2. Mobile heatable horse blanket

A horse has to be wiped dry after every tournament or ride out to avoid undercoolings, colds or muscle tensions. During winter horses are often placed under a solarium which can be used only stationary and which has a high power consumption Regarding this we developed a heatable horse blanket based on our textile heating elements which is operated by battery packs. This horse blanket can be used mobil and dries the horse within 20 minutes without wiping. The heatable horse blanket causes pleasant comfort temperature. Before riding it relaxes the muscles. After riding it protects against undercoolings, colds and muscle tensions. (www.dry-and-care.de) Our heatable horse blanket has been nominated for the Equitana Innovation Price.

Nominiert für den EQUITANA Innovationspreis 2013

dry care

3. Textile patient heating system

During 50% of operations in Germany the anaesthetic and the air-conditioning in the operating theatres causes patients to suffer from hypothermia, which can even include muscle tremors. To prevent hypothermia, roma, together with the Hohenstein institutes, has developed a textile patient heating system based on the textile heating elements. It consists of 6 modules, each one of which uses an integrated temperature sensor to stay at body temperature. Unlike other systems currently on the market, the textile heating elements ensure that the patient heating system can be draped around the patient's body. During surgery, only the module that is in the area where the operation is performed has to be removed. The patient heating system thus ensures that the patient does not suffer from hypothermia before the anaesthetic, during the operation or in the recovery room.

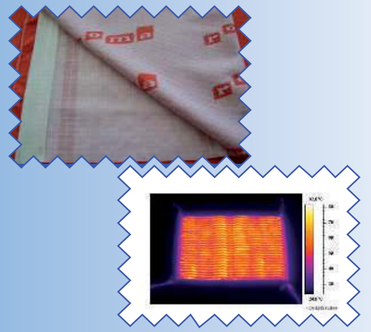
Other possible areas of application:

heatable sportswear or motorbike clothing
winter or cold storage clothing
heatable interior parts for cars (including heatable door panels, heatable seats, heatable armrests and heatable foot mats)
heatable ski, bicycle and riding helmets
heatable medical prostheses or bandages

roma-Strickstoff-Fabrik
Rolf Mayer
GmbH & Co. KG
Hertenwinkelstr. 25
D-72336 Balingen
Deutschland

telephone: +49/(0)7433/26029-20
fax: +49/(0)7433/26029-25
emaill: info@roma-strickstoffe.de
web www.roma-strickstoffe.de

contact
Jürgen Reichart



Textile heating elements

Textile heating elements: drapable and elastic

1. Product description

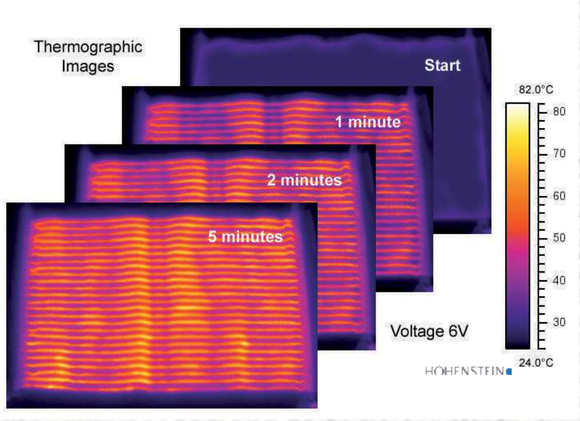
roma-Strickstoffe has developed and patented a heatable knitted fabric that allows rapid and absolutely even heating. The fabric can be flexibly adapted to customer wishes.

The electrically heatable knitted fabric has conductive threads knitted into a circular polyester knitted fabric at definable intervals in parallel to each other. The distance between the conducting threads and the choice of alloy for the conducting threads means that the voltage/

electricity relation of the heating elements can vary and tailored to the customer's needs and types of application. The fabric combines the advantages of circular knitting, such as high elasticity and processing flexibility, with the advantages of low-voltage heat generation such as no risk of current impulse and electromagnetic fields. The integration into a knitted polyester fabric insulates the threads. The construction also ensures a high level of breathability and low moisture absorption at the same time.

2. Applications

The textile heating elements can be cut according to requirements from the electrically heatable knitted fabric. The fabric's elasticity ensures that three-dimensional shapes can be covered with the fabric. The fabric can also withstand stretching and pressure to various degrees. The thickness of the fabric of only 0.5 mm means that the textile heating elements can be concealed directly under the surface (textile, leather) without impacting on look and feel. This also ensures the highest possible radiant heat. The textile heating elements can be coated with sewing, glueing or ultrasonic welding. The following textile heating element applications are already being marketing or currently being launched: heatable mattresses or beds, a mattress for people allergic to dust mites, heatable waistcoats, a mobile heatable horse blanket nominated for the Equitana 2013 innovation prize and a textile patient heating system to prevent hypothermia.



3. Advantages of our textile heating elements

Fast heating

Homogeneous heat distribution

High performance in the low voltage area

No electromagnetic fields

Customer taylored voltage/electricity relations

Energy Efficiency

High Elasticity in length and width

High flexibility in processing

Measurements of cuttings according to customer needs

Coating of 3D-Structures possible without problems

No prejudice of appearance and haptic

High withstanding against stretching and pressure

High breathability and low moisture absorption

Maximal heat emission caused by coating directly under the surface material (textile, leather)

The following applications can be bought or are in market introduction.

1. Mattress for people allergic to dust mites

Matresses offer dust mites optimal life conditions. They are humid, warm and dark. Additionally they deliver food the scaly skin which men loose during the night. Together with Hohenstein Institutes roma developed a heatable mattress based on the textile heating elements which avoids the contamination of the mattress by dust mites. This is proved with an experimental group of allergics during two years. The mattress has to be heated to a temperature over 50°C by the textile heating element twice or three times a week to avoid the settlement of the dust mites. With this method we generate a hygrothermal climate where dust mites die. The people who are allergic to dust mites can sleep without discomfort.

www.wellmed.org

WELLMED Allergo