NDT COMBICELL

Hybrid test system with automatic
part handling for non-destructive testing

Dual testing of components with complex geometries
With its NDT COMBICELL, FOERSTER offers a simple and economical solution for the combined, non-destructive testing of complex-shaped components that need more than one testing method to verify their quality. The test cell consists of a basic module made up of a handling robot and the system for crack detection with eddy current; another module can be added on for a further method of your choice, currently either thermography or magneto-inductive testing. The system can be used for 100% inspection in the test line, for inspection of random samples in parallel with production, or for external contract inspection.

Advancement to the next production process occurs manually or automatically.

The benefits

- Reliable testing: proven STATOGRAPH CM, STATOVISION, DEFECTOVISON CT and MAGNATEST technologies
- Modular design consisting of the basic module and an optional additional test module of your choice
- Easy integration: each test module has its own fieldbus and PLC components
- Automated active thermography testing
- Flexible loading and unloading interface
- Parts tracking throughout the entire test process
- Automatic sorting into good parts and rejects
- Documentation of results

NDT COMBICELL - Flexibility meets precision

Future-proof modular design

By combining the basic module, which consists of a handling robot and an eddy current crack detector, with a further testing module, the system can be flexibly adapted to meet your changing testing requirements.

Follow-up modules are currently available for automated testing with active thermography and for magnetoinductive microstructure testing. Each module has an autonomous control system, which also allows standalone operation or integration of a module into an existing production chain.

Crack detection is carried out using the proven test system STATOGRAPH, which can be extended with the STATOVISION visualization solution. The test probe is guided by a teachable, high-precision robot system that can be trained to accommodate other test part geometries.

In thermographic testing, the test part is heated slightly above ambient temperature by an inductor using eddy current. The IR images are evaluated by software that can be parameterized. If the component has several test zones, these are tested sequentially and evaluated together.

Another option is the automated magneto-inductive microstructure testing, which assesses material properties.

Do you need a highly adaptable system solution for your application? The NDT COMBICELL's modular design allows further test modules to be added. Please feel free to contact us.

Perfect manipulation by robot(s)

The test cell can be loaded either manually or automatically by connecting it to a production line. The handling robot gently lifts the components to be tested at the transfer point and delivers them to the various test stations. During eddy current crack detection, a robot-guided probe inspects the sample without ever touching its surface. For thermography testing, the handling robot places the sample in front of the inductor and camera. After evaluation, the components are automatically sorted.

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