

**Bibliographic data: EP1444455 (A1) — 2004-08-11**

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**MULTIFUNCTIONAL ELECTRONIC DEVICE FOR A MECHANICAL SEAL AND CONTROL AND MANAGEMENT PROCESS REALISED BY SUCH DEVICE**

**Inventor(s):** COMPER RICCARDO [IT] ± (COMPER, RICCARDO)

**Applicant(s):** TERMOELETTRONICA S P A [IT] ± (TERMOELETTRONICA S.P.A)

**Classification:** - **international:** **F16J15/34; G01M13/00;** (IPC1-7): F16J15/34;  
G01M13/00  
- **cooperative:** **F16J15/3492; G01M13/005**

**Application number:** EP20030715347 20030313 [Global Dossier](#)

**Priority number(s):** [WO2003IT00154 20030313](#) ; [IT2002MI01396 20020625](#)

**Also published as:** [EP1444455 \(B1\)](#) [AT312309 \(T\)](#) [AU2003219534 \(A1\)](#)  
[DE60302645 \(T2\)](#) [ITMI20021396 \(A1\)](#) [more](#)

**Abstract not available for EP1444455 (A1)**

**Abstract of corresponding document: WO2004001259 (A1)**

Multifunctional electronic device (30) based on a microprocessor for checking and managing all operating and diagnostic conditions of a mechanical seal (10, 20). A mechanical seal, installed on pumps or process machines (11, 21), comprises two coupled surfaces, one rotating and integral with a shaft and one stationary and integral with the or machine in which the shaft is inserted; these two surfaces are kept in contact through combined forces: a mechanical force generated by springs and another hydraulic force generated by the pressure of a fluid and suitably controlled by a pressure regulator (103, 202, 302). The electronic device regulates the pressurization of a mechanical seal to variable pressure values, keeping the optimum difference (305) constant between pressure (303) inside the mechanical seal and pressure (304) in the pump delivery line or inside the process machine in which the seal is installed.

**Bibliographic data: US2005251541 (A1) — 2005-11-10**

**Multifunctional electronic device for a mechanical seal and control and management process realised by such device**

**Inventor(s):** COMPER RICCARDO [IT] ± (COMPER RICCARDO)

**Applicant(s):** TERMOELETTRONICA, S.P.A

**Classification:** - international: **F16J15/34; G01M13/00;** (IPC1-7): G06F7/00  
- cooperative: **F16J15/3492; G01M13/005**

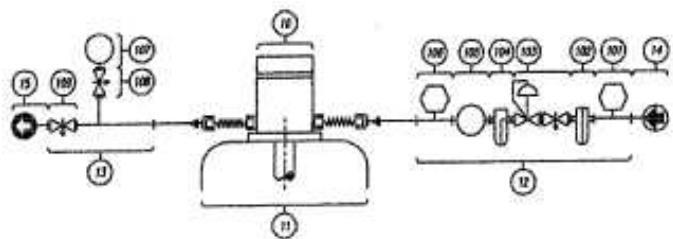
**Application number:** US20040519124 20041221 [Global Dossier](#)

**Priority number(s):** [IT2002MI01396 20020625](#) ; [WO2003IT00154 20030313](#)

**Also published as:** [AT312309 \(T\)](#) [AU2003219534 \(A1\)](#) [DE60302645 \(T2\)](#)  
[EP1444455 \(A1\)](#) [EP1444455 \(B1\)](#) [more](#)

### Abstract of US2005251541 (A1)

A multifunctional electronic device for checking and managing the operating and diagnostic conditions of a mechanical seal. A method of controlling and managing the operating and diagnostic conditions of a mechanical seal.





# **Ministero dello Sviluppo Economico**

## **Ufficio Italiano Brevetti e Marchi**

**Domanda numero 102008901637646 (TO2008A000482) Tipologia Invenzioni**

*N.B. Non tutte le schede riportano la medesima struttura, essendo questa strettamente correlata alla tipologia.*  
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**Titolo**  
**dispositivo elettronico indossabile sul braccio di un operatore con algoritmi e procedure informatizzate per l'implementazione di un interfaccia mobile e una sinergia uomo/macchina nell'ambito di cicli produttivi automatizzati nell'industria tessile.**

**Titolare**  
**LIVINGTECH DI COMPER E ASSOCIATI I**

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*CLASSI*

Codice Classi  
**G05B**

**Bibliographic data: EP2136274 (A1) — 2009-12-23**

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**Electronic device adapted to be worn on an arm of an operator and to be used in the field of automated manufacturing in textile industry**

**Inventor(s):** COMPER RICCARDO [IT] ± (COMPER, RICCARDO)

**Applicant(s):** LIVINGTECH DI COMPER E ASSOCIA [IT] ± (LIVINGTECH DI COMPER E ASSOCIATI)

**Classification:** - international: **G05B19/409; G06F1/16**  
- cooperative: **G05B19/409; G05B2219/23161; G05B2219/23406;**  
**G05B2219/23414**

**Application number:** EP20090007765 20090612 [Global Dossier](#)

**Priority number(s):** [IT2008TO00482](#) 20080619

**Also published as:** [ITTO20080482 \(A1\)](#)

**Abstract of EP2136274 (A1)**

An electronic device wearable on the arm of an operator (just like a large watch), allowing him thus to work with free hands. The device is equipped with a rechargeable battery, has a graphic touch-screen display and is able to communicate over wireless nets with machinery automation and control systems, as well as with centralized or distributed computers, such as those used in various manufacturing control procedures or for the remote control of production plants. This device is provided with software tools implementing algorithms, functions and automation procedures which, processing data, inputs and commands coming from shared networks and/or the web, allow to have a mobile communication interface and synergetic effects between man and machinery, integrating and checking in real time, safely, efficiently and in an ergonomic way, processes steps, commands and manual operations within manufacturing cycles which are largely, but not totally, automated.