



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
24.11.2010 Bulletin 2010/47

(51) Int Cl.:
G07C 3/00 (2006.01)

(43) Date of publication A2:
15.07.2009 Bulletin 2009/29

(21) Application number: **08163514.6**

(22) Date of filing: **02.09.2008**

(84) Designated Contracting States:
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 States:
AL BA MK RS

(72) Inventors:
• **Perelli, Luca**
40024, CASTEL SANPIETRO TERME (BOLOGNA) (IT)
• **Santini, Alessandro**
40134, BOLOGNA (IT)

(30) Priority: **04.09.2007 IT BO20070604**

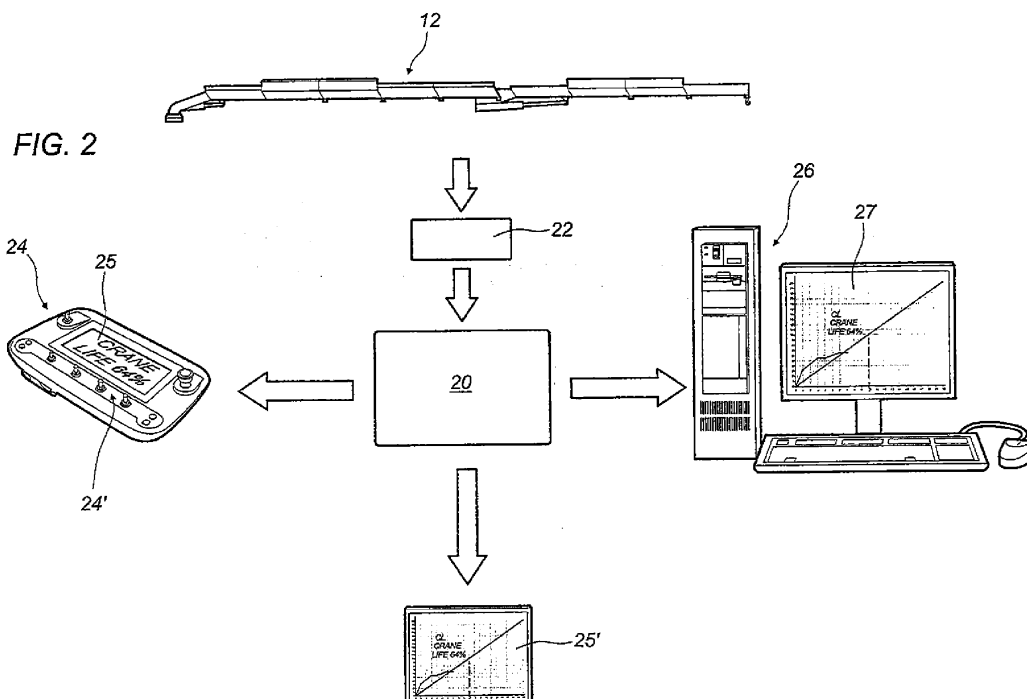
(74) Representative: **Fanzini, Valeriano**
Bugnion S.p.A.
Via di Corticella, 87
40128 Bologna (IT)

(71) Applicant: **EFFER S.p.A.**
38068 Roverto (TN) (IT)

(54) **Apparatus for determining the effective operating life of a machine**

(57) An apparatus for determining the effective operating life, or working life, of a machine for moving loads, in particular in the form of a crane, comprises means (Cnm) for counting the number of cycles (Nnm) that have occurred for corresponding oscillation intervals (Pnm) of

the signal detected. The apparatus also comprises means that use this count for calculating a data item defining the effective operating life in relation to the operating life limit defined for the machine and means (25, 25', 26) for displaying the effective working life.





EUROPEAN SEARCH REPORT

 Application Number
 EP 08 16 3514

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 01/61301 A1 (KOIVISTO MARJA LIISA [FI]; KOIVISTO VESA [FI]) 23 August 2001 (2001-08-23) * page 1, line 5 - line 26 * * page 3, line 3 - line 23 * * page 6, line 4 - line 16 * * page 7, line 30 - line 34 * * page 8, line 18 - page 10, line 23 * * figures *	1-25	INV. G07C3/00
X	US 5 531 122 A (CHATHAM MICHAEL D [US] ET AL) 2 July 1996 (1996-07-02) * column 2, line 58 - line 62 * * column 7, line 2 - line 5 * * column 11, line 14 - column 13, line 32 * * figures 1,2,10,13a,13b *	1,25	
X	EP 0 856 817 A1 (FUKUOKA KIKI CO LTD [JP]) 5 August 1998 (1998-08-05) * column 1, line 19 - line 39 * * column 2, line 33 - column 3, line 20 * * figures 5,7a,7b *	1,25	TECHNICAL FIELDS SEARCHED (IPC) G07C B66C
A	US 2001/045405 A1 (HIGGINS DAVID J [US]) 29 November 2001 (2001-11-29) * paragraph [0013] - paragraph [0018] * * paragraph [0048] - paragraph [0054] * * figures 1,20-25 *	1,25	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 15 October 2010	Examiner Paraf, Edouard
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

 1
 EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 16 3514

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

15-10-2010

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0161301	A1	23-08-2001	NONE	

US 5531122	A	02-07-1996	AU 679595 B2	03-07-1997
			AU 1151095 A	07-09-1995
			CA 2140848 A1	29-08-1995

EP 0856817	A1	05-08-1998	JP 3188838 B2	16-07-2001
			JP 9264706 A	07-10-1997
			US 5847668 A	08-12-1998

US 2001045405	A1	29-11-2001	US 2003071005 A1	17-04-2003
