

Title (en)
LARGE MANIPULATOR, ESPECIALLY FOR SELF-PROPELLED CONCRETE PUMPS

Title (de)
GROSSMANIPULATOR, INSBESONDERE FÜR AUTOBETONPUMPEN

Title (fr)
MANIPULATEUR DE GRANDE TAILLE, NOTAMMENT POUR POMPES A BETON AUTOMOTRICE

Publication
EP 0686224 B1 19970326 (DE)

Application
EP 94902681 A 19931204

Priority
• DE 4306127 A 19930227
• EP 9303416 W 19931204

Abstract (en)
[origin: WO9419563A1] The invention relates to a large manipulator, especially for self-propelled concrete pumps. A chassis bears a mast base rotatable about a vertical pivot (18) and an articulated mast consisting of at least three arms (1 to 5). The arms (1 to 5) can be pivoted to a limited extent about horizontal, mutually parallel axes (A to E) in pairs in relation to the adjacent base (16) or arm (1 to 5) by means of a drive system. The articulated mast is actuated via a remote control device (30) with control levers (34, 34', 34''). In order to ensure a clear allocation of the movements of the control lever (34) and the articulated mast, the invention proposes that the remote control device (30) have a computer-supported co-ordinate transmitter (42) controllable via the control lever (34) for the drive systems (30) via which, in one direction of adjustment (+, -) of the control lever (34), the drive systems (30) for the pivots (A to E) can be actuated independently of the drive system for the pivot (18) of the mast base (16) with the accomplishment of an extending or retracting movement of the articulated mast (20) for a predetermined height (h) of the tip of the mast. In the other direction of adjustment (l, r) of the control lever (34) perpendicular to the first direction, a rotary movement of the articulated mast (20) about the pivot (18) is triggered via the co-ordinate transmitter (42) independently of the movement in the axes (A to E) with a predetermined height (h) of the tip of the articulated mast.

IPC 1-7
E04G 21/04

IPC 8 full level
E04G 21/04 (2006.01)

CPC (source: EP US)
B66C 13/40 (2013.01 - EP US); **E04G 21/04** (2013.01 - EP US); **E04G 21/0436** (2013.01 - EP US); **E04G 21/0463** (2013.01 - EP US); **Y10T 137/8807** (2015.04 - EP US)

Citation (examination)
BENCKERT H. und RENZ H. " Entwicklung der Antriebshydraulik für Mobile Betonverteilmaste", O+P Ölhydraulik und Pneumatik, 36, 1992, Nr. 4, Seiten 242-244, 247,248 und 251

Cited by
DE102016106595A1; WO2017174576A1; DE102019105814A1; CN103806665A; CN102360228A; CN103206090A; DE102019105817A1; CN101824916A; DE102019105871A1; WO2017178420A1; EP3705662A1; DE102016106352A1; EP3705663A1; US11214970B2; EP3705664A1

Designated contracting state (EPC)
DE ES FR GB IT

DOCDB simple family (publication)
DE 4306127 A1 19940901; DE 4306127 C2 20020808; DE 59305997 D1 19970430; EP 0686224 A1 19951213; EP 0686224 B1 19970326; EP 0686224 B2 20050601; ES 2100674 T3 19970616; ES 2100674 T5 20051216; JP H08507112 A 19960730; US 5640996 A 19970624; WO 9419563 A1 19940901

DOCDB simple family (application)
DE 4306127 A 19930227; DE 59305997 T 19931204; EP 9303416 W 19931204; EP 94902681 A 19931204; ES 94902681 T 19931204; JP 51858294 A 19931204; US 51379095 A 19950825