wording that can immediately be

recognised as corresponding to features 1 and 2. In fact, it appears that both "features" are intended to represent groups of features listed in claims 1 and 2.

2.7 Feature 1 appears to refer to a group of features relating to the "line decoder (44, 216, 224)" mentioned in claims 1 and 2. However, Figure 2 of document D1 already shows a line decoder 44 connected to a two-wire cable 28. This suggests that only some of the features relating to the line decoder are part of "feature 1". Point 9.1.3 further adds to the confusion by stating that feature 1 is "part of the preamble", even though the characterising parts of claims 1 and 2 include features specifying that the line decoder transmits self-inductance and resistance values to the controller and power supply via the two-wire cable. Furthermore, claims 1 and 2 do not appear to specify any encoder.

Hence, it cannot be readily understood from the written decision which group of claim features is represented by "feature 1". This is a further reason why the contested decision is insufficiently reasoned.

2.8 As for feature 2, the "central controller" apparently refers to the "controller and power supply (30, 202)". In view of points 9.1.8 and 9.1.11 of the contested decision, it is sufficiently clear that feature 2 represents the features specified in the two bullet points at the end of claim 1 (and the corresponding features of claim 2):

- if said resistance and said self induction have decreased: said controller determining and reporting that said solenoid has degenerated,
- if said resistance has increased, while said self induction is substantially unchanged: said

controller determining and reporting a likely connection fault between said localized irrigation control unit and said solenoid.

2.9 The examining division argued that feature 1 was "not described in the application" and that this meant that either there was a lack of disclosure within the meaning of Article 83 EPC or "it is implied that the skilled person knows that de-/encoding devices are available and can be applied to the system without further modification".

As the examining division did not indicate, let alone explain with technical reasons, which specific claim features represented by "feature 1" it considered to be insufficiently disclosed in the sense that, at the priority date of the application, the skilled person using their common general knowledge and the information contained in the application as filed could not have implemented them, also this aspect of the decision is insufficiently reasoned.

The board further notes that the mere fact that the skilled person could have implemented a given claim feature - which apparently is the assumption underlying the "or" branch of the examining division's argument - does not mean that the feature itself is obvious. In any event, in its statement of grounds of appeal, the appellant did not rely on "feature 1" for its inventive-step argumentation.

2.10 With regard to feature 2, the examining division argued that "there are no executable thresholds for generating an alarm, such that this is either a fatal lack of disclosure under Article 83 EPC, or it is implied that the skilled person knows when changes in device

parameters are alarming and will program the controller accordingly".

Again the written decision fails to give any reasoning why the absence of explicit threshold values in the application would have prevented the skilled person from programming a controller to determine whether resistance and self-induction values have (meaningfully) "decreased" or whether resistance values have (meaningfully) "increased".

The board further notes, again, that the mere fact that the skilled person could have implemented a given claim feature does not mean that the feature itself is obvious. If the skilled person is able to program a controller to determine whether resistance and self-induction values have decreased, it does not logically follow that the skilled person knows that the problem of determining whether a solenoid has degenerated can be solved by determining whether resistance and self-induction values have decreased.

2.11 Finally, the board observes that the objective technical problem formulated by the examining division in point 9.1.11 of the contested decision, which reads "to generate alarms based on deviating resistance or inductance", contains an inadmissible pointer to the solution, namely that the alarms relating to certain failures in the irrigation system are to be generated based on deviating resistance or inductance.

2.12 Hence, the contested decision is insufficiently reasoned within the meaning of Rule 111(2) EPC (see points 2.3, 2.7 and 2.9 above).

3. *Remittal for further prosecution*

3.1 A lack of sufficient reasoning of the contested decision is a fundamental deficiency and thus in principle a special reason within the meaning of Article 11 RPBA for remitting the case to the examining division for further prosecution.

3.2 While studying the present case, the board noticed that the wording of the feature of claim 1 "alternatively monitoring said self inductance value and said resistance value and signals in said controller and power supply (30, 202) in case any of said self inductance value and said resistance value is outside a predetermined range" and of the corresponding feature of claim 2 may suffer from grammatical and perhaps other clarity problems.

Compliance of the application with Article 84 EPC may therefore require further examination.

3.3 Moreover, it is not immediately apparent to the board that the subject-matter of claims 1 and 2 has a basis in the root application as filed (Article 76(1) EPC).

In particular, it may need to be further examined whether the claimed combination of the two bullet points and the "transmitting ... or alternatively monitoring" features of claim 1 and the corresponding features of claim 2 is disclosed in the root application as published on page 29, line 28, to page 30, line 14, or perhaps in another passage of the root application.

3.4 In view of the above, the board considers it appropriate to exercise its discretion under

Article 111(1) EPC and to remit the case to the examining division for further prosecution. For the avoidance of doubt, the board stresses that this decision contains no findings under Articles 76(1) and 84 EPC which bind the examining division under Article 111(2) EPC.

3.5 Since the lack of sufficient reasoning is a substantial procedural violation and is at least partially causal for the appeal, the appeal fee is to be reimbursed under Rule 103(1)(a) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the examining division for further prosecution.

3. The appeal fee is to be reimbursed in full.

The Registrar: The Chair:

G. Nachtigall M. Jaedicke

Decision electronically authenticated