A VISIT TO TESA'S FACTORY

TESA: more than 70 years of history

The TESA production facility in Renens, Switzerland has developed from a small local factory into a unique hub of innovation and technical knowledge.

More than seven decades ago, TESA set off as a small company with a far-reaching vision, putting all its efforts into the advancement of metrology. Today it stands as a modern group with a worldwide sales and distribution network operating on all continents.

Teamwork

Every day, approximately 200 employees and 10 apprentices make their way to TESA's production building to start work in one of the many departments involved in transforming raw materials into the high-precision products supplied to customers.

The Logistics Department is the first link in the chain, accepting the raw materials that are delivered to TESA and passing them to the Incoming Inspection Department for control checks. If the materials meet internal quality requirements, they are processed to create component parts using the powerful milling, turning and grinding machines in the Renens workshops. After this initial step, the surface of each workpiece is chemically treated. When all the components are finished, they can be assembled either in the cleanroom or in the respective workshops for machines or smaller instruments. Electronics units, which are also developed in-house, can be integrated into the equipment. As soon as a measuring instrument is certified for use, it is put into stock ready to be shipped to a customer.

Two other business units are particularly important for the whole production facility: the Quality Department and the Process Engineering Department. The Quality Department conducts inspections and checks throughout the production process, from raw materials to finished products. It makes sure that only the best goods are used during fabrication and that the items provided to customers will be of the quality expected. The Methods Engineers also play a key role in the factory, striving constantly to find new concepts and techniques to optimise the use of resources while improving quality and production time.

Towards the factory of the future

One of the milestones in the modernisation of the factory was the implementation of a supervisory system that feeds all data into one database that everybody can access. This concept of a digital factory is based on the connectivity of the measuring instruments and on software that is able to process the data, which is then displayed on screens in the production area.

The cleanroom and electroplating facility have also been entirely rebuilt, in 2010 and 2012 respectively, and are the pride of the company today. The cleanroom is a closed environment with an upper limit of airborne pollutants like dust and other contaminants.

The state-of-the-art electroplating facility features an automatic system, including a robot, and is used for surface finishing on around 13 000 different component types. Nearly 50 chemical and acid baths are used to coat the pieces with thin layers of nickel, chromium or other metals. This both offers allergy-protection for users and protects the instruments from sweat, rust and

corrosion. The computer-controlled robot automatically immerses parts in the baths and a chemist on site keeps the plant facilities in the best possible condition.

Certified facilities bring certain results

The laboratories are also a very important part of the production site. The central laboratory, which is certified by METAS (the Swiss Federal Institute of Metrology), has to fulfil strict requirements. In fact, the whole laboratory is situated on a sand pile to avoid vibration from outside, and the temperature and humidity inside are precisely regulated. This central laboratory is responsible for the certification of the other production laboratories, which in turn certify TESA products.

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