

CASE STUDY

DURABOOK R8 FORMS THE ROBUST CORE OF FOERSTER'S TCM EDDY CURRENT TEST DEVICES

CUSTOMER

FOERSTER

CHALLENGE

FOERSTER develops devices for mobile eddy current testing. This requires the use of robust, temperature-resistant tablets with high performance.

SOLUTION

The Durabook R8 rugged tablet offers the ideal hardware for FOERSTER with IP66 certification, an operating temperature range of -20°C to 60°C and a compact design.



R8 Tablet

INTRODUCTION

German company FOERSTER is one of the global technology leaders for non-destructive material testing. It develops devices and systems to examine the quality and condition of objects without damaging them. It uses eddy current testing, which detects cracks and gaps in metallic surfaces through electromagnetic interactions. For mobile use, FOERSTER's TCM device platform combines various established products for eddy current testing in one device. They are designed for deep penetrating low-frequency testing, for high-frequency testing to detect the smallest cracks, and for conductivity measurements of non-ferromagnetic materials. This means that all tests can be carried out with one device.





THE CHALLENGE

The TCM device platform for non-destructive material testing was developed by FOERSTER for mobile use during maintenance work in various areas. For example, it can help to guarantee safe operation in aviation, rail transport or the energy sector. Due to the different fields of application, the hardware must also be ready for use under different environmental conditions: whether in closed rooms or in open areas; in rain, snow and temperatures below freezing as well as in dusty environments with direct sunlight and strong heat. In order to prove itself as a true universal testing device, the hardware must function error-free in all conceivable scenarios and deliver the most accurate measurement data.

The TCM platform's basis is a tablet that collects the information from



the test probes used in the respective eddy current procedures and analyses it using the appropriate software. It must meet various requirements, for example, it must have a handy form factor to guarantee maximum mobility. Stability is also required, not only IP66 certification for resistance to dust and water jets, but also reliable functionality under a wide range of temperature conditions. Last but not least, it must have enough power to process incoming data streams and use software solutions for various frequency procedures. What is needed is a handy device that is able to deliver the best performance even under the toughest conditions.

THE SOLUTION

FOERSTER became aware of Durabook, the experienced specialist for robust mobile devices, through a press article. After consulting with Durabook partner Logic instrument, it was decided to use the robust 8-inch tablet Durabook R8 as the basis of its TCM platform. With 12th generation Intel processors, it has the computing power required to



carry out a wide range of applications in eddy current testing. At the same time, it is protected from external influences thanks to the robust design with fanless Coolfinity™ cooling and IP66 certification. In addition, with an operating temperature range of -20°C to 60°C, it is also suitable for the toughest areas of application. Users can intuitively select individual applications via the R8's 8-inch touch display, which enables exceptional visibility even in direct sunlight thanks to DynaVue® technology and up to 800 nits of brightness. Thanks to Durabook, FOERSTER was able to create unique universal testing devices with its TCM platform and create products that are prepared for any application and the toughest conditions.

“With the Durabook R8 we have found the ideal basis for our TCM platform. As far as we know, no other 8-inch tablet can perform so well even in extreme temperatures. Thanks to the Durabook R8 in conjunction with our hardware and software adapted to the tablet, we can offer our customers a completely reliable testing system that can withstand extreme conditions and is still light and handy.”

Manfred Maskos,
Product Manager
at FOERSTER