New Fabrics – New Stuff. Design with Technical Textiles

An exhibition in the St. Gallen Textile Museum (23 August 2017 to 2 April 2018)

On 23 August 2017, the St. Gallen Textile Museum will launch the "New Fabrics – New Stuff. Design with Technical Textiles" exhibition, which will be open to the public in St. Gallen up to and including 2 April 2018. The exhibition will be devoted to the diverse applications of technical textiles in the past and in the present, and will shed light on the innovation potential of the "new fabrics".

From 23 August onwards, everything in the *St. Gallen Textile Museum* will be about "new fabrics". The exhibition will thus focus on an aspect of textile production that is relatively little known. It is beyond the world of fashion and interior decoration that the wide field of technical textiles and smart textiles unfolds in multi-faceted applications. The exhibition avoids the usual view of textiles, for even well-known textile techniques and materials appear in completely unaccustomed spheres of application and combinations. They are used in medicine and wellness, in the automotive industry, in architecture and in energy generation.

After a review of the long history of these functional textiles, the exhibition focuses entirely on known and unknown fibres and materials, the way in which they are processed and the applications of the "new fabrics" in our everyday lives. The exhibition proves that the modern world is far more "textile" than is generally assumed.

For Michael Fehr, the curator of the exhibition, the significance of the "new fabrics" is easily explained since they combine qualities which are in greater demand now than ever before: in comparison with other materials, they are light, firm and highly flexible, and they can be used and processed easily and in many different ways. "With the right combination of material and processing technology, almost everything is possible," he believes. This is why the gamut of applications ranges from stable light car bodies and cladding to tiny filters in mobile phones. At a time when natural resources are becoming scarcer and more expensive, the utilisation of retrenchment potential is of the essence, and textiles – or fibre-based materials, as technicians prefer to call them – make their contribution towards this. Research pays particular attention to applications with which the disadvantages of conventional materials and techniques can be overcome or from which possible solutions to foreseeable problems can be expected. Fehr quotes an example from aerospace: when polyester fastening straps in space shuttles were replaced by Zylon ones, which weigh 25kg less, costs per flight were reduced by 1.25 million dollars. Needless to say the straps, which were developed by the Swiss company *Cortex Hümbelin A*G, can be seen in the exhibition.

To develop new products, textile firms cooperate closely with specialists from a variety of technical disciplines, says Peter Flückiger, Director of *Swiss Textiles*. This is why Switzerland, with its long-standing textile tradition, plays a crucial role in the development of new products at an international level. One example of such cooperation advertises the exhibition in front of the Museum: the large animated flag was developed in a St. Gallen embroidery company that is steeped in tradition, *Forster Rohner AG*, which developed the embroidery from conductive threads and LEDs with the support of the *CTI* (Commission for Technology and Innovation) and various Swiss research institutes.

The significance of technical textiles in the Swiss textile industry makes it de facto a compulsory topic for the *St. Gallen Textile Museum* since the house engages with the past, present and future of the industry. According to Michaela Reichel, the Director of the Museum, it was an immensely exciting job to conquer this highly technical world since "we

had to completely rethink everything and understand the term “textiles” in its entirety. It took some time for the team to internalise that a mesh fence made of metal can also be a textile on account of how it was produced! The prerequisite for working on this topic was the producers’, universities’ and research institutes’ willingness to cooperate, to provide the necessary information and to explain complicated technologies. This is how the exhibition came into being, which is the first in the German-speaking area to deal comprehensively with “new fabrics”.

From the *Velorex* to the *BMW 301i*, from black tents to translucent concrete

There is a wide variety of possible applications for “new fabrics”; the exhibition concentrates on those areas which are particularly important for everyday life – medicine, mobility, safety and architecture.

Its first section is devoted to the history of functional textiles and reveals that the advantages of textile materials have been known and exploited for centuries. A black tent from the Western Turkish Yörük nomads, which regulates the climate in its interior thanks to an ingenious manufacturing technique, is followed by an example from aviation: the *Zeppelin* airships from Friedrichshafen. A special highlight of the “Mobility” group is constituted by the *Velorex* from the late 1940s. The small car with a body made from textiles is regarded as a rarity among aficionados. The role which textiles play in people’s safety is shown with the help of fire-fighting equipment: besides fire buckets made of linen, one of the items on show is a big rope rescue bag. Dressing materials from the inventory of the *Basel Pharmacy Museum* provide an insight into wound care around 1900.

The material archive following this section provides an insight into the diversity of textile fibres and techniques. Just under 200 samples are available to visitors and can be examined by them. They are supplemented by specimens of fibres and raw materials. Information is offered about the properties and possible applications of the fabrics. This section of the exhibition was produced in close cooperation with the Verein *Material-Archiv* and the *weißensee academy of art berlin*.

The material archive provides the link to the third section of the exhibition, which showcases specific examples of applications. Many of the examples shown here require a great deal of rethinking before onlookers are able to identify them as textiles. After all, the carbon-fibre body of the *BMW301i* looks more like plastic than fibre at first sight, as does the interior trim of a car by *Bcomp*. In the sphere of medicine, the utilisation of modern fibres for the human body has already resulted in a spare-parts store of textile implants for the skeleton, stents, textile hearts and bone scaffolds. Exhibits include the artificial uterus *ARTUS* developed by the *Hohenstein Institute*, the sprinter prosthesis for amputated legs with which *Paralympic* athletes regularly break records, as well as a cooling vest which makes multiple sclerosis patients’ lives easier. The exhibition provides a great deal of room for protective clothing against heat, cold, firearms and stabs. It was to the Director’s great regret that the stab-proof saddle blanket cannot be shown for reasons of space.

A literally shining example of the use of “new fabrics” in the field of architecture is a wall made of translucent concrete. Less spectacular but more practice-oriented are swimming textiles that are suitable for planting, or geotextiles for the reinforcement of dams.

The fact that technical textiles also fascinate creative people is proved at the end of the exhibition, which besides the *LED collection* by *Akris* also presents “stone web” and “stone fall”, free artistic works that were created at the *weißensee academy of art berlin*.

An exhibition of textile concrete

The German-Mexican architectural studio *Zeller & Moye* developed the scenography of the exhibition. Christoph Zeller and Ingrid Moye enable visitors to experience and see "new fabrics" in the architecture of the exhibition, which is made of textile concrete. In this spacer fabric filled with concrete dust, they chose an industrial product that was developed for open-air applications such as slope reinforcement, water flow control and the construction of emergency shelters. In their designs, it is used for furniture construction on a major scale for the first time ever: they used it to shape the slender but stable exhibition furniture.

"New Fabrics" is the architect team's first freelance work in Switzerland after their many years of working for *Herzog & de Meuron* in Basel, for whom they were in charge of the Tate Modern project.

Michael Fehr

Michael Fehr, a freelance author and exhibition organiser, studied history of art and history. In 1978 he was awarded a doctor's degree for a thesis on early medieval history under the supervision of Max Imdahl. From 1974 to 1981, he worked as a curator at the Museum Bochum, and from 1981 to 1986, he was a member of the research staff at the Chair of Aesthetics/Communication of Art at the University of Wuppertal. In the period from 1987 to 2005, Fehr was the Director of the *Karl Ernst Osthaus-Museum of the City of Hagen*. From 2005 to 2014, he was a professor and the Director of *the Institut für Kunst im Kontext* at the *Universität der Künste Berlin*. Fehr has been on the Board of *Werkbundarchiv e.V. – Museum der Dinge*, Berlin, since 2003. Further information about publications and projects can be found at www.aesthetischepraxis.de

Zeller & Moye

Architectural studio *Zeller & Moye* was founded by Christoph Zeller and Ingrid Moye and is based in Mexico City and Berlin. *Zeller & Moye* have planned and realised a wide variety of projects at all scales ranging from furniture design to large-format cultural buildings. At present, the firm is realising various housing projects, a concert hall and a public park in Mexico, a memorial in Kurdistan, Iraq, and the new Luther monument in Berlin, Germany.

Christoph Zeller and Ingrid Moye worked for *Herzog & de Meuron* and *SANAA* for many years. Among other things, they were the project leaders responsible for the extension to the *Tate Modern* in London.

Both of them teach at the *Universidad Iberoamericana* in Mexico, at the *Architectural Association (AA) Visiting School* in *Berlin* and *Mexico*, and were jury members and visiting critics at various universities. www.zellermoye.com

Textilmuseum
St.Gallen

The exhibition has been organised in cooperation with the following institutions:

Carbon Composites Schweiz, Empa St. Gallen, HS Luzern - Design & Kunst, weißensee kunsthochschule berlin, Schweizerische Textilfachschule STF, Swiss Textiles, Westsächsische Hochschule Zwickau Angewandte Kunst Schneeberg, Material Archiv

Empa
Materials Science and Technology

swiss TEXTILES

Lucerne University of Applied Sciences and Arts
HOCHSCHULE LUZERN
Design & Kunst
FH Zentralschweiz

weißensee kunsthochschule berlin

S1-8 MATERIAL ARCHIV

stf Schweizerische Textilfachschule

Angewandte Kunst Schneeberg
Fakultät der Westsächsischen Hochschule Zwickau
Modedesign

Kanton St.Gallen Kulturförderung

Kanton St.Gallen Kulturförderung

SWISSLOS

st.gallen

IHK St. Gallen Appenzell

IHK Stiftung

swiss TEXTILES

heimgartner
DIE FAHNE

Forster Rohner
Textile Innovations

CARBON COMPOSITES

Textilmuseum
St.Gallen

New Fabrics – New Stuff. Design with Technical Textiles
An exhibition in the St. Gallen Textile Museum (23 August 2017 to 2 April 2018)

Textile Museum
Vadianstrasse 2
CH-9000 St. Gallen

www.textilmuseum.ch
info@textilmuseum.ch
+41 71 228 00 10

open daily from 10 am to 5 pm

Catalogue

An eponymous exhibition catalogue is published by *Hier und Jetzt Verlag für Kultur und Geschichte*.

Events

Information about the accompanying programme can be found on our website as from the beginning of August: http://www.textilmuseum.ch/category/veranstaltungen/