A FAMILY OF COMPUTER CONTROLLED INFUSION PUMPS – TECHNOLOGY TRANSFER FROM UNIVERSITY TO THE SMALL INDUSTRY

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Last changes in Poland have made that in the hi-tech industry the main role started to play the small-specialized enterprises, leaded by the people who has a good contacts in Universities. They are interested in the sophisticated technology and want to cooperate with the University.

The mechatronic product – the family of computer controlled infusion pumps are the important part of the intensive care room equipment in every hospital. The designed family of pumps gives the possibility to program infusion rate in most frequently used units, allows to record in memory own dosing procedures, could automatically load and recognize the syringe etc. They are nearly the top product similar to the ones offered by the best manufacturers as B. Brown, or Fresenius.

These two aspects: characteristic of the pumps family and the technology transfer are the main goals of the paper.

Key words: *intensive care, infusion pump, syringe pump, docking station, microprocessor control, technology transfer, R&D financing system*

1. Introduction

Last changes in Poland have made that in the hi-tech industry the main role started to play the small-specialized enterprises leaded by the people, who has a good contacts or roots in Universities. They are interested in the sophisticated technology and very often they want to cooperate with the University. So we are very close to the problem of the technology transfer and financing of the research and development (R&D).

The mechatronic product mentioned in the title of the paper – a family of computer controlled infusion pumps is a very good example of such technology transfer. The pumps were designed at the University and then the technology has been implemented for manufacturing to small firm called Medima.

Infusion pumps are the important part of the intensive care room equipment in every hospital. Nowadays according to the EU regulations, approximately up to five of such pumps have to be placed near one bed of intensive therapy. Our pumps which technical data are described on following pages are comparable to the top products offered by the best manufacturers B. Brown, Fresenius etc., but they are two times cheaper. So there are two main goals of the paper: characteristic of the pumps family and the technology transfer.

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