

## Conclusion

Thermographic measurements were carried out on a piece of textile made from a double layered fleece material. One of the layers was heated, whereas the other one could only be heated through conduction from the first one. A theoretical model was set up for this textile structure and the results compared with the experimental data. It was found that the perpendicular conduction was almost non-existent. The lateral thermal conductivity was found to be  $k = 0.0688 \text{ W/m}\cdot\text{K}$ . With ANSYS software a two dimensional simulation was carried out as well. The lateral and perpendicular thermal conductivities were found to be  $k_x = 0.0628 \text{ W/m}\cdot\text{K}$  and  $k_y = 0.0268 \text{ W/m}\cdot\text{K}$ , respectively. The conclusion is that the simple analytical model is suited to determine the lateral thermal conductivity. To measure both conductivities, a more detailed two dimensional model is required. It should be noted that the temperature drops at a length constant at around 3 mm. Hence only a small area is suited for measurements, which is not a problem if thermography is used.

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