

Title (en)

LIFTING STRUCTURE OF TOWER CRANE, HYDRAULIC SYSTEM OF LIFTING STRUCTURE, AND LIFTING METHOD

Title (de)

HEBESTRUKTUR FÜR EINEN KRAN, HYDRAULIKSYSTEM FÜR DIE HEBESTRUKTUR UND HEBEVERFAHREN

Title (fr)

STRUCTURE DE LEVAGE DE GRUE À TOUR, SYSTÈME HYDRAULIQUE DE STRUCTURE DE LEVAGE ET PROCÉDÉ DE LEVAGE

Publication

EP 2620405 A4 20140416 (EN)

Application

EP 11859735 A 20110817

Priority

- CN 201110050632 A 20110302
- CN 2011078540 W 20110817

Abstract (en)

[origin: EP2620405A1] Disclosed are a lifting structure of tower crane, a hydraulic system for the lifting structure, and a lifting method for tower crane. The hydraulic system of the lifting structure of tower crane comprises a forward branch working oil-way and a reverse branch working oil-way. Arranged on the forward working oil-way of each oil cylinder is a forward speed regulator valve for adjusting the flow rate of hydraulic oil. Arranged on the reverse branch working oil-way of each oil cylinder is a reverse governor valve for adjusting the reverse flow rate of the hydraulic oil. The lifting structure of tower crane comprises the hydraulic system for lifting structure. In the lifting method for the tower crane, the forward governor valve and the reverse governor valve on each oil cylinder are used to control the forward and reverse flow rate of the hydraulic oil in the branch working oil-ways of each oil cylinder and the synchronization accuracy of each cylinder, and synchronized lifting of each of the cylinders is allowed by keeping equal the forward and reverse flow rate of the hydraulic oil in the branch working oil-ways of each oil cylinder and by the synchronized lifting of each of the cylinders.

IPC 8 full level

B66C 13/20 (2006.01); **B66C 23/28** (2006.01); **B66C 23/32** (2006.01); **B66C 23/62** (2006.01)

CPC (source: EP)

B66C 23/283 (2013.01); **B66C 23/32** (2013.01)

Citation (search report)

- [A] EP 0516938 A1 19921209 - LIEBHERR WERK BIBERACH GMBH [DE]
- [A] DE 202005009236 U1 20060921 - LIEBHERR WERK BIBERACH GMBH [DE]
- [A] DE 2253201 A1 19740509 - JUL WOLFF & CO GMBH
- See references of WO 2012116537A1

Cited by

CN103663183A; CN103626047A; CN105417429A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2620405 A1 20130731; **EP 2620405 A4 20140416**; **EP 2620405 B1 20151014**; CN 102173363 A 20110907; CN 102173363 B 20130918; WO 2012116537 A1 20120907

DOCDB simple family (application)

EP 11859735 A 20110817; CN 2011078540 W 20110817; CN 201110050632 A 20110302