BINDER
Best conditions for your success

Programmable light-emitting textiles are in fashion

Textile Research Institute Thuringia Vogtland e. V. (TITV Greiz) uses BINDER drying ovens to test textiles and surfaces

The business-related research institute TITV Greiz is located in Germany in the state of Thuringia. The institute is involved in research, development, services, consulting, testing and continuing education along the entire textile value creation chain. More than 50 employees work on high-tech solutions that serve as a basis for new materials for traditional textile technology.

Combination of electronics and textiles set new trends

Collaboration with non-textile industries is shaping development more and more. Specifically, the combination of electronics and textiles is making entirely new areas of application possible. The latest developments include light-emitting textiles, textile sensors and actuators and partially electrically conductive textile structures. Programmable light-emitting textiles are manufactured in two different processes. LEDs integrated in textiles are applied to conductive textiles on the one hand and on

▲ Assistant of TITV Greiz

Requirements

- Testing of light-emitting textiles, surface functionalization and flexible materials
- Standardized test methods
- artificial ageing of materials
- Testing according to DIN, ISO, ASTM, AATCC
- Simple Usage

BINDER Solutions

- Individual drying process with forced convection
- Same conditions thoughout the chamber interior
- Digital temperature setting with an accuracy of one of a degree
- Temperature safety device with visual alarm
- Adjustable fan speed

the other, electroluminescent pastes are applied to conductive textile structures in a silkscreen process. In collaboration with industrial partners in the areas of electronics, microsystems technology, automobile manufacturing and medicine, the institute is exploring product- and technology-based solutions in the areas of microsystems technology, surface functionalization and flexible materials.

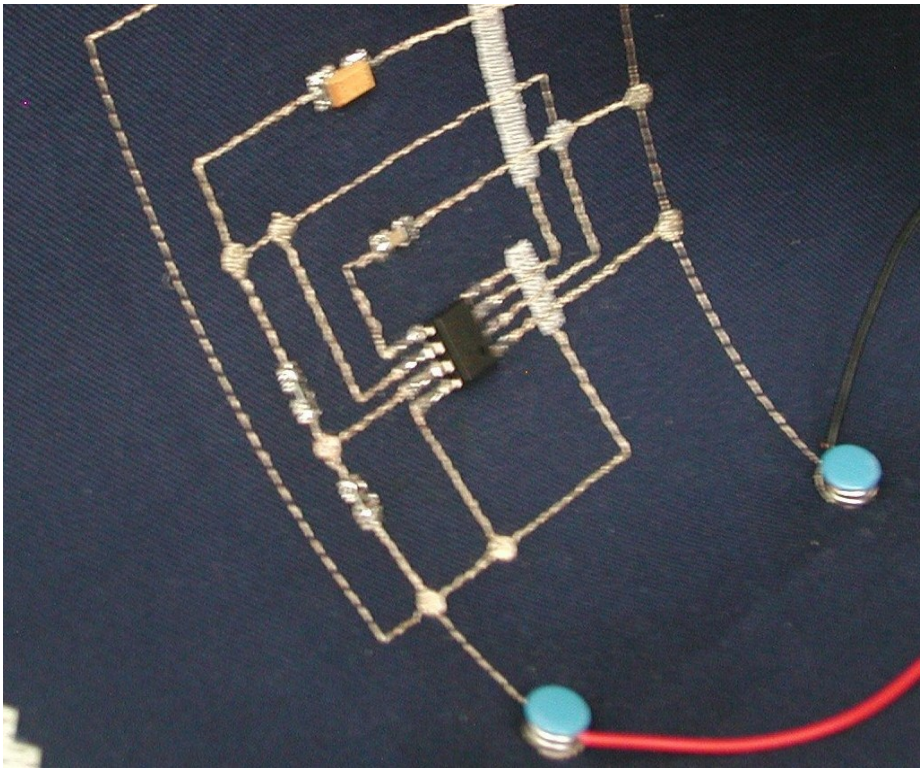
Individual drying processes

For many individual drying processes, the TITV Greiz uses drying ovens from BINDER including the FD 115 and ED 53 chambers. The textiles are exposed to specified temperatures under precisely defined dwell times. Drying and condensation processes of partial coatings are carried out in a temperature range of 120 °C – 150 °C. The institute places particular value on maintaining exact temperatures to ensure that testing procedures are carried out under constant, reproducible conditions.

"The units have a very simple operating philosophy, making our daily routine easier and more efficient,"

Christina Stark, Laborantin TITV Greiz

"The units have a very simple operating philosophy, making our daily routine easier and more efficient," says Laboratory technician Christina Stark of BINDER drying ovens.



▲ Stiched conductor board

Standardized test methods

The accredited TITV Greiz test center offers comprehensive services in the area of material and product testing. Various textile materials are tested according to DIN, ISO, ASTM, AATCC and testing methods developed by the TITV Greiz. Testing includes especially artificial ageing of materials in particular, but also testing where drying processes play a role and storage of materials in various media, e.g. an artificial sweat solution.

BINDER drying ovens have proven to be multi-talented. Test conditions can be individually adapted to specific materials and methods to obtain accurate test results.

The institute has been using BINDER drying ovens for several years and is very pleased with the results.

Advantages

- Short warm up time with forced convection
- High air exchange rate and large power reserve
- High standard accoding to DIN 12880

Aeras of application

- Elektronics / Semiconductor Industry
- Plastics Industry
- Metal Industry
- Surface technology
- Glas / Keramik

▲ Drying oven ED 53

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