

Title (en)  
MACHINE TOOL MONITORING DEVICE

Title (de)  
WERKZEUGMASCHINENÜBERWACHUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF DE SURVEILLANCE D'UNE MACHINE-OUTIL

Publication  
**EP 2291261 A1 20110309 (DE)**

Application  
**EP 08874690 A 20081209**

Priority  
• EP 2008067124 W 20081209  
• DE 102008002503 A 20080618

Abstract (en)  
[origin: WO2009152878A1] The present invention relates to a machine tool monitoring device having a detecting unit (32) for detecting the presence of at least one type of material in at least one prescribed machine tool region, particularly the machine tool working region (34), by means of spectral analysis of radiation (SR), wherein the detecting unit (32) comprises a sensor unit (44) having at least one sensitivity region (54.2) for detecting radiation in a wavelength range (WL2) disposed in the electromagnetic range, a transmitting unit (42; 64) for transmitting radiation having at least one radiation component in the wavelength range (WL2), and an analysis means (58) designed such that it can detect the presence of at least one type of material in at least one prescribed machine tool region based on the radiation detected by the sensor unit (44), wherein the analysis means (58) is operationally coupled to the transmitting unit (42).

IPC 8 full level  
**B23Q 11/00** (2006.01); **B23Q 17/24** (2006.01); **F16P 3/14** (2006.01)

CPC (source: EP US)  
**B23Q 11/0082** (2013.01 - EP US); **B23Q 17/2438** (2013.01 - EP US); **F16P 3/144** (2013.01 - EP US); **F16P 3/147** (2013.01 - EP US);  
**Y10T 83/533** (2015.04 - EP US)

Citation (search report)  
See references of WO 2009152878A1

Citation (examination)  
• US 2005167593 A1 20050804 - FORSYTH KEITH W [US]  
• "Optical properties of human skin in the near infrared wavelength range of 1000 to 2200 nm", vol. 6, no. 2, April 2001 (2001-04-01), pages 167 - 176, Retrieved from the Internet <URL:http://courses.engr.illinois.edu/ece398/sb/articles/9-27%20Opt%20Prop%20Skin%20in%20NIR.pdf> [retrieved on 20120514]  
• "Spectrophotometry of human hemoglobin in the near infrared region from 1000 to 2500 nm", 1994, pages 59 - 65, ISSN: 0967-0335, Retrieved from the Internet <URL:http://psi.cz/ftp/publications/NIR/J02\_0059.pdf>

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 MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**DE 102008002503 A1 20091224**; CN 102066049 A 20110518; EP 2291261 A1 20110309; JP 2011524263 A 20110901;  
JP 5279900 B2 20130904; RU 2011101495 A 20120727; RU 2495319 C2 20131010; US 2011088528 A1 20110421;  
WO 2009152878 A1 20091223

DOCDB simple family (application)  
**DE 102008002503 A 20080618**; CN 200880129870 A 20081209; EP 08874690 A 20081209; EP 2008067124 W 20081209;  
JP 2011513891 A 20081209; RU 2011101495 A 20081209; US 99991608 A 20081209