

Title (en)
Construction machine with a safety device

Title (de)
Baumaschine mit einer Sicherheitseinrichtung

Title (fr)
Engin avec un dispositif de sécurité

Publication
EP 2378054 B1 20190828 (DE)

Application
EP 10004085 A 20100416

Priority
EP 10004085 A 20100416

Abstract (en)
[origin: EP2378054A1] The safety device has a detector for detecting instantaneous position of an actuator unit (18) of a construction machine (1) relative to the carrier unit (10) of the construction machine. A display device (20) is provided, with which the instantaneous position of the actuator unit relative to the carrier unit is displayed. An evaluation unit (22) is provided through which an adjustable range of the actuator unit is ascertained depending on an input value. The adjustable range together with the instantaneous position of the actuator unit is displayed by the display device.

IPC 8 full level
E02D 7/00 (2006.01); **E02F 9/26** (2006.01); **E21B 7/02** (2006.01)

CPC (source: EP US)
E02F 9/24 (2013.01 - EP US); **E21B 7/022** (2013.01 - EP US); **E21B 7/024** (2013.01 - EP US); **E21B 41/0021** (2013.01 - EP US)

Citation (examination)
US 4511974 A 19850416 - NAKANE MASAO [JP], et al

Citation (opposition)
Opponent : Liebherr-Werk Nenzing GmbH,
• DE 8912027 U1 19891123
• US 2006289205 A1 20061228 - LAW ARNOLD R [US], et al
• DE 20011371 U1 20000914 - BAUER SPEZIALTIEFBAU [DE]
• US 5730305 A 19980324 - ICHIBA AKINORI [JP], et al
• DE 19933917 A1 20000203 - KOBE STEEL LTD [JP]

Cited by
EP3553229A1; WO2019197219A1; EP3268538B1

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 2378054 A1 20111019; EP 2378054 B1 20190828; BR PI1101739 A2 20130115; CN 102220862 A 20111019; CN 102220862 B 20150520; HK 1162632 A1 20120831; JP 2011226257 A 20111110; JP 5564462 B2 20140730; RU 2011111328 A 20121010; RU 2466241 C1 20121110; US 2011254694 A1 20111020; US 8624752 B2 20140107

DOCDB simple family (application)
EP 10004085 A 20100416; BR PI1101739 A 20110415; CN 201110095046 A 20110415; HK 12102941 A 20120323; JP 2011085433 A 20110407; RU 2011111328 A 20110328; US 201113072460 A 20110325