Title (en)

SAFETY METHOD AND SAFETY DEVICE FOR A MACHINE, ESPECIALLY A BENDING PRESS

Title (de)

SICHERUNGSVERFAHREN UND SICHERHEITSEINRICHTUNG FÜR EINE MASCHINE, INSBESONDERE EINE BIEGEPRESSE

Title (fr)

PROCEDE DE SECURISATION ET DISPOSITIF DE SECURITE DESTINES A UNE MACHINE, NOTAMMENT A UNE PRESSE A PLIER

Publication

EP 1687563 A1 20060809 (DE)

Application

EP 04763936 A 20040810

Priority

- EP 2004008915 W 20040810
- DE 10353353 A 20031114

Abstract (en)

[origin: WO2005052437A1] The invention relates to a method for securing a machine, especially a bending press (10), whereby a first tool part (12) is displaced towards a second tool part (14) in such a way that an opening gap (22) between the tool parts (12, 14) is gradually closed during the course of the working movement. According to said method, a protective region (36) located upstream of the first tool part (12) and containing at least one part of the opening gap is monitored by at least one optoelectronic sensor, such that when the protective region (36) is entered, a switching signal is generated, e.g. in order to stop the first tool part (12). The aim of the invention is to provide an improved method for securing a machine and an improved safety device, especially for increasing the level of safety. To this end, the entire protective region (36) is monitored, and during the operation of the machine (10), when the opening gap (22) is reduced to the size of the protective region (36) in the direction of displacement, the protective region (36) is reduced in the direction of displacement according to the displacement of the first tool part (12), in such a way that essentially the entire opening gap (22) is located in the protective region (36) during the subsequent closing movement.

IPC 8 full level

F16P 3/14 (2006.01)

CPC (source: EP US)

B21D 55/00 (2013.01 - EP); F16P 3/144 (2013.01 - EP US)

Citation (search report) See references of WO 2005052437A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

DE 10353353 A1 20050602; EP 1687563 A1 20060809; TW 200526402 A 20050816; US 2007214854 A1 20070920; US 7578156 B2 20090825; WO 2005052437 A1 20050609

DOCDB simple family (application)

DE 10353353 Å 20031114; EP 04763936 A 20040810; EP 2004008915 W 20040810; TW 93124004 A 20040811; US 57913304 A 20040810