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Datasheet for the decision of 5 October 2018

Case Number: T 0968/15 - 3.2.08

Application Number: 07842847.1

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Language of the proceedings: EN

Title of invention:
METHOD AND APPARATUS FOR WIRELESS REMOTE CONTROL COMMUNICATION OF A WELDER

Patent Proprietor:
Illinois Tool Works Inc.

Opponent:
Fronius International GmbH

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - main request (no) - auxiliary requests (no)

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Catchword:

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Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0968/15 - 3.2.08

D E C I S I O N
of Technical Board of Appeal 3.2.08
of 5 October 2018

Appellant: (Patent Proprietor)	Illinois Tool Works Inc. 155 Harlem Avenue Glenview, IL 60025 (US)
Representative:	HGF Limited Merchant House 30 Cloth Market Newcastle upon Tyne NE1 1EE (GB)
Respondent: (Opponent)	Fronius International GmbH Vorchdorfer Strasse 40 4643 Pettenbach (AT)
Representative:	Sonn & Partner Patentanwälte Riemergasse 14 1010 Wien (AT)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 3 March 2015 revoking European patent No. 2081723 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	A. Björklund
	P. Schmitz

Summary of Facts and Submissions

I. With its decision posted on 3 March 2015 the opposition division revoked European patent No. 2 081 723. The opposition division found that the subject-matter of claim 1 of the main request did not involve an inventive step and did not admit the auxiliary request into the proceedings.

II. The appellant (patent proprietor) filed an appeal against this decision, in due form and within the prescribed time limits.

III. Oral proceedings were held before the Board on 5 October 2018.

IV. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or one of auxiliary requests 1 to 4 filed by letter of 15 June 2015, or auxiliary requests 5 to 6, filed by letter of 19 July 2018.

V. The respondent (opponent) requested that the appeal be dismissed.

VI. The following documents are of relevance to the decision:

D1: EP 1 500 456 A1
D2: US 2004/0026392 A1
D3: DE 600 24 764 T3
D3': EP 1 112 800 B1
D5: US 2006/0229111 A1

Document D3 (which was considered in the appealed decision) was published after the priority date of the

patent and is consequently not prior art. Document D3' is the specification of the corresponding European patent as granted and belongs to the prior art. It was therefore introduced into the proceedings by the Board. The relevant passages of both documents have the same content.

VII. Claim 1 of the patent as granted (main request), with feature references as used throughout the opposition and appeal proceedings, reads as follows:

1a) "A welding-type system (10) comprising:

1b) a power source (12) having a controller (13) to regulate welding operation;

1c) the power source (12) has a connection port (37);

1d) a welding torch (16) connected to the power source (12);

1e) a remote control (50) configured to remotely transmit a signal for controlling at least one of a plurality of welding parameters in the welding system (10) and

1f) a receiver (36) connected to the controller (13) remote from the remote control (50) and configured to receive the signal and allow the controller (13) to regulate at least one of the plurality of welding parameters in response thereto;

characterised in that

1g) the remote control (50) is wireless,

1h) the receiver (36) is further configured to engage the connection port (37) located on the power source (12),

1i) the connection port (37) configured to engage both the receiver (36) and a control cable,

1j) and the connection port (37) is a 14 -pin connector."

Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that feature 1i), with additions underlined, reads:

"the connection port (37) configured to engage both the receiver (36) and a control cable that is a control cable for use in a welding-type system,"

Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 through the addition of the following features:

"...wherein the receiver (36) is configured to directly connect to said connection port (37) located on the power source (12) such that, when the receiver (36) is engaged with said connection port (37) located on the power source (12), there is no cable between the receiver (36) and the power source (12)."

Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 1 through the addition of the following features:

"...wherein a connection port of the receiver (36) is configured to directly engage with said connection port (37) located on the power source (12) such that, when the receiver (36) is engaged with said connection port (37) located on the power source, there is no cable between the receiver (36) and the power source (12)."

Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 1 through the addition of the following features:

"...wherein a connection port of the receiver (36), that is configured to engage with said connection port (37) located on the power source (12), is comprised by the receiver's housing such that, when the receiver (36) is engaged with said connection port (37) located on the power source (12), there is no cable external from the housing of the receiver and external from the power source (12) that provides a connection between the receiver (36) and the power source (12)."

Claim 1 of auxiliary request 5 differs from claim 1 of the main request in that feature 1h), with additions underlined, reads:

1h) "the receiver (36) is further configured to directly engage the connection port (37) located on the power source (12),"

Claim 1 of auxiliary request 6 differs from claim 1 of auxiliary request 5 in that features 1c), 1h) and 1i), with additions underlined, read:

1c) "the power source (12) has an existing connection port (37);"
1h) "the receiver (36) is further configured to directly engage the existing connection port (37) located on the power source (12),"
1i) "the existing connection port (37) configured to engage both the receiver (36) and a control cable,"

VIII. The appellant (patent proprietor) argued essentially as follows:

The welding-type system disclosed in D3' could be regarded as the closest prior art.

Its connection port was not able to connect to both a cable and a receiver. The receiver was connected to the connection port via a cable. This differed from being "configured to engage the connection port", which meant that the receiver had a mechanical arrangement allowing a direct physical connection to the connection port. The port was not a 14-pin connector.

The subject-matter of claim 1 therefore differed from the welding-type system disclosed in D3' through the features 1h), 1i) and 1j).

These differences together solved the problem of providing a welding-type system with increased versatility and ease of use.

The person skilled in the art would not combine the teachings of D3', D1 and D2 to arrive at the subject-matter of claim 1. He would have no motivation to change the cable connection from the receiver to the connection port in the system of D3' to a direct connection, *inter alia* since this document was concerned with frequency choices for avoiding disturbance of the wireless remote control.

Auxiliary requests 1-6 used different wording to explicitly define the direct physical connection of the receiver to the same connection port, which could also be used for the control cable of a cable-bound remote control, and were supported by paragraph [0021] and the figures of the application as originally filed.

IX. The respondent (opponent) argued essentially as follows:

Paragraphs [0044]-[0046] of D3' disclosed that the connection port of the welding-type system could be connected to both a control cable and a wireless receiver. Furthermore, the claim merely required a functional connection of the receiver to the connection port. Consequently, features 1h) and 1i) were disclosed in D3'.

The subject-matter of claim 1 therefore differed from the system disclosed in D3' merely in the 14-pin connector.

The 14-pin connector was an alternative connector well known in the art, as disclosed in D1. Choosing this specific connector did not involve an inventive step.

Should the receiver in D3' not be regarded as "configured to engage the connection port", direct connections of receivers were known in the art, for example from D2 and D5, where they provided miniaturised receivers such that this did not involve an inventive step either.

Since the auxiliary requests merely clarified the latter feature, they too did not involve an inventive step.

Reasons for the Decision

1. Main request – Inventive step

1.1 It is common ground that D3' is the closest prior art and discloses:

1a) A welding-type system (Figure 1) comprising:
1b) a power source (5) having a controller to regulate welding operation (implicit in view of paragraph [0002]);
1c) the power source (5) has a connection port ("prise", paragraph [0046]);
1d) a welding torch (4) connected to the power source;
1e) a remote control (1) configured to remotely transmit a signal for controlling at least one of a plurality of welding parameters in the welding system (paragraph [0042]) and
1f) a receiver (3) connected to the controller remote from the remote control (1) and configured to receive the signal and allow the controller to regulate at least one of the plurality of welding parameters in response thereto;
1g) that the remote control (1) is wireless (paragraph [0042]).

It is also common ground that the subject-matter of claim 1 differs from this system in feature 1j), in that the connection port is a 14-pin connector.

1.2 It is disputed whether the features 1h) and 1i) are disclosed in D3'.

1.2.1 The respondent argued that the wording "the receiver is further configured to engage the connection port" merely means that the receiver is functionally connected to the port, and nothing more.

However, the term "engage" in a technical and mechanical sense implies a direct physical connection and fitting with a corresponding part, for example as in cogs which engage. This is corroborated by the similar wording in paragraph [0021] of the patent,

where it is stated that the connection port is "configured to engage standard control cables". A connection of a control cable to a connection port is evidently a direct physical connection.

The disclosure in paragraph [0046] of D3', which merely states that the receiver is connected to the connector of the power source where the control cable of the classic cable-connected remote control was connected, does not specificy how the receiver is connected to the port, while the figures show that a cable is used. A receiver, which is connected to a connection port via a cable, as in the figures of D3', engages the cable which in turn engages the connection port, but the receiver itself does not engage the connection port.

1.2.2 The appellant argued that the connection port in the system of D3' is not configured to engage both the receiver and a control cable.

This is not convincing. The system in D3' is converted from remote control via a control cable to a wireless remote control, by removing the cable and replacing it with transmitter-receivers. Paragraphs [0046] to [0047] explicitly disclose that the wireless transmitter-receiver is connected to the connection port of the power source where the control cable was previously connected, and that the user, if so desired, can return to a classic cable-connected remote control. This means that the connection port of the power source is configured to engage both a control cable and a receiver, and consequently also "the" receiver, should it be configured for (direct) engagement to the connection port.

1.3 The subject-matter of claim 1 therefore differs from the system disclosed in D3' through the features 1h) and 1j), while feature 1i) is known from D3'.

1.4 According to the appellant, the problem to be solved is to provide a system with increased versatility and ease of use. This problem is, however, solved by the connection port being configured to engage both the receiver and a control cable, i.e. feature 1i), which is already present in the system of D3'. The differing features 1h) and 1j), i.e. the receiver being configured to engage the connection port and the 14-pin connector, do not contribute to solving this problem.

Therefore, the objective technical problem solved starting from D3' is not the problem defined by the appellant.

1.5 The differing features of the 14-pin connector and the receiver being configured to engage the connection port have no synergetic effect. Hence they solve the unrelated problems of selecting a specific connector and miniaturising the receiver.

1.5.1 The choice of a 14-pin connector, which is known to be used in welding-type systems, as disclosed in D1, sentence bridging columns 1 and 2, is nothing more than a normal design choice which does not involve an inventive step.

1.5.2 When connecting the receiver to the connection port of the power source of the welding-type system of D3', there are but two choices. Either the receiver is connected via a cable or the receiver itself has a connection port which physically attaches to the port of the power source, i.e. engages the port.

Miniaturised receivers which directly engage connection ports of welding type systems are known from D2 (see Figures 1 and 2, paragraph [0051]). It is true that in the specific example this receiver is connected via a RS-232 interface. However, this is merely mentioned as an example of a suitable connecting mechanism, and the specific type of connector is immaterial to the direct connection of the receiver to the communication port. Furthermore, the connection of the receiver to an RS-232 port reinforces the fact that receivers can directly engage connection ports which are normally connected to cables.

In view of this teaching, it would be obvious for the person skilled in the art to modify the receiver of the system of D3' such that it directly engages the connection port in order to solve the problem of miniaturising the receiver.

1.6 The person skilled in the art would therefore arrive at the subject-matter of claim 1 of the main request without the exercise of inventive skill. Consequently it does not involve an inventive step (Article 56 EPC).

2. Auxiliary requests 1 to 6

The amendments made to claim 1 of the auxiliary requests seek to make it clear that the receiver is configured for a direct physical engagement, without an interconnecting cable, to the same connection port of the power source as the control cable of a cable-bound remote control.

As set out above, the Board finds the direct and cable-less connection of the receiver to the connection port to be a feature which already distinguishes the

subject-matter of claim 1 of the main request from the system of D3', but which does not involve an inventive step. Furthermore, the system of D3' already has an "existing" connection port and its control cable is for use in a welding-type system. Should the person skilled in the art, for the reasons presented with respect to the main request, modify the system of D3' such that its receiver is "configured to engage the connection port" of the power source as taught in D2 and uses a 14-pin connector as the connection port as taught in D1, he would have to provide the receiver with a connection port comprised by the receiver housing which is able to connect to the connection port of the power source. He would therefore arrive at the subject-matter of claim 1 of auxiliary requests 1-6 in an obvious manner.

Consequently, the subject-matter of claim 1 of auxiliary requests 1-6 does not involve an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

C. Moser M. Alvazzi Delfrate

Decision electronically authenticated