

APPLICATION OF A THERMAL MODEL FOR THE DETERMINATION OF COMFORT FACTORS

The human efficiency is greatly affected by the thermal comfort levels. Therefore detail knowledge of the thermal comfort of humans has become a field of growing concern in the development of new technologies. Transportation, working places, clothing are amongst the major applications of such development.

Although thermal stress levels continue to be the most widely used items, they are of statistical nature and do not provide detail information. The computer simulation of the body – clothing environment system is the most effective way to overcome those limitations.

In the present work, a computer application has been developed that includes a thermal model for the human body, a data base and graphics interface, coded in Pascal

This interface improves the easy to use of the model. In order to test the usability of such interface, two tests (SUMI and QUIS) were performed on a group of 61 individuals.

In general, the software has been well accepted by the users. Regarding the SUMI tests, these were concerned with the visual aspects and supporting documentation. The QUIS test provided encouraging information regarding the learning process.

The results will provide useful leads for improving the existing version and will make the computational code a useful learning tool at both undergraduate and postgraduate levels.