

NEWSLETTER

Edition 1/2024

Aviation and Aerospace Industries

Review: 4th Aerospace Symposium from 13 to 14 March 2024

We are pleased that so many customers followed our invitation to the 4th Aerospace Symposium and came to Frankenthal in Germany; and we are now looking back on two eventful days. For our international visitors, the range of presentations reached from a historical perspective – NDT in aviation – and robot-based solutions to the outstanding issue regarding the use of AI for automated testing decisions.

We would like to express our thanks to the speakers and the exhibiting companies from Germany and abroad, who we were able to win over for our event. A small exhibition in the foyer and in the testing hall rounded off the programme, where the following companies could present their programs.

The exhibitors:

VECTOR Technische Unternehmensberatung GmbH: Subsidiary of the TÜV Saarland Group, offering training courses and re-certification for various non-destructive testing methods in Germany and abroad.

MR Chemie GmbH: The family-owned company, founded in 1971, is market leader for high-quality NDT testing equipment and instruments (MR® NDT-Materials), as well as 3D scanning spray (REFLECON®) and products for the hygiene sector (MR® Smart & Clean).

ROBORIS Germany GmbH: Their key areas are the development of software for machine simulations, NC simulation & robot offline programming.

HEXAGON: The Swedish company, founded in 2000, is global leader for sensor software and autonomous solutions for industry.

TRANSVALOR: The French company is global leader in the simulation of forming processes.

Westphal CAD CAM GmbH: The service provider offers CAD CAM systems, which are tailor-made solutions for customers, from construction to the end product.

It was not all about the “Eddy Current testing”, but moreover about the different suppliers and solutions for the aviation industry. Indeed, this variety benefited both visitors and exhibitors.

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Aerospace Symposium - Visitors and exhibitors in conversation

Naturally, our Eddy Current test instruments and systems had to be part of it all. In addition to the new ELOTEST M6 Eddy Current test instrument, the latest version of the ELOWHEEL as well as the ELOSCAN and a FLEXITEST were presented live.

The dinner with everyone, featuring live music on the evening of 13 March offered a perfect platform to all visitors for discussing and networking. The mood was casual and reflected the really good atmosphere during both days.



Aerospace Symposium - Moderation: Nele Nowack and Dr. Aschwin Gopalan

The presentations can be made available as a download at the request of those interested in reading them.

Overview of the presentations and the guest speakers:

Non-destructive material testing in aviation: A historical perspective,
Mr Hemmen, ZEPPELIN, Germany

Beyond boundaries of average: Advanced solutions for aerospace NDT - Penetrant and magnetic particle testing equipment,
Mr Novák, ATG, Czechia

Presentation of Mr ITHURRALDE, TESTIA, France

NDT at NTN Europe mit Rohmann PL600,
Mr Arragain, NTN Europe, France

FLEXITEST in the aviation sector, Mr Geiger, n-dect, Germany

Possibilities and limits of robot-based air ultrasonic testing,
Mr Hufert, IKT Kunststofftechnik Stuttgart, Germany

Presentation of the ELO\SCAN and ELO\WHEEL test systems
Mr Grzonkowski, Rohmann GmbH, Germany

LFEC testing with C-scan function for arrays in aircraft maintenance with the new Rohmann ELOTEST\M6,
Mr Justin, Rheinland Air Service, Germany

Eddy current testing in aviation using array probes
Mr Dr. Aschwin Gopalan, Rohmann GmbH, Germany

Simulation solutions for aerospace applications
Mr Schwesinger, TransValor, France

Implementing techniques to the Employer's written practice - Reflecting NADCAP Requirements in AC7114 questionnaire,
Mr Zdislav Hospodk, ATG, Czechia

Current trends in testing innovative aerospace components and their materials Using industrial CT,
Mr Dr. Olaf Günnewig, diondo GmbH, Germany

Robot-based inspection with CAM/CAD software solutions and DICONDE, Mr Grzonkowski, Rohmann GmbH, Germany

Digital Reality solutions for aerospace and defence,
Mr Braun, HEXAGON, Germany

Rotating probes kit: Kits containing mini or standard rotating probes with adjustable shafts

A handy kit with probes for the testing of bores is included in our range of products. The case is available in two versions containing 9 adjustable mini or standard rotating probes each, covering a diameter range of 5 to 30 mm. The reference standard TP200 is also part of the delivery. The test piece is divided in two parts. The division is in the center between the bores, which makes it possible to simulate continuous cracks. A corrosion simulating lateral bore with a diameter of 1.4 mm is also provided.

The case can also be individually equipped, as there is enough space for the corresponding rotors (optional) as well as for cables and further probes. The rotating probes from Rohmann provide the best tools for work in the MRO shop or for external use, with all required appliances for testing bores of different diameters within quick reach.

ASZ00000 – Kit of rotating probes for RSV-S probes
(suitable for the SR1 standard hand-held rotor)

ASZ00005 - Kit of rotating probes for RSMV-S probes
(suitable for the MR3 mini hand-held rotor or SMR4 sub-mini hand-held rotor)



Rotary probe set with additional rotor and cable

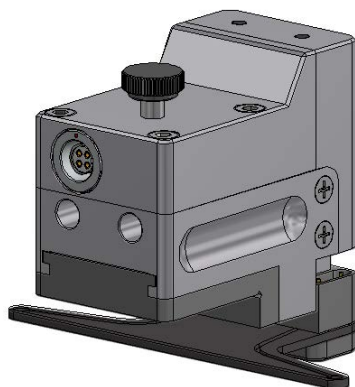
**New in our range of products:
slotted probes**

Do you already know our slotted probes in stainless steel? Compared to expandable probes made of plastic, these probes are better protected from wear. Of course, they cannot be adjusted, but due to their expandable, slightly flexible probe head they adapt themselves very well to the bore to be tested. These probes are designed to manage extreme tolerances in the bore.



Probe for the inspection of reinforcing steel straps

Our KAS-3 H-2016 probe is designed for the inspection to detect fatigue cracks. Fatigue cracks can start from the mounting holes in the inner steel reinforcement straps and the inner strap area of the tapered joints and fuel flow openings. The inspection is carried out through contact tests. The position of the probe can be adjusted with the aid of the glide shoe, which is available in three versions.



Probe KAS-3 H-2016 with guidance and glide shoe

Sales launch of ELOTEST\M6

47 years after founding Rohmann GmbH, the ELOTEST M6 is yet another milestone in the development of our test instruments. Our hand-held ELOTEST M6 does not only have new features, but also a variety of functions, which the users would until now only expect from our innovative inline instruments. The hand-held Eddy Current test instrument can be used in the laboratory, but also in rough environments. The test results can be stored directly on site as notes or voice memos. The instrument has a 7-inch touch display, which can also be used when wearing gloves. Multiplex operation, A-Comp and C-Scan are further highlights. The first instruments will be delivered in summer 2024.

Probe arrays

Our high- and low-frequency probe arrays will be launched on the market along with the ELOTEST M6 in summer.



reddot winner 2024

**ELOTEST\M6 wins the Red Dot Award:
Product Design 2024**

It is not only our customers who are enthusiastic about our hand-held ELOTEST M6 Eddy Current test instrument. Even though it has not yet been launched for sale, we have already received an award for the design: we won in the Product Design 2024 category for the ELOTEST M6. We would like to express our thanks to LA Design Ltd. for their creative ideas and the extremely successful execution.

The Red Dot Award endorses of our efforts to put a model on the market, which is not only user-friendly and state-of-the-art, but also offers a real benefit to the user as far as technology, workmanship and ergonomics are concerned.

Every part is unique

What is the use of the best testing instrument when its probe does not detect the defect? In addition to the manufacture of eddy current testing instruments, the development and manufacture of probes is part of our core business. Every handmade probe is unique. Our probes are as varied as the parts to be tested.

In recent years, we have manufactured countless customized versions, which also include probes in aligned shapes for testing aircraft wheel rims or jet engine blades. The parts to be tested often first arrive in our application laboratory. With a feasibility test, which is free of charge to our customer, we determine whether the defects can be detected with eddy currents. Then the precision work begins. The sensor casing is manufactured on our CNC machines according to the required shape and the sensor core is positioned appropriately. The signal output from the eddy current testing instrument enables our customer to detect defects.



Probes with aligned shapes

ELOWHEEL 800 RPT18 wheel rim inspection system: complex solution, easy to operate

Our wheel rim inspection system has been used for many years now in MRO companies – Maintenance, Repair and Overhaul – all over the world. The current version, ELOWHEEL 800 RPT18, is a further development. A great deal of importance was attached to the safety of the user. The clamping unit has a more compact structure, the clamping and centering of the rim have been optimized, as well as the accessibility for the service employee. The software for the touch operation has also been improved.

The turntable is positioned on defects with the aid of a servo drive and an axial positioning laser. The rim halves can be inspected with a velocity of up to 120 rpm. An exact linear guiding system with a high-quality motor control of the axis moves the probes without vibrations. ELOWHEEL inspects rim halves with diameters of up to 800 mm. Rohmann has also developed the corresponding EloWheel 3.0 software. High-quality components, a robust steel structure and our latest inspection instrument – ELOTTEST PL650 – are also part of the system.



ELOWHEEL 800 RPT 18



FLEXITEST with ELOTEST\PL650:

Flexible and precise Eddy Current inspection for detecting cracks and grinding burns on three axes

The specialized machine from N-DECT was also presented at our aviation symposium. The Remote Compact version of our new ELOTEST PL650 RC is installed in it. Flexitest makes it possible to carry out the quality control of individual parts and small series quickly, in a reproducible manner, but it can also be extended for fully automatic series testing. FLEXITEST is provided with a precision chuck, to clamp the test objects. Information on probes, inspection orders and user information are read in and automatically processed without error by a simple click with the aid of the cordless Data Matrix or a QR code hand scanner.



Flexitest Midi, company n-dect



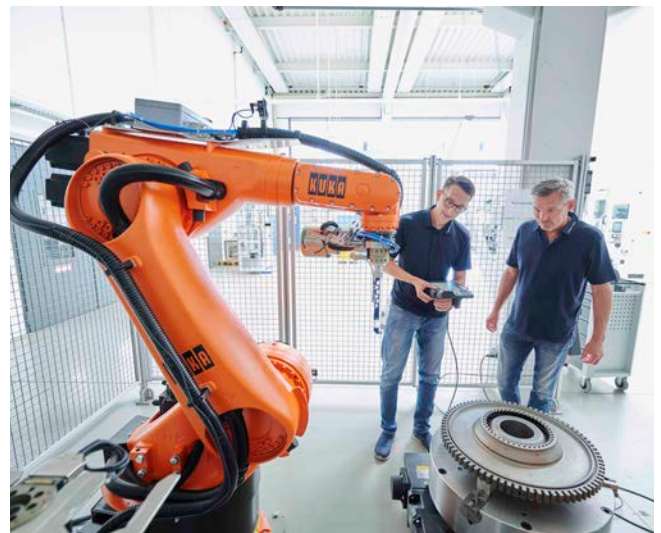
NEW: Flexitest Mini

ELO\SCAN:

the flexible robot testing system

The automated EloScan Eddy Current inspection system is mainly conceived for the testing of rotationally symmetric engine parts. The system can also be used to inspect other complex component geometries owing to its universal structure. The precise sensor guidance makes it possible to inspect the part along its surface, even on points which are difficult to access, owing to the customized sensor fixtures.

In addition to the rotating and oscillating scanning of the component surface with a static sensor, bores can also be tested with a rotating sensor system as part of the inspection process. The application of sensor arrays in multiplex mode has proven to be useful for this system.



ELOSCAN in use



Rohmann has two new partners for international sales

ANGLIA NDT in the UK and **SIMPLIFI NII** in Australia took on the sales of our products in April. We are so pleased to have gained these two companies as business partners.

With Mark Lawler and his team at ANGLIA NDT, our customers in the UK have a new contact partner. Many of our customers in the aviation industry may already know ANGLIA NDT and Mark Lawler, also as the representative for Magnaflux chemicals. Rohmann and ANGLIA NDT will have a booth together at the BINDT trade fair – Material Testing 2024 – in Telford.

SIMPLIFI NII is still a young company, founded in 2022. We are really looking forward to having the sales support of John Duenzl and his colleagues in Australia.



Our current global sales network counts more than 30 representatives. There is sure to be a contact partner for you in your country, please feel free to contact us.

Trade fairs in June 2024

Visit the booths of our representatives:

BIEMH in Spain -

our representative KEMIA will have a booth at this trade fair and Dr. Ulrich Semmler (Rohmann GmbH) will be there.

A3TS in Frankreich -

meet Jonathan Kroener at our Rohmann GmbH booth.

CINDE in Kanada -

our representative ANDEC will be there as an exhibitor, supported by Gregor Grzonkowski (Rohmann GmbH).



Specification sheets are available on request for all products presented above. Please contact us with any questions about our test instruments, representatives or our services. We look forward to hearing from you.