

Title (en)  
Civil construction machine with computer unit for determining an adjustment range

Title (de)  
Tiefbaumaschine mit Rechereinheit zum Ermitteln eines Verstellbereichs

Title (fr)  
Machine de génie civil doté d'une unité de calcul pour déterminer une zone de réglage

Publication  
**EP 2378053 B1 20190828 (DE)**

Application  
**EP 10004084 A 20100416**

Priority  
EP 10004084 A 20100416

Abstract (en)  
[origin: EP2378053A1] The machine (1) has an actuating unit (18) e.g. rotary drilling drive and vibration drilling drive, adjustable with respect to a carrier unit (10) that is formed as an undercarriage, and detectors (51-64) for detecting condition data of the machine. A processor unit (23) determines an adjusting range of the actuating unit based on the data, where the actuating unit is adjustable within the adjusting range with tilt steadiness of the machine. The processor unit determines a position of the actuating unit within the adjusting range, and one of the detectors is formed as a rotary encoder. An independent claim is also included for a method for operating a construction machine.

IPC 8 full level  
**E21B 7/00** (2006.01); **E21B 7/02** (2006.01); **E21B 41/00** (2006.01); **E21B 44/00** (2006.01)

CPC (source: EP US)  
**E21B 7/005** (2013.01 - EP US); **E21B 7/022** (2013.01 - EP US); **E21B 15/00** (2013.01 - EP); **E21B 41/0021** (2013.01 - EP US);  
**E21B 44/00** (2013.01 - EP US)

Citation (examination)  
US 5610818 A 19970311 - ACKROYD NEIL [GB], et al

Citation (opposition)  
Opponent : Liebherr-Werk Nenzing GmbH,  
• DE 8912027 U 19891010  
• US 2006289205 A1 20061228 - LAW ARNOLD R [US], et al  
• US 5730305 A 19980324 - ICHIBA AKINORI [JP], et al  
• US 6032094 A 20000229 - YANAGI KUNIKAZU [JP], et al  
• EP 1491486 A1 20041229 - HITACHI CONSTRUCTION MACHINERY [JP]  
• DE 19933917 A1 20000203 - KOBE STEEL LTD [JP]  
• DE 20011371 U1 20000914 - BAUER SPEZIALTIEFBAU [DE]  
• ANONYMOUS: "Betriesanleitung", LIEBHERR, TYPE 1160, VERSION 002, 27 May 2020 (2020-05-27), pages 1 - 69, XP055702007

Cited by  
EP2801668A1; CN113946786A; EP3613903A1; DE102015105908A1; CN106065767A; US10344586B2; EP3337946B1; EP3418167A1;  
DE102017113910A1; EP4174283A1; EP3228756B2; EP3613903B1; EP3268538B1; EP3854943B1; EP3722512B1

Designated contracting state (EPC)  
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 SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2378053 A1 20111019; EP 2378053 B1 20190828**; BR PI1101542 A2 20140107; BR PI1101542 B1 20200825; CN 102220839 A 20111019;  
CN 102220839 B 20140212; EP 3255239 A1 20171213; HK 1162631 A1 20120831; JP 2011226259 A 20111110; JP 5395109 B2 20140122;  
RU 2011109915 A 20120927; RU 2471981 C2 20130110; US 2012072081 A1 20120322; US 8538670 B2 20130917

DOCDB simple family (application)  
**EP 10004084 A 20100416**; BR PI1101542 A 20110415; CN 201110095020 A 20110415; EP 17178017 A 20100416; HK 12102940 A 20120323;  
JP 2011088853 A 20110413; RU 2011109915 A 20110317; US 201113070637 A 20110324