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**Datasheet for the decision
of 7 December 2010**

Case Number: T 1048/08 - 3.2.06

Application Number: 99121474.3

Publication Number: 0997428

IPC: B66C 23/36

Language of the proceedings: EN

Title of invention:
Crawler crane

Patentee:
Kobelco Cranes Co., Ltd.

Opponent:
Terex-Demag GmbH & Co. KG

Headword:
-

Relevant legal provisions:
-

Relevant legal provisions (EPC 1973):
EPC Art. 54, 56

Keyword:
"Novelty - yes"
"Inventive step - yes"

Decisions cited:
-

Catchword:
-



Case Number: T 1048/08 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 7 December 2010

Appellant: Terex-Demag GmbH & Co. KG
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Respondent: Kobelco Cranes Co., Ltd.
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Representative: TBK-Patent
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 3 April 2008
rejecting the opposition filed against European
patent No. 0997428 pursuant to Article 101(2)
EPC.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: G. Kadner
W. Sekretaruk

Summary of Facts and Submissions

I. The mention of grant of European patent No. 0 997 428 in respect of European patent application No. 99121474.3 filed on 28 October 1999 and claiming a Japanese priority from 29 October 1998 was published on 6 October 2004.

Claim 1 reads as follows:

"A crawler crane (1) comprising:

a revolving frame (2);

a boom (6);

a main winding drum (3), an auxiliary winding drum (4) and a third drum (5) mounted on said revolving frame (2) to wind each operating rope,

whereby said respective drums are arranged in a row so that their rotational shafts are at substantially right angles to a center axis of the boom (6);

a counterweight (8); and

an engine (7) including a power plant for supplying driving pressure oil to said main winding drum (3), said auxiliary winding drum (4) and said third drum (5) mounted on said revolving frame (2);

characterized in that said engine is mounted on either left or right side of said revolving frame (2);

said counterweight (8) has a recessed portion having a front side formed into a recessed surface and is mounted at the rear of said main winding drum (3), said auxiliary winding drum (4) and said third drum (5) so that a size of said third drum (5) is not less than that of the other drums; and

a boom accessory device (13) is installed within said recessed portion."

II. Notice of opposition was filed against the granted patent and revocation of the patent on the grounds of Article 100(a) EPC 1973 was requested.

By decision posted on 3 April 2008, the opposition division rejected the opposition against the European patent.

III. Notice of appeal was filed against this decision by the appellant (opponent) on 21 May 2008, and the appeal fee was paid on the same day. The grounds of appeal were filed on 11 August 2008. With letter dated 29 August 2008 the appellant filed a new prior art document:

Brochure SL 13000 dated 1993

IV. In a communication accompanying the summons to oral proceedings, the Board expressed its preliminary view that the newly filed document did not seem to be more relevant in respect of the subject-matter claimed than the prior art on file. Since novelty was not in dispute, inventive step would have to be considered. The Board opined that the skilled person would not be led in an obvious manner to the claimed invention by the prior art when considering the general knowledge of the skilled person.

V. With letter dated 14 October 2010 the appellant withdrew its request for oral proceedings and requested a decision on the basis of the state of the file. It also stated that if oral proceedings were held, it would not attend.

VI. Oral proceedings were held on 7 December 2010 in the absence of the appellant, as announced. The following prior art documents were discussed:

D1: EP-A-0 048 076

D2: EP-B-0 582 401

The appellant (opponent) had requested in writing that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patentee) requested that the appeal be dismissed or that the European patent be maintained on the basis of one of the auxiliary requests 2 to 6 of 8 November 2010.

VII. In support of its request the appellant had argued in writing that, starting from the prior art as shown in Figure 12 of the patent in suit, the distinguishing features of claim 1 were only that

- the counterweight has a recessed portion,
- a fourth drum acting as a boom accessory device is installed within that recessed portion and
- a size of the third drum is not less than that of the other drums.

Regarding the function of the drums, it was merely essential that they served to operate a rope.

D1 disclosed a mobile crane structure which could be designed as a crawler crane having four drums of the same size arranged in a row one after the other. The rear drum was provided as a boom accessory device. Provided that on the frame enough space for such an arrangement was present, the problem arising was only

what to do in the case that a counterweight were to be mounted on the frame as well. Since there was no essential difference between a crawler crane and a mobile crane the skilled person would D2 take into consideration as this disclosed a counterweight having a recessed portion, within which a drum for actuating a boom was installed. The combination of D1 and D2 led the skilled person in an obvious manner to the subject-matter of claim 1.

Considering the SL 13000 Brochure, the prior art disclosed, on page 1 thereof, the essential features of claim 1, without however explicitly showing the position of the engine. In any case, an engine was necessary in that arrangement for supplying the driving power to the drums. That it could be mounted on one side of the revolving frame was already acknowledged in Figure 12 of the patent. Also for this reason, the claimed combination of features did not involve an inventive step.

VIII. The arguments of the respondent can be summarized as follows:

The problem underlying the invention was not trivial in that the skilled person was well aware of the restrictions in weight and size when a crawler crane of the type as claimed had to be transported on public roads. Therefore on the one hand it was important to achieve compactness of the crane and on the other hand high flexibility in operation.

Since the embodiment shown in Figure 12 of the patent was not pre-published, the closest prior art was D1

which disclosed a mobile crane that could be equipped as a crawler crane. At first sight, the crane type according to D1 was not flexible in use since some components had to be removed before it was transportable.

D1 did not give any indication towards an arrangement of the engine on one side of the revolving frame. The drums - although mounted in one row - were intended for different purposes than winding operating ropes for moving loads, in particular those were for operating a fly jib, a boom or a gantry. Since there was no indication towards the use of the drums as load operating drums or separating the split drums to become two drums in the row, the skilled person had no reason to modify the known arrangement, irrespective of the arrangement of the engine, which was mounted in line with the drums and not beside them.

Consequently, because D1 was not relevant to the claimed combination of features, no indication was given towards a combination with D2 which disclosed a counterweight with a recessed portion in a different configuration.

Reasons for the Decision

1. The appeal is admissible.
2. *Novelty (Article 54 EPC 1973)*

In the appeal proceedings no arguments were presented by the appellant as to why the subject-matter of claim 1 of the patent in suit lacked novelty. The Board comes to the conclusion that none of the documents on file

discloses the combination of features of claim 1. Thus the requirement of novelty is met.

3. *Inventive step (Article 56 EPC 1973)*

3.1 According to the introduction of the patent specification (paragraph [0001]) the invention starts from a crawler crane as known from D1. It is an object of the invention to provide a crawler crane capable of performing versatile operations (paragraph [0008]). This technical problem is solved by a crawler crane having the features of claim 1, in particular due to the features that the engine is mounted on either the left or the right side of said revolving frame, the counterweight has a recessed portion having a front side formed into a recessed surface and is mounted at the rear of the main winding drum, the auxiliary winding drum and the third drum, the third drum has a size which is not less than that of the other drums, and a boom accessory device is installed within the recessed portion of the counterweight.

3.2 In its grounds of appeal the appellant argued that the embodiment shown in Figure 12 of the patent was acknowledged as prior art. However, no document or other evidence was provided which would support this allegation. Therefore Figure 12 cannot be considered to represent prior art.

3.3 D1 shows a crawler crane having a revolving frame 14, a boom 18, 47, 48, a main winding drum 32-32, an auxiliary winding drum (jib drum 34) and a third drum (boom suspension drum 35) mounted on said revolving frame 14 to wind each operating rope, whereby the drums are

arranged in a row so that their rotational shafts are at substantially right angles to a center axis of the boom 18, 47, 48, a counterweight 56 and an engine 30 including a power plant 31 for supplying driving pressure oil to the main winding drum 32-32, the auxiliary winding drum 34 and the third drum 36 mounted on the revolving frame 14. Immediately rearward thereof is a further drum 38 acting as a gantry, mast, boom guy-line drum.

3.4 This crawler crane has only the split drum 32-32 for operating the load block; the further drums are all designated for operating a boom, jib or gantry. No indication is present in this document that the drums should be used for a different function than the outrigger parts. Furthermore, the conventional counterweight 56 does not have a recessed portion within which a drum could be installed since there is obviously enough space for it on the frame. Thus no reason can be seen to make the construction more compact, also in view of the engine which is situated in line with the row of drums, thereby consuming additional space in the longitudinal direction of the frame. Therefore, the crane known from D1 cannot lead to the claimed combination of features aiming at a compact construction of the crane and using the drums for versatile operations.

3.5 D2 discloses a mobile crane having a revolving frame. On the frame are mounted a main operating drum, an auxiliary operating drum and a boom suspension drum which is installed within a recess of the counterweight. This document does not show an engine, and the drums are arranged with space between them such that they are not

positioned in a row. Obviously this assembly does not point towards a compact construction but rather to a suitable position of the boom suspension drum. Since further, no engine is shown, the position of which could also contribute to a compact construction, the skilled person has no reason to consider the teachings of D2 in order to solve the technical problem underlying the patent in suit. Even if the skilled person would apply the form of the counterweight of D2 in the crawler crane according to D1, he would not arrive at the subject-matter of claim 1 since the features of three operating main drums in a row and the position of the engine mounted on either left or right side of the revolving frame would still be missing.

3.6 The further prior art document SL 13000 cited during the appeal proceedings does not come closer to the claimed solution than the documents discussed above because the installation shown there is obviously not suitable for versatile operations and does not disclose a compact construction. It comprises only one main winding drum, the other drums being intended for operating the boom, and the position of an engine cannot be identified in the drawings.

3.7 Hence, in the absence of a teaching in the prior art leading to the combination of features according to claim 1, the subject-matter claimed involves an inventive step. Since the dependent claims 2 to 4 also meet the requirements of the EPC the patent can be maintained as granted.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau