

# KD-INFO

Edition 2020

## Evolution of PA Testing Instruments GEKKO and MANTIS



70 Years KARL DEUTSCH Company  
NDT on Wind Turbine Components  
Worldwide Distribution via Video Stream  
Helical PAUT Tube Testing at TMK-ARTROM

# KARL DEUTSCH



## Content

Editorial	2
GEKKO and MANTIS: New Phased Array Instruments	3
Phased Array Course at W.S. Werkstoff Service GmbH in Essen	3
ECHOGRAPH-RPTS-PAUT: Phased Array Inspection of Seamless Tubes at TMK-ARTROM	4
DEUTROFLUX UV-LED Large Area Lamp in Compliance with ASTM Norm	5
Chemical Products by KARL DEUTSCH	6
KD-CHECK SYSTEMS: Semi-Automatic PT System for Valve Components	6
DEUTROFLUX-UWS: Magnetic Particle Testing of Turbine Shafts	7
DEUTROMAT: NDT on Wind Energy Components	8
ECHOGRAPH-HRPS-PAUT: Metal Bar Inspection with Phased Arrays	8
KARL DEUTSCH Celebrates 70 <sup>th</sup> Anniversary	10
Annual Meeting of DGZfP 2019 in Friedrichshafen	12
Summer Party 2019	13
Another Training Facility Opts for KARL DEUTSCH	13
ECHOGRAPH 1095: Aiming High with ABUS Crane Systems	14
#Hashtags Conquer the World - KARL DEUTSCH Goes Social Media	15
Safe Consulting Service	16
KARL DEUTSCH Successfully ISO-Recertified	16
Illustrated Book on 70 Years KARL DEUTSCH	17
New Specialist Book on Ultrasonic Testing	17
New Truck for Wuppertaler Tafel	18
Cartoon	18
New Employees at KARL DEUTSCH	19
KARL DEUTSCH Junior Staff	19
Trade Fair Outlook	20
About KARL DEUTSCH	20

Cover: Inspection of a thick-walled weld seam with  
the portable phased array flaw detector GEKKO

## Editorial

Dear customers, partners and friends!

This is a special year. COVID-19 has the world firmly in its grip, many of our customer industries are dramatically affected and everyone is eagerly awaiting research, so that the global problem can finally be solved through vaccination or medication.

The automotive sector already had its (diesel) problems before and a reluctance of customers to buy cars is understandable. In addition, many forged parts will no longer be a component of an e-car and so KARL DEUTSCH is repositioning in the crack testing sector (MT and PT). The first steps are promising: Our PT testing liquids received the valuable aviation approval according to AMS 2644. In addition, many car components are now made of aluminium and need to be tested in large quantities. Since penetrant testing is a rather slow (but underestimated!) method, it requires large, multi-stage testing systems with individual test steps running in parallel. KARL DEUTSCH has been able to implement many different testing concepts with its customers in recent years.

We had started the year 2020 with an excellent order backlog. A large order for a renowned automotive manufacturer for a large number of mobile testing instruments caused overtime in production. After that, we had to worry about whether we would be capable of acting if employees were absent due to COVID-19. A comprehensive hygiene concept has successfully prevented us from this to date.

This shows once again that it is better to stand on many legs. KARL DEUTSCH stands on five legs: mobile testing equip-



**Dr. (USA) Wolfram A. Karl Deutsch**  
(CEO)

ment, sensors, crack detection systems (MT and PT), crack detection media and UT testing systems. System engineering has enabled the company to grow to 150 employees in recent years. This year, mobile testing equipment has been a key contributor to the success of the company.

It is also important to present new products. This has been impressively achieved with the multi-channel ECHOGRAPH 1170 testing electronics! Expectations in sales were clearly exceeded in 2020 – pleasing and rare in times of COVID-19. The electronics are significantly cheaper than the predecessor products and thus also attractive for integrators who only purchase electronics, possibly an (optional) data software tool and the probes from us.

In this spirit – stay healthy!

Dr. (USA) Wolfram A. Karl Deutsch

## GEKKO and MANTIS: New Phased Array Instruments

Since its market launch in 2014, the proven GEKKO high-end phased array instrument from KARL DEUTSCH has remained virtually unchanged in terms of design. After six years, it was now time for a new look. The modernized design also makes the device more compact and lightweight.

But considerable improvements have also been made on the technical side: In earlier times there used to be only one standard model, now there are a total of eight different versions. This means that the appropriate model can be found for every customer's need. The original version of a 64:64 configuration was supplemented with a 32:128 and 64:128



architecture. Optionally, all three versions are also available with TFM (Total Focusing Method). The flagship is the GEKKO 64:128PR TFM 128, which provides real-time TFM with 128 channels.

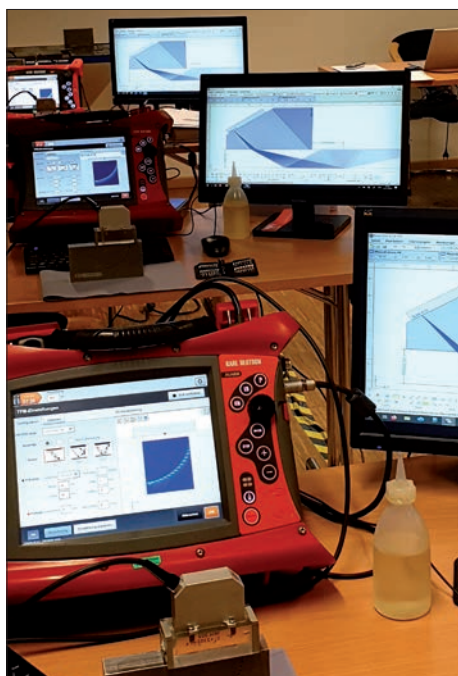
In addition, the memory capacity of the new GEKKO has been doubled, a USB 3.0 port has been added and a WLAN interface has been implemented. In addition to other new features, the latest software now also includes Plane Wave Imaging (PWI), which enables high-energy and extremely fast scans in TFM quality.

The economical alternative: MANTIS, the little brother of the GEKKO, is similarly powerful but much more compact. **Ki**



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Products »  
Phased Arrays »  
GEKKO

## Phased Array Course at W.S. Werkstoff Service GmbH in Essen



On November 9<sup>th</sup>, 2020, the time had finally come – the phased array ultrasonic course at W.S. Werkstoff Service GmbH in Essen, originally scheduled for spring 2020 and postponed for well-known reasons, got started.

In compliance with all hygiene measures and with a reduced number of attendees, five participants from different industries were looking forward to being trained in the possibilities of ultrasonic testing with phased arrays and related techniques. Each participant had his or her own workstation, equipped with complete inspection equipment along with test pieces, so that the best possible health protection was also guaranteed. The portable phased

array instruments GEKKO and MANTIS from KARL DEUTSCH were used, which, along with other accessories such as probes and position encoders, were provided jointly with W.S. Werkstoff Service GmbH. The course, which is recognized by the DGZfP (German Society for Non-Destructive Testing), lasts two weeks including the examination and will be held at regular intervals in the future. In addition, W.S. Werkstoff Service GmbH offers a comprehensive program of courses and seminars on destructive and non-destructive material testing. **Ki**



[www.werkstoff-service.de](http://www.werkstoff-service.de)

## ECHOGRAPH-RPTS-PAUT: Phased Array Inspection of Seamless Tubes at TMK-ARTROM

The company TMK-ARTROM is a world-leading manufacturer of seamless tubes, located in Slatina, Romania. KARL DEUTSCH was commissioned to develop a highly sophisticated testing system for TMK-ARTROM and to put it into operation in 2021. The project was accompanied in the best possible way by our

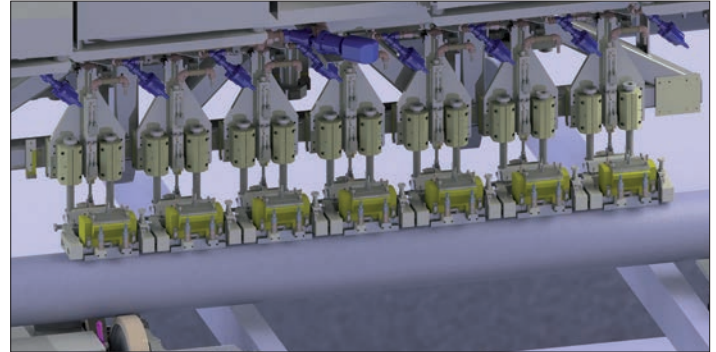


longtime partner Raimund Zeman from the company Solutii CND in Bucharest, Romania, whose company also ensures the after-sales service.

Since its introduction in the early 2000s, the phased array technology with linear arrays has proven to be a robust and highly versatile solution to meet the high performance requirements in terms of sensitivity, repeatability and productivity for many manufacturers producing OCTGs (Oil Country Tubular Goods) and pipelines. Combined with precision mechanical scanning in a testing gantry or inspection bridge configuration with rotation of the tube and linear probe displacement, this solution eventually became the standard and was adopted by major suppliers of ultrasonic

inspection equipment and leading tube manufacturers. A novelty of this technique was the ability to use sound beam steering to detect oblique defects. Depending on throughput requirements, the same probes can be used for longitudinal flaw detection, although most inspection systems have separate arrays for the respective testing tasks.

The manufacturing process, especially for quenched and tempered thick-walled tubes, can produce inhomogeneities in any orientation, necessitating an extension of the angular steering to detect oblique defects and thus an extension of the linear phased array technique for oblique defects up to  $\pm 75^\circ$ . For thick-walled tubes, optimization of the beam angles and sometimes the use of mode-converted waves is essential for reliable detection of internal and external defects. The best possible ultrasonic configuration, the respective highly sensitive phased array probes and new



The ECHOGRAPH-RPTS-PAUT testing system at TMK-ARTROM employs seven probe clusters.

probe clusters for fast coupling via an acoustically transparent membrane have been developed at KARL DEUTSCH. The probe clusters for transverse defects and for normal insonification (for wall thickness measurement and lamination testing) were also newly developed. Excellent test results with high sensitivity, high throughput and high signal-to-noise ratio could be achieved.

Several parallel ECHOGRAPH-PAUT electronic modules with a total of over 800 test channels are used. A high testing speed with parallel shot sequences and multiple parallel calculations in reception mode are important features. Therefore, a high test sensitivity, repeatability and productivity can be guaranteed for the entire production matrix at our customer TMK-ARTROM. The testing system will be put into operation during 2021. **BJ/RW/WD**



Photo of a similar ECHOGRAPH-RPTR test system for thick-walled seamless tubes with six probe clusters



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ECHOGRAPH-RPTR



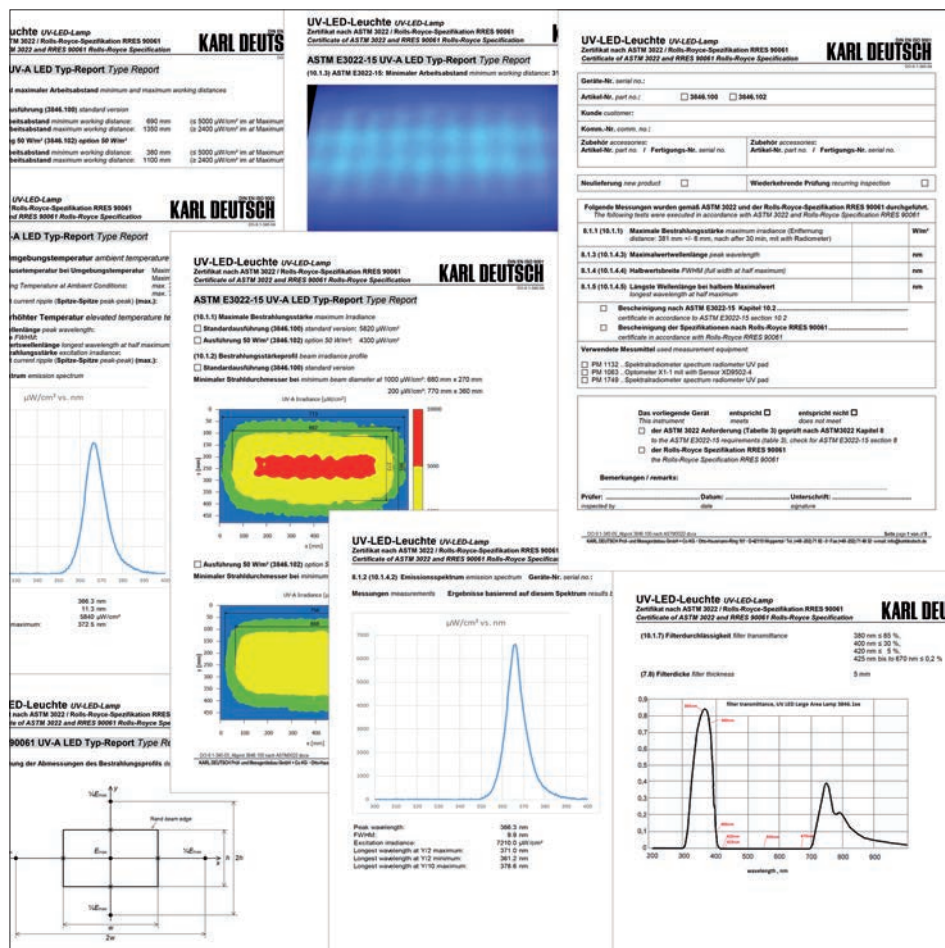
## DEUTROFLUX UV-LED Large Area Lamp in Compliance with ASTM Norm

Multifunctional UV-LED large area lamps from KARL DEUTSCH are ideally suitable for stationary use in fluorescent penetrant and magnetic particle inspection and are now also being offered in an ASTM compliant version.

The ASTM E3022-15 standard for UV-LED lamps was introduced to define a manufacturer-independent standard that ensures a consistently high level of safety and quality of the lamps.

In addition to the technical standard, the norm also specifies the description of the technical data and the form of the documentation. Among other things, the light homogeneity, the distribution or profile pattern of the irradiance, the minimum distance and the emission spectrum must be specified.

The ASTM lamps from KARL DEUTSCH have additional optical UVA filters and adapted electronics for optimized LED ripple current. Each lamp is spectrally measured and receives a quality certificate with the test results according to ASTM E3022-15.



Versions of the UV-LED large area lamp meeting the requirements of ASTM, Airbus and Rolls Royce are available.

The UV-LED lamps are particularly suitable for the extended use of fluorescent examination in aerospace applications

and are also approved according to Airbus AITM 6-1001 and Rolls Royce RRES 90061. An annual inspection is recommended for the lamps.

Of course, UV-LED large area lamps from KARL DEUTSCH can also be retrofitted to meet these standards. **Kr**



Testing with the UV-LED large area lamp under UV light



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UV-LED Large Area Lamp

## KARL DEUTSCH Chemical Products

**In addition to the development and production of instruments and systems for non-destructive material testing, the product portfolio of KARL DEUTSCH also includes a variety of proprietary chemicals for magnetic particle, penetrant and ultrasonic testing.**

All products are developed and produced in-house and subjected to thorough quality control in our chemical laboratory. Due to our high in-house production depth, we are able to develop and produce special inspection media tailored to the needs of our customers.

In combination with our own magnetic particle and penetrant testing systems the customer benefits from being able to obtain all components for a testing task from a single source. This eliminates interface problems, and customers need only one contact person for all areas of their specific testing task.

You are welcome to convince yourself of the quality of our products. Of course, we will be happy to send you samples free of charge. In addition, your components can be tested under practical conditions in our application laboratories. Just contact us. **Rb**



**Quality control during the production of test media and couplants**

## KD-CHECK SYSTEMS: Semi-Automatic PT System for Valve Components



**This semi-automatic PT system for the testing of valve components was designed and built for a reputable customer in Luxembourg.**

There was a special focus on process time monitoring at the individual stations and on the control of important parameters such as pressures and temperatures. The two-stage washing process (1st step: automatic prewash; 2nd step: manual post-wash) also makes the system flexible for future component geometries. The washing water is cleaned in a filter system above the PT line. Activated carbon is used, which is specially optimized for the testing medium used. **Rb**



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and Systems**



## DEUTROFLUX-UWS: Magnetic Particle Testing of Turbine Shafts



Testing of a turbine shaft during the acceptance test with our customer. For this purpose, the system with the darkening cabin was completely assembled and demonstrated in one of the production halls at the KARL DEUTSCH premises.

Another highlight this year was the completion of a crack detection machine of the type UWS for the company MAN ES in Berlin, where turbine shafts up to 3000 mm in length and weights up to 1.5 t (metric tons) are tested in one cycle.

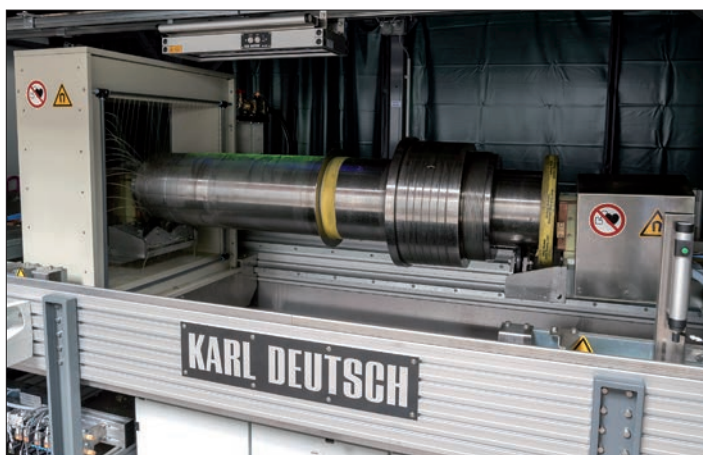
In the past, a manual yoke was used to check for surface cracks. For a full-surface inspection, many individual steps were required, with correspondingly high labour costs and time commitment. By means of the new MT system, it is now possible to

magnetize the parts to be tested fully automatically in a single test step and then inspect the surface.

A particular challenge were the large diameter changes along the axis of the shaft.

In order to be able to adjust the required field strengths for each diameter, this machine is provided with a sectional control. Here, up to seven sub-segments can be controlled separately and freely adjusted in terms of power values and traversing speed. Thus, all sections are magnetized with the required field strengths. Exceeding or dropping below the permitted and required magnetizing strength can be excluded.

The new system considerably reduces the customer's time spent for examination and increases the process reliability. **Ba**



Optimized testing by an individual sectional control with respect to the large diameter changes along the axis of the shaft



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DEUTROFLUX UWS

## DEUTROMAT: NDT on Wind Energy Components

During the current business year, two testing systems for large rings were delivered to our customer Xuzhou Rothe Erde in China.

The entire testing and control technology of the magnetic particle crack detection system was developed and designed by KARL DEUTSCH. The required mechanics was provided in China. This demanded a close coordination between the respective construction departments.

Our subsidiary KD-China took over the project coordination and thus contributed significantly to the completion of the project. Installation and commissioning were also carried out by our Chinese colleagues.

It was a success for all those involved, and this cannot be appreciated highly enough in times of the COVID-19 lockdown. We



Inspection of a bearing ring from the main bearing of a wind turbine

would like to take this opportunity to thank the KD-China team once again and are all the more pleased about the follow-up order received in the year 2021. **Ba**



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## ECHOGRAPH-HRPS-PAUT: Metal Bar Inspection with Phased Arrays

For some years now, phased array testing systems with linear component transport have been state of the art for testing bars with diameters between 10 mm and 130 mm. These testing systems need to meet customer-specific requirements in terms of bar material (steel, aluminum, titanium, etc.), inspection specifications (e.g. automotive, aerospace), shape (round, oval, rectangular, profiled), straightness (1 to 2 mm/m) and surface condition (black or bright).

KARL DEUTSCH has further developed two different concepts for phased array crack detection in order to cover all cus-



Timur Sayfullaev from the ultrasonic testing laboratory optimizes the testing parameters.

tomers requirements in the best possible way. The first inspection concept, based on the ECHOGRAPH-HRPS-PAUT system type, uses an immersion tank with several

phased array probes mounted in groups on inspection cassettes. The probes enclose the bar to accomplish a complete ultrasonic coverage by means of linear or sec-





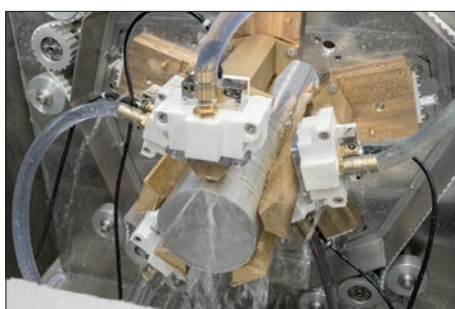
**ECHOGRAPH-HRPS-PAUT immersion tank testing system for oval aluminum bars**

torial shot sequences. The required number of probes depends on the diameter, the shape (round, rectangular, etc.) and the inspection task. The system of the ECHOGRAPH-HRPS-PAUT type has been specially designed for testing bright bars with diameters from 10 mm to 100 mm. It is optimally suited to meet test specifications in which adjustment reflectors in the form of a flat bottom hole (i.e. a circular disc reflector, abbreviated FBH) are used, which must also be detected dynamically.

The second inspection concept, based on the ECHOGRAPH-STPS-PAUT system type, uses the so-called water jet coupling (water nozzles) and five phased array probes in the standard version. The combined sector scans of all probes also ensure a complete coverage of the inspection volume. This attractively priced and user-

friendly system has been specially developed for testing black bars, where larger straightness deviances can occur. Here, too, a very high inspection sensitivity can be used to meet stringent requirements, e.g. in the aluminium industry. The typical diameter range of the

ECHOGRAPH-STPS-PAUT testing system is 15 mm to 130 mm.



**ECHOGRAPH-STPS-PAUT testing system with five probes and water jet coupling**

To achieve a high inspection sensitivity, repeatability and productivity, advanced ECHOGRAPH-PAUT inspection electronics are used for both systems. High throughput speeds, the possibility of parallel firing and multiple parallel reception modes (Paintbrush, DDF Dynamic Depth Focus-

ing) are important features. Inspection sensitivities from 0.7 mm FBH are possible for both inspection systems, depending on material, surface quality and straightness. The probes, manufactured in-house at KARL DEUTSCH, feature a long service life, and have been perfected over the years.

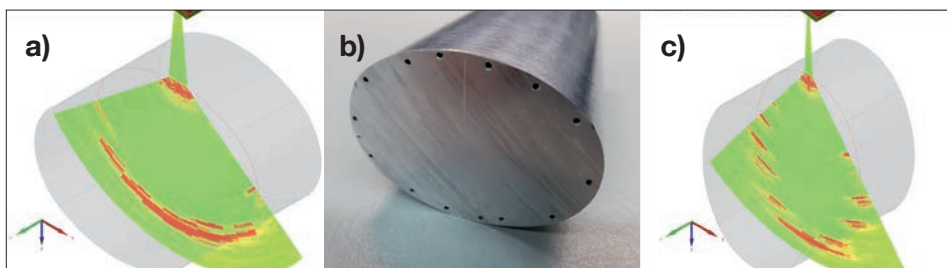
Normally, our customers provide the linear transport equipment and the sorting. The testing system is mounted on a height-adjustable test table. The bars are precisely guided by V-rollers or triple drivers.

The testing system can be pulled out of the testing line via a sliding device, for adjustment and convenient maintenance (offline).



**ECHOGRAPH-STPS-PAUT testing system for aluminium bars at Constellium in the Czech Republic. Looking at satisfied faces (from left to right): Our Czech sales partner Petr Richter (Foerster Tecom), Dr. Kirill Zilberberg (KARL DEUTSCH Worldwide Sales) and Jaroslav ĎURIŠ (Constellium).**

Both types of phased array testing systems have been successfully commissioned at our customers' plants in Europe and China. The final customers of the bars come from the automotive and aerospace industries. **WD**



**Test result for oval bars: a) testing of an oval sample with longitudinal holes close to the edge and insonification from the flat side (some holes are clearly visible in the B-scan), b) oval sample with longitudinal holes and c) insonification into the more curved side with many hole indications**



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## KARL DEUTSCH Celebrates 70<sup>th</sup> Anniversary

On September 18<sup>th</sup> and 19<sup>th</sup>, 2019, the **KARL DEUTSCH** company celebrated a memorable anniversary: The company was founded in Wuppertal on May 13<sup>th</sup>, 1949.

Three generations of the Deutsch family have shaped the seven decades so far, and this was celebrated together with customers, long-time companions and friends of the company. In addition to top-class conference topics, the two-day event also offered an exciting and entertaining supporting programme.

The anniversary event was opened by Lord Mayor Andreas Mucke. Being an engineer himself, he followed the further presentations with great interest and was convinced in his view that testing technology is important for many industry branches.

The lectures were given by reputable personalities from research, development and the customer base. For example, Prof. Anton Erhard (DGZfP Executive Board) reported on „70 Years of Ultrasonic Testing in Germany“ and Dr. Dirk Treppmann (DGZfP Executive Board, Evonik Industries) on the requirements for NDT in chemical plants\*. More than 200 guests gladly took up the invitation to Wuppertal. In perfect weather conditions, they celebrated on the plant premises, which had been elaborately redesigned for the event. **Kr**



Managing Director Dr. (USA) Wolfram Deutsch welcomes more than 200 guests to the anniversary event at Works 2 in Wuppertal.



Cloth acrobatics on one of the cranes in a production hall, that had been elaborately redesigned for the celebration, gave the amazed attendees a pleasant tingling sensation.



\*Lectures from the anniversary event can be found on our Youtube channel "NDTChannel"





More pictures at:  
[www.karldeutsch.de](http://www.karldeutsch.de)  
News & Dates » News

**It was a great celebration!**



## DACH Conference 2019 in Friedrichshafen

Friedrichshafen, the Zeppelin City on Lake Constance, was the venue for the DACH Conference organized by the DGZfP (German Society for Non-Destructive Testing) in May 2019.

For three days, a total of 550 participants – including eight KARL DEUTSCH employees – gathered in the beautiful conference center located directly on the lake shore.

Numerous technical presentations were part of the scientific program, three of which by KARL DEUTSCH. The product presentation at the equipment exhibition, which was established for the first



Dr. (USA) Wolfram Deutsch and Dietger Schäle open the social evening together with Peter Fisch. Peter Fisch is the President of the Swiss Society for Non-Destructive Testing (SGZP).

time, was well attended. KARL DEUTSCH was also the main sponsor of the entire conference and of the social evening at the Dornier Museum. In this context, the management – represented by Dr. (USA) Wolfram Deutsch and Dietger Schäle – also gave a short speech. **WD**



The KARL DEUTSCH delegation visiting the Dornier Museum in front of a Dornier Do 31, a vertical take-off cargo aircraft developed from 1959 at Friedrichshafen (f.l.t.r.: Timur Sayfullaev, Dr. Helge Rast, Dr. (USA) Wolfram Deutsch, Dietger Schäle, Istvan Bonifert, Dr. Werner Roye, not shown in this picture: Dr. Wolfgang Weber and Stefan Kierspel).



“Phased Array Inspection for Bars” was the topic of the poster presentation rewarded with the second place: Managing Director Dr. (USA) Wolfram Deutsch (left) and author Timur Sayfullaev are happy about the book prize.



Premiere for the well-received equipment exhibition: Many conference participants took the opportunity to find out about the latest developments from KARL DEUTSCH.



## Summer Party 2019

The 70<sup>th</sup> anniversary celebrations finished with a big summer party at our Works 2 on September 20<sup>th</sup>, 2019.

Being a family business, we were very pleased that a large part of our staff brought their partners and children to celebrate together. **Kr**



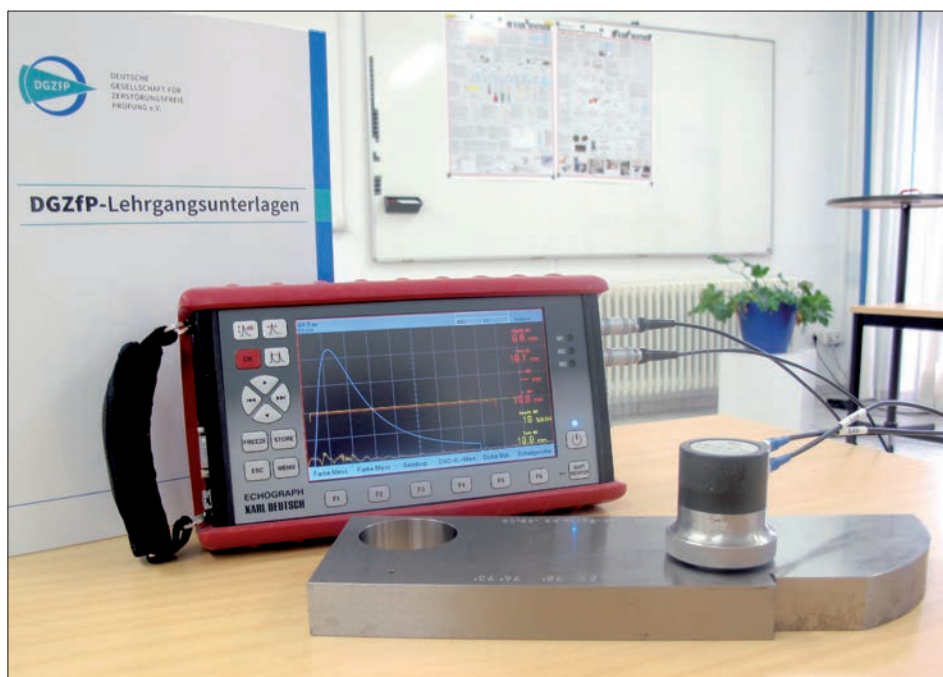
## Another Training Facility Opts for KARL DEUTSCH

Q-AW, an innovative company for education and training on Non-Destructive Testing purchases four ECHOGRAPH 1095 from KARL DEUTSCH.

Matthias Quast, owner of Q-AW, is enthusiastic about the simple operation. Another important point for training are the standard-compliant designations. He is also a friend of German products with fast service.

Among other things, Q-AW with its modern training rooms is characterized by small training groups. Thus, individual attention can be paid to all training participants. The location is excellent – the training center is very easy to reach by train or car.

Q-AW trains according to ISO 9712 in the fields radiographic testing (RT Film),



Training at Q-AW with the ECHOGRAPH 1095

film evaluation of weld seam images (RI), ultrasonic testing (UT), magnetic particle

testing (MT), penetrant testing (PT) and visual inspection (VT). **Kr**

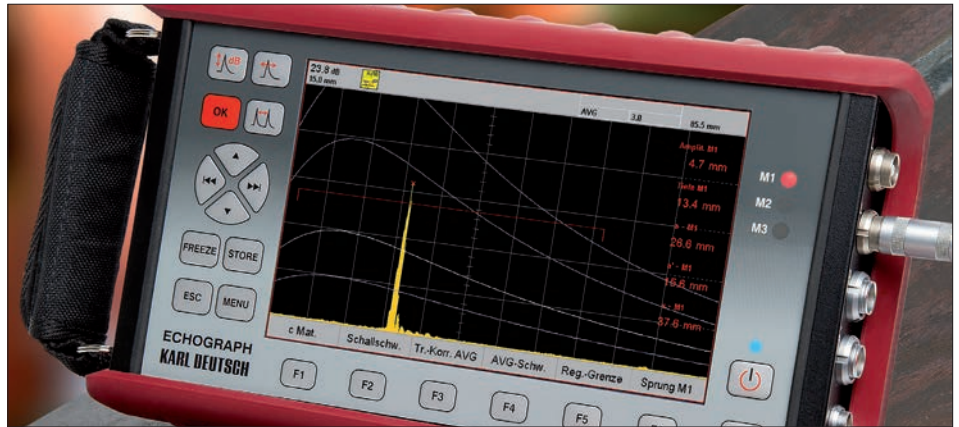
## ECHOGRAPH 1095: Aiming High with ABUS Crane Systems



**ABUS Kransysteme GmbH, one of the most important European manufacturers of overhead cranes with a worldwide service and sales network, recently decided to purchase three ECHOGRAPH 1095 UT flaw detectors.**

ABUS production in Gummersbach, which is spread over four locations in the surrounding area, uses our equipment to inspect incoming goods and, in particular, look for laminations in the raw material.

More than 1100 employees at the production sites in Gummersbach and the European sales subsidiaries manufacture crane systems and hoists from 80 kg to 120 t (metric tons) load capacity. In addition, ABUS offers comprehensive service and assembly power.



**The ECHOGRAPH 1095 makes it possible: The inspection of incoming goods at ABUS is carried out with individualized menu programming.**

KARL DEUTSCH cares a lot about the wishes and requirements of its customers. At ABUS, there was a desire for an individualized and shortened menu structure that effectively avoids operating errors and enables less time to be spent on adjustment. This was successfully implemented.

For this purpose, the access options were reorganized for the level 1 and level 3 operators at ABUS. For simplification, some test

parameters were blocked for level 1 personnel. Other test parameters were assigned to the function keys for all ABUS devices to enable faster and easier testing. **La**



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ECHOGRAPH 1095**

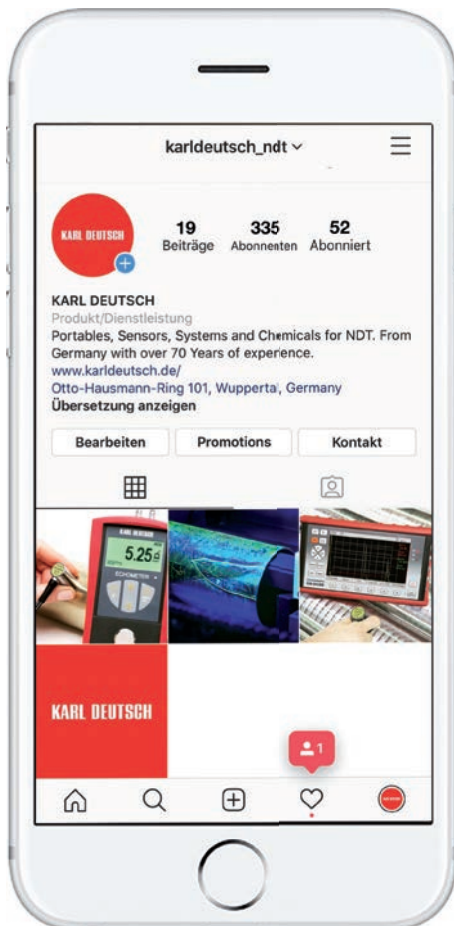




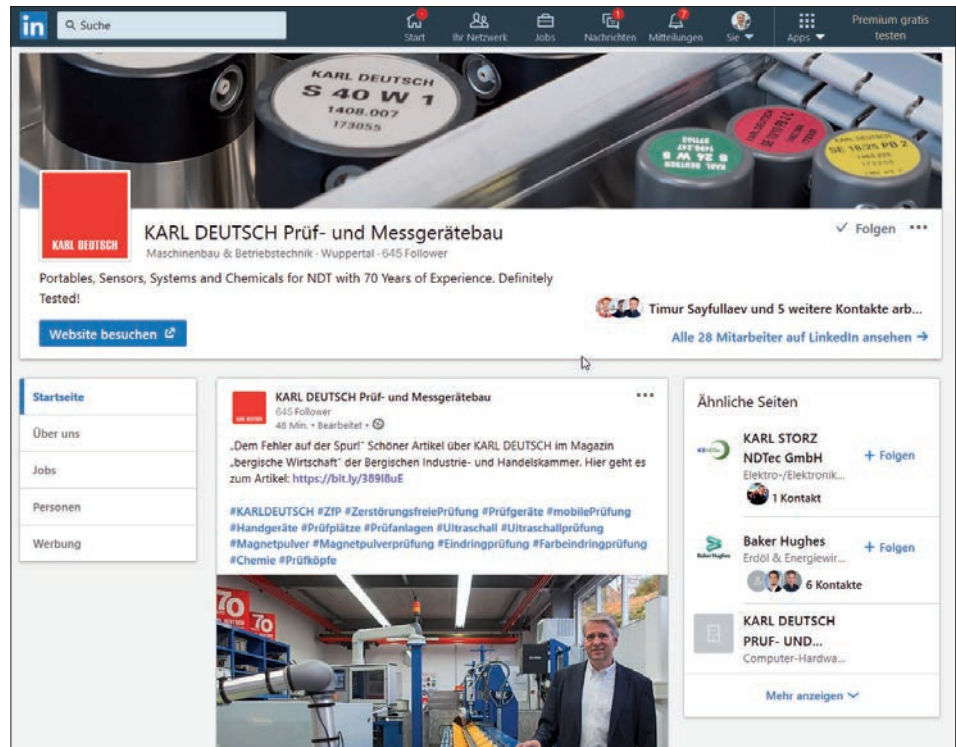
## #Hashtags Conquer the World - KARL DEUTSCH Goes Social Media

Over three billion people worldwide are active on social media networks. As of today. And the number is growing every day! According to a study by the Bitkom association, Facebook, Instagram & Co. have long been part of everyday life for nine out of ten German internet users.

Accordingly, the average internet user is registered in at least three social networks. Of these, 38 % use Facebook etc. to find offers for products and services, 31 % to find out about brands and companies, and 10 % to complain to companies.



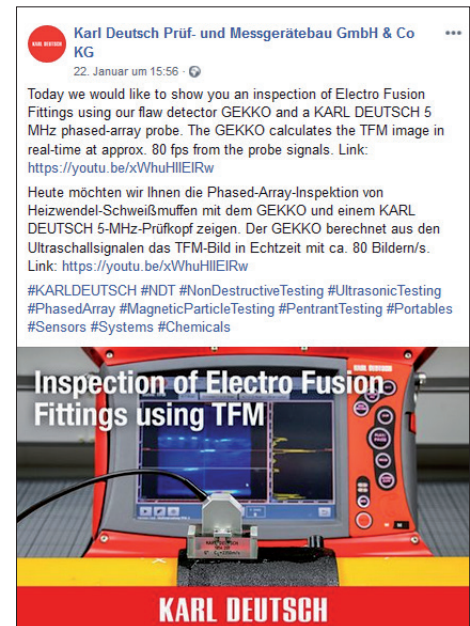
KARL DEUTSCH appearance on Instagram



The KARL DEUTSCH profile on LinkedIn

The crucial factor is that people on social media are not only interested in the brands they are already familiar with, but that a large proportion of users are open to getting to know new suppliers on social media channels and then testing them.

This development is also highly interesting for KARL DEUTSCH, and so we have positioned ourselves more broadly and better in the area of social media. In addition to our long-standing YouTube channel ("NDTChannel"), we are now also represented on LinkedIn, XING, Instagram and Facebook. Through these channels, we generate contact and transfers to our website. In addition to product marketing, the social media platforms are also very well suited for job postings. Kr



Posting on Facebook



## Safe Consulting Service

### Let's meet digitally and live!

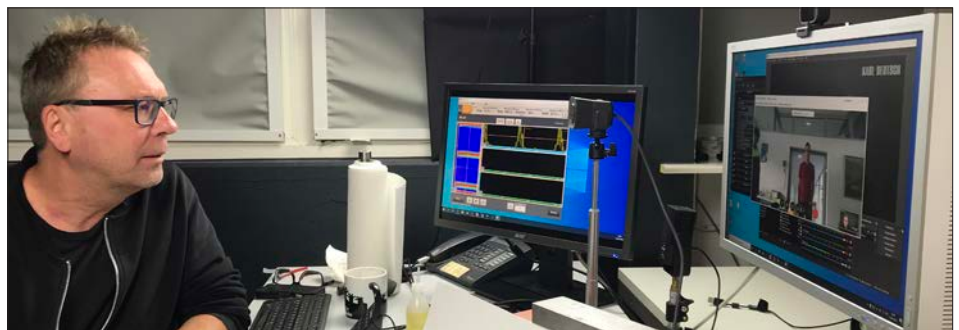
In addition to personal on-site visits, we offer our customers and interested parties the option of a digital meeting.

Thanks to state-of-the-art conference and video equipment, our specialists are now able to present KARL DEUTSCH products remotely to you. We look forward to your appointment request! **Kr**

Many of our devices and systems are presented on our Youtube channel "NDTChannel":



[www.youtube.com/user/NDTChannel](https://www.youtube.com/user/NDTChannel)



Individual consulting on application and equipment from Wuppertal for the whole world presented by Dr. Kirill Zilberberg (top) and Stefan Kierspel.

## KARL DEUTSCH Successfully ISO-Recertified

As early as in 1993, the KARL DEUTSCH QM system was certified for the first time according to DIN EN ISO 9001 and has been continuously developed throughout the company ever since. In the year 2018, the company converted to the revised new DIN EN ISO 9001:2015 standard, and in April 2019 KARL DEUTSCH was again successfully recertified by TÜV Nord.

Then and now, quality enjoys highest priority at KARL DEUTSCH. The top goals of our quality policy are reliable products, short delivery times, individual support for our customers and fast processing, also in case of service. Of course, this includes personal advice and professional support as well.



Presentation of the certificate during the 70<sup>th</sup> anniversary celebration: Dietger Schäle, Dr. (USA) Wolfram Deutsch, Uwe Spindler from TÜV Nord CERT GmbH, Dr. Volker Schuster, Dirk Furtmann (from left to right).

Thus, our on-site consulting engineers and in-house specialists are gladly avail-

able to our customers as direct contacts for solving their NDT tasks. **SV**



## Illustrated Book on 70 Years KARL DEUTSCH

On the occasion of our anniversary, a comprehensive illustrated book has been produced. Oliver Haas (Marktplan), Christa Mrozek (Taldesign) as well as Henning Kroemer and Dr. (USA) Wolfram Deutsch from KARL DEUTSCH faced this project, which in the end took much more time than expected.



**70 years of KARL DEUTSCH: The anniversary book**

The result looks pretty good! A hardcover with 144 pages in DIN A4 landscape format describes not only the history and the product range of the company KARL DEUTSCH. North Rhine-Westphalia, the Bergisches Land region and the city of Wuppertal are also documented in detail and in two languages (German/Eng-

lish), so visitors of the company are also introduced to the surrounding area.

Wuppertal in particular has more to offer than many people are aware of. The roots

of early industrialization are still associated with the name Friedrich Engels, who was born 200 years ago in the valley of the Wupper river and whose family was the largest employer in the region. The wealth of the city permitted projects such as the famous suspension railroad and the impressive Stadthalle (town hall), which nowadays is mostly used for classical concerts.

Current flagship projects are the Nordbahntrasse, a 22 km long leisure trail along the city, and the Junior Uni, an educational institution with a technical focus for young researchers. KARL DEUTSCH is involved in both projects as a sponsor and partner. **WD**

## New Specialist Book on Ultrasonic Testing

**Dr. Werner Roye has been expressing the wish to write a book on ultrasonic testing for some time now and has now taken on this challenging task.**

The classic book on the same subject published by KARL DEUTSCH with the authors Prof. Volker Deutsch, Dr. Michael Platte and Manfred Vogt in 1997 was out of print and a comparable book focusing on industrial testing practice was not available.

Less formulas and more practice was the credo for the new project. Dr. Roye was able to use many images that had been created during his many years of laboratory work at KARL DEUTSCH. Phased array testing, which has become more im-

portant in recent years, takes up a lot of space. Dr. (USA) Wolfram Deutsch focused in detail on automated ultrasonic testing. In addition to many other specialist colleagues, Prof. Volker Deutsch also provided further valuable information in order to complete a well-rounded successful specialist book.

The book comprises 230 pages and 355 mostly coloured illustrations and is intended to be an ideal guide for both the beginner and the experienced user. The English version is on the way. **WD**



**New publication in September 2019**

## New Truck for Wuppertaler Tafel

**The Wuppertaler Tafel, a non-profit organisation, ensures that no one in Wuppertal goes hungry. In earlier times, the association used to collect food and pass it on unbureaucratically to those in need.**

Today, the work of the Wuppertaler Tafel has become much more diverse and includes, among other things, the serving of three hot meals a day, driving to the “Platte” (outdoor gathering location of homeless people) with the “Sozial- und Medimobil” (a specialized vehicle to take care of social and medical basics), supplying needy people with food in the Tafelladen (a shop selling food at a low price), taking care of children in the “Kinder-tafel” or providing clothing, household goods and furniture in the “Sozialkaufhaus” (at budget prices). This multitude of tasks is carried out by more than 150 volunteers, more than 50 “Euro Jobbers” (one-euro

workfare jobber), 10 full-time employees, two part-time employees, three social workers and about 80 community workers (fulfilling their legally prescribed social hours) per month.

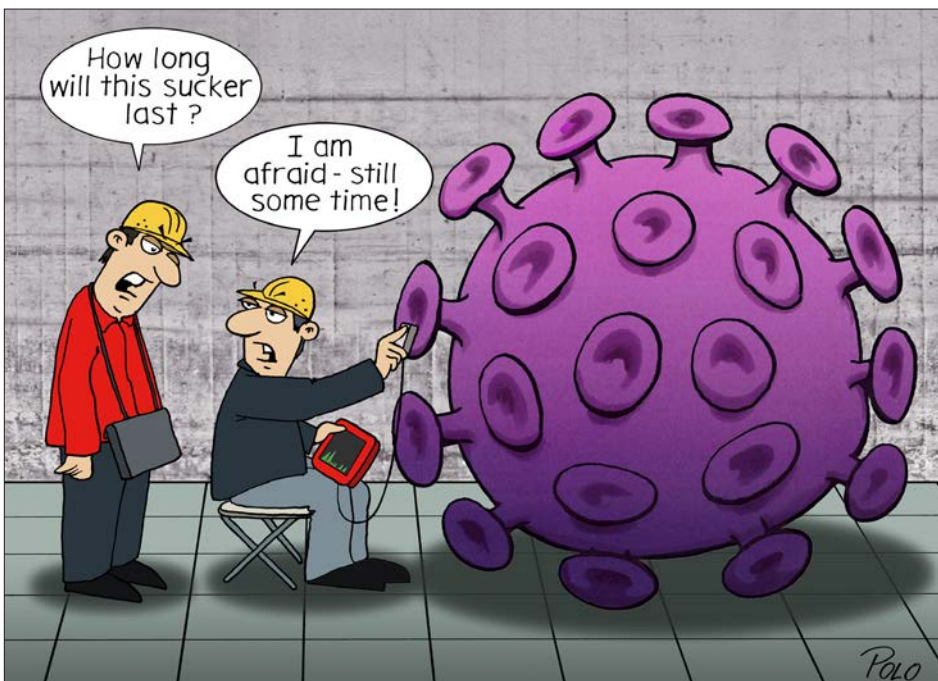
Last year, the Wuppertaler Tafel urgently needed a new truck for the multitude of necessary transports as part of their work. Together with other Wuppertal companies such as Riedel Communications, Stadtparkasse Wuppertal, the local Mercedes-Benz branch,



**KARL DEUTSCH Managing Director Dietger Schäle (right) together with Mr. Wolfgang Nielsen, the 1st Chairman of Wuppertaler Tafel**

EDE, Aptiv, HECTAS (Vorwerk Group) and many more, KARL DEUTSCH made the purchase of the new truck possible with a donation of 4,900 EUR. **Kr**

## Cartoon



**Non-destructual pandemic nightmares**

The graphic artist André Poloczek, known under the artist name POLO, lives and works in Wuppertal. His cartoons are well-received in many daily newspapers and known from regular exhibitions. For the KD-INFO he describes scenes from non-destructive testing in a humorous way. **WD**



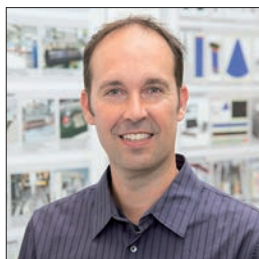
**Illustrator André Poloczek alias POLO from Wuppertal**



## New Employees at KARL DEUTSCH

Since KARL DEUTSCH was founded 70 years ago, our employees have made a special contribution to the corporate success. Many employees have been working for KARL DEUTSCH for decades, so our customers benefit from the close relationships we have established over many years and the know-how we have acquired together.

Over the past few months, we have welcomed many new employees to KARL DEUTSCH. We are happy about the new team members and would like to introduce them briefly here.



**Jörn Bolten**  
Deputy Manager  
Ultrasonic Testing Systems



**Daniel Braun**  
Division Manager  
Magnetic Particle Testing Systems



**Lutz Frerichs**  
Deputy Director  
Sales, Marketing



**Ievgenii Kres**  
Software Ultrasonic  
Testing Systems



**Henning Kroemer**  
Head of Marketing



**Marina Rupp**  
Dispatch Department



**Nathanael Vitale**  
Ultrasonic Probes



**Andrea Arizzi**  
MT Product Manager  
ECOMAG, Italy

## KARL DEUTSCH Junior Staff

As an owner-managed, medium-sized company, KARL DEUTSCH also cares about the family well-being of its employees.

For new parents, there are now cozy baby bodysuits in KARL DEUTSCH design to celebrate the birth of their offspring.

In addition to many young parents, we were also able to delight a grandfather with this gift: Dr. Werner Roye, a long-time employee at KARL DEUTSCH's application laboratory, received one of the baby rompers for his grandchild. Shortly

afterwards we received the nice message shown below. Kr

*Hello Mr Deutsch,*

*our youngest granddaughter is only 10 weeks old and already a KD fan. Thank you very much for the nice Christmas present!*

*Kind regards,*

*W. Roye*



**Dr. Werner Roye**, a long-time employee at the applications lab with his youngest granddaughter in KARL DEUTSCH outfit

## Trade Fair Outlook



**10 – 12 May 2021**  
**DGZfP Annual Meeting 2021**  
Osnabrueck, Germany

Lecture (Wednesday, 12 May 2021, 11:30 a.m.)

**High-speed ultrasonic testing of standard and thick-walled seamless tubes with enhanced testing of oblique flaws by means of phased arrays**

Lecturer:

Dr. (USA) Wolfram A. Karl Deutsch (KARL DEUTSCH)

Poster Presentation (P25):

**Physical and chemical influencing variables on the flaw indication in MT and PT testing**

Lecturer:

Stephan Robens (KARL DEUTSCH)

Note: Lectures are given in German language



**08 – 10 June 2021**  
**FABTECH Mexico 2021**

Monterrey, Mexico

We are represented by the company **Brüder NDT**



**19 – 21 October 2021**  
**49<sup>th</sup> National Conference of NDT**

Hotel AQUARIUS SPA \*\*\*\*\*

ul. Kasprowicza 24

78-100 Kołobrzeg, Poland



**11 – 14 October 2021**  
**testXpo – International Forum for Materials Testing**

Zwick Company

89079 Ulm, Germany



More information on dates and lectures:  
[www.karldeutsch.de](http://www.karldeutsch.de) » **News & Dates** » **Dates**

## About KARL DEUTSCH

### KARL DEUTSCH

**Pruef- und Messgeraetebau GmbH + Co KG**

The privately owned company KARL DEUTSCH was founded in 1949 and develops and produces instruments for non-destructive material testing. Portable instruments, stationary testing systems, sensors and crack detection liquids are produced by 130 motivated employees in two works in Wuppertal. Additional 20 employees in international offices and a worldwide network of dealers support the export business which accounts for more than 50 % of the turnover. Characterised by continuous innovation and product reliability, the trade marks **ECHOGRAPH**,



**Main offices and manufacturing site for portables, sensors and chemicals (Works 1)**

**ECHOMETER, DEUTROFLUX, LEPTOSKOP, FLUXA, KD-CHECK** and **RMG** are well-recognised. Our customers are metal producing and processing industries, e. g. steel works, automotive companies and bearing manufacturers. Typical test tasks

are ultrasonic weld testing, detection of shrink holes in castings, crack detection in forgings with magnetic particles and dye penetrants, safety components for railway and aerospace as well as the wall and coating thickness measurement.



**Offices and manufacturing site for test-ing systems (Works 2)**

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# KARL DEUTSCH