

A FIELD STUDY OF THE CLOTHING USED AT COLD PLACES OF WORK

Bjarne W. Olesen and Pia J. Mørck

Laboratory of Heating and Air Conditioning

Address for reprints:

Technical University of Denmark
Building 402
DK-2800 Lyngby
DENMARK

At cold places of work like meat packing industries and cold stores, the clothing is an important factor for obtaining an acceptable thermal environment for man. Often it is difficult to select the right clothing due to changes in activity level and changes between rooms with different temperature/humidity levels.

A field study has been performed to investigate what type of clothing people normally are using in cold environments. The study was focused on the meatpacking industries and workplaces with a temperature level of 5-10° C.

The major objectives was to study individual differences and seasonal effects on the used clothing. In the study physical measurements of the thermal environment, physiological measurements on some subjects and subjective evaluations were collected for a large number of people performing similar type of work.

The results showed that there were large individual differences in the thermal insulation of the clothing used, even if activity level and thermal environment was almost the same. The clothing selected provided the people with a thermal sensation around neutral. For some of the workplaces there was a significant seasonal affect on the used clothing. People used a clothing with a higher thermal insulation during winter compared to summer, even if the temperatures at the workplaces were unchanged.