Universitatea
Politehnica
Timișoara

Utility Models

INVENTORS: SEBARCHIEVICI CĂLIN, SÂRBU IOAN, IACOB MIHAI

UTILITY MODEL NO. RO201300054

AUTOMATIC CONTROL DEVICE FOR HEATING SYSTEMS


ROMÂNIA

OFICIUL DE STAT PENTRU INVENŢII ŞI MĂRCI

CERTIFICAT

privind
Modelul de Utilitate înregistrat
Nr. RO 2013 00054

Titlul:
DISPOZITIV DE REGLARE AUTOMATĂ PENTRU INSTALAŢIILE DE ÎNCĂLZIRE

Durata Modelului de Utilitate este de 6 ani, cu începere de la data de:
18/11/2013

Confirm cele de mai sus prin semnarea şi aplicarea sigiliului
Director General

București, Data eliberării:
29/07/2016

The technical problem solved by the invention is to provide a device for pump's speed control automatic adjustment based on monitoring the ambient temperature in order to optimize electrical and thermal energy in the system.

According to the invention, the automatic control device for heating systems ensures the speed control of the heating system supply pump through a programmable logic controller (PLC) that uses information from interior and exterior temperature sensors. The command of the PLC is submitted to a frequency converter that commands the pump's speed and its start-stop function in order to reduce energy consumption.

The automatic device for heating systems according to the invention has the following advantages:

- ensures the heating system optimization by automatic speed pump adjusting;
- provides thermal energy and electricity savings;
- leads to improved boiler efficiency (running on natural gas, oil or solid) that is used to prepare the thermal fluid for space heating;
- helps to improve the heat pump's (air-water, water-water or ground-water type) seasonal coefficient of performance.

INVENTOR: PAVEL ŞTEFAN

UTILITY MODEL NO. RO201500055

PORTABLE DEVICE FOR SIGNALING PAIN,SENSITIVITY OR DISCOMFORT DURING THE COURSE OF MEDICAL DENTAR ACTIVITY


ROMÂNIA

OFICIUL DE STAT PENTRU INVENŢII ŞI MĂRCI

CERTIFICAT

privind
Modelul de Utilitate înregistrat
Nr. RO 2015 00055

Titlul: DISPOZITIV PORTABIL PENTRU SEMNALIZAREA DURERII SAU A DISCONFORTULUI ÎN TIMPUL ACTULUI-MANOPERĂ MEDICAL DENTAR

Durata Modelului de Utilitate este de 6 ani, cu începere de la data de: 17/09/2015

Confirm cele de mai sus prin semnarea şi aplicarea ştampilei
Director General

București, Data eliberării: 28/10/2016

The invention refers to a portable electronical device for signaling pain, sensitivity or discomfort during the course of medical dentar activity. The electical portable device for signaling pain, sensitivity or discomfort during the course of medical dentar activity atachable to the dentar unit (armchair) is composed out of an interlocking microcontact piece and/or optionally out of a glove attached to the patient's arm which contains an interlocking piece which is activated manually by the patient in case they feel pain or discomfort during the course of medical dental activity. The manual activation of the automatically restoring microswitch or of the contacts inside the glove interlocks a relay powered with a tension of 12 V which will command the activation of two independent transformers of 4.5V and 12V which, in turn, will power with electricity, optionally, the operation of a LED lamp, of a buzzer and of a micro speaker with pre-recorded voice signals installed inside a flexible piece of equipment and attached via a suction cup to the armchair. This equipment is also designed with microswitches which permit the simultaneous or independent activation of the light signal via the LED lamp, the accoustic signal via the buzzer and the voice signal via the micro speaker.