tory rate, the textronic contact junctions described in detail in [13] were used.

A prototype of textronic clothing for monitoring the respiratory rate is presented in ***Figure 10*** (see page 77). The real courses of the voltage of the sensor integrated with a shirt registered are presented in ***Figure 11*** (see page 77).

Discussion

The construction of textronic products requires changing the prevailing mentality of manufacturers of specialised clothing. First of all, the production of this kind of product requires the collaboration of a few branches of industry (textile industry, electronics, medicine), which means an increase in the expenditure of companies in order to change their production systems and develop technological lines. However, it seems as if continuous technological progress will force this kind of course of the development of the modern textile industry. Modern clothing with sensory characteristics is a new specialisation being developed at the Department of Clothing Technology and Textronics.

The textronic sensor described integrated with clothing allows to monitor the breathing rhythm frequency and can be inserted in different types of apparel (shirt or blouse).

The advantage of the sensors discussed is that they do not interfere directly with the human body and their textile form does not cause discomfort of use.

Conclusions

The textronic sensor for measuring the respiratory rate described can be applied in many different products due to its fibrous structure and elasticity. The sensor has a linear static characteristic. The tests performed showed that the sensor works correctly, as the output voltage of the sensor followed changes in its deformation. Moreover the real measurements of the respiratory rhythm using the test shirt confirmed that it works correctly.

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