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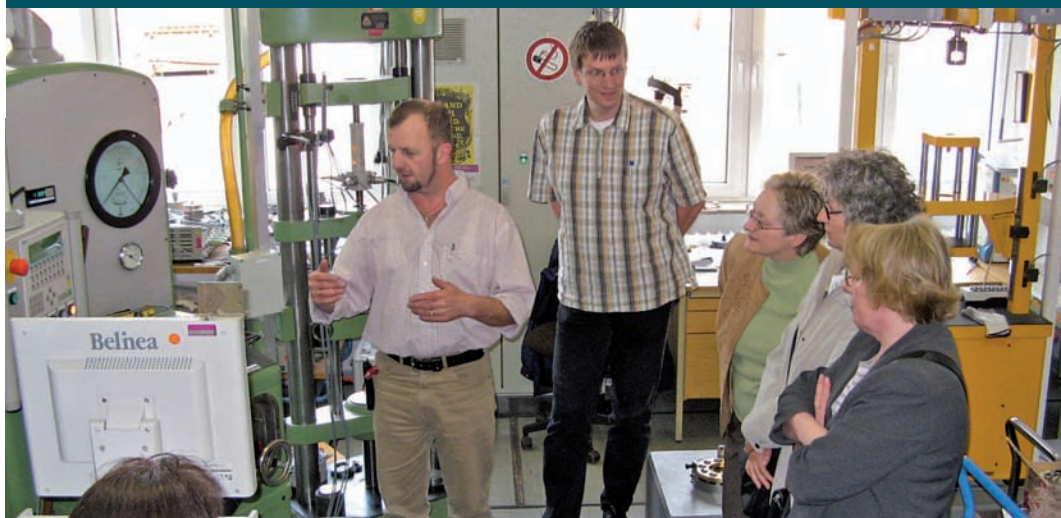
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MPA NRW
Materialprüfungsamt Nordrhein-Westfalen
TESTING – SURVEILLANCE – CERTIFICATION

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The newsletter of the Materialprüfungsamt Nordrhein-Westfalen



Harald Noll-Wagner from the department “Testing and Calibration of Testing Machines” explains his improvement suggestion to the members of the decentralised committee.

Good ideas and considerable bonuses

More and more staff members of the MPA NRW make improvement suggestions and are rewarded with bonuses

They improve computer programmes processing testing orders, make detailed suggestions for the energy saving afterburning of flue gases in the testing laboratory for fire tests of the MPA NRW in Erwitte, or suggest the modification of testing instruments to simplify the determination of test results – for the company MPA NRW the inventiveness of its staff members is an essential contribution to necessary continuous improvement processes.

“With the establishment of the project team “Technical innovations” in 2001 the corporation management began to coordinate and encourage improvement sugges-

tions from the staff members”, says project manager Dieter Goedecker, graduate engineer and head of the group. “Since this time suggestions have increased significantly.”

Most of these suggestions also bring improvements for the clients of the MPA NRW by reducing test periods or simplifying procedures.

Of course the suggesting staff members also benefit from their good ideas: they receive a present from the company and can participate in the “Central Ideas Management NRW”. Here the improvement suggestions from the section of the Land administration

are collected, the best of which are awarded a prize.

“Concerning improvement suggestions the MPA NRW has a leading position in the portfolio of the ministry of economics”, says Brigitte Vogel (picture above, 3rd person from the right), head of the decentralised committee for the idea management in the portfolio of the Ministry of economics, mittelstand and energy for the Land North Rhine-Westphalia. “Several suggestions have already been submitted that were rewarded with a considerable bonus.”

Altogether half of all suggestions have resulted in a cost reduction for the MPA NRW due to the simplification of operating processes, the optimization of technical equipment or the reduction of energy costs. Ten percent of the suggestions concern environmental protection, further ten percent concern new testing offers. Due to the realization of a suggestion the energy consumption for lighting a testing laboratory can be reduced by 370,000 kilowatt hours for the next years.

MPA NRW on the QualiPro

The MPA NRW has an exhibition stand on the QualiPro. The most important specialized fair for production quality assurance takes place in Dortmund's Westfalenhallen from 23 till 26 September 2008.

The departments “Testing and calibration of testing machines” and “Hardness” will be present at the stand.

MPA NRW at the QualiPro, Hall 6, Stand-No. 6302



■ ■ ■ | Thermal insulation

The MPA NRW possesses all necessary notifications for the German and European market to carry out mechanical, moisture and thermal tests up to 900° C, acoustic tests, tests of behaviour in fire and chemical analyses.

Furthermore, the MPA NRW supervises the factory production control of the manufacturers and also participates in developing and introducing new innovative thermal insulation technologies.

The MPA NRW tests all kinds of flat, pipe and loose-fill insulation for building applications, industrial use or special applications. National and European single item tests, third party control approval and audit testing as well as initial type tests can be carried out.

📄 www.mpanrw.de | menu item:
Our services

■ Help from experts

■ ■ ■ In the near future pipe insulation will also have regulations compulsory for the EU



Ralf Bertram testing thermal protection in the MPA laboratory

Heat insulation means saving energy and thus means climate protection. Therefore requirements to thermal insulation have increased also in the sphere of pipeline engineering. Especially in the industrial sector,

for example in nuclear or other power plants, in pipelines for long-distance heating or in cold-storage warehouses it is vital to conduct gases and liquids through pipes without them losing their temperature. The testing laboratory is already very much involved in determining the thermal conductivity of pipe insulation. This also concerns the task of preparing the clients for Eur ope: “It will not take long”, says the departamental head Karlheinz Fennig, graduated physicist, “and we will have a Eur ope-wide uniform set of regulations.”

As experts from his department helped to create the European standards, the laboratory has a wide-ranging backgr ound knowledge from which the clients benefit. “The manufacturers save a lot of money”, so the departamental head, “if they can contact us directly with questions concerning the Eur opean regulations instead of having to spend a lot of time on research.”

■ Harmony in Europe

■ ■ ■ The behaviour in fire of heat insulators will soon be tested exclusively according to EU standards

The EU regulations for the behaviour in fire of heat insulations already exist, and the national standards have a parallel validity only for a transitional period. “The CE marking will soon be compulsory for many products” – so the departamental head of the testing laboratory for fire tests of the MPA NRW in Erwitte, Hendrik Rademacher, graduate engineer, recommends his clients “to deal with the EU standards and their effects on their pr oducts as soon as possible.” For this he offers support from his

company: “We know everything about questions concerning the CE mark. We actually helped to develop the new Single Burning Item Test (SBI-Test), the EU standardized testing procedure for determining the behaviour in fire of building materials.”

For many years the MPA NRW has worked on harmonizing the EU standards with regard to behaviour in fire. Staff members from Erwitte for instance work as trainers for EGOLF – this European association of fire test laboratories helps to ensure that all

European testing institutes work according to a uniform technical standard.

The fact that the MPA NRW plays an active part in national and international standardization bodies is an important attestation of qualification. “For our clients this has the advantage that we can give them pr ofound consultation”, says Hendrik Rademacher. A special highlight for him is also the fact that the MPA NRW heads the work gr oup of the EOTA, the European Organisation for Technical Approvals, that is currently developing a new European test procedure to determine the behaviour in fire of claddings for external walls.

■ Good and affordable

■ ■ ■ With the “good old” film badge the MPA NRW reliably proves the compliance of the ordinance on radiation protection at a good price.

It's hard to believe, but there still are analog measuring instruments that are more effective and more practical in use than digital systems. The film badge is such a device: it has been used by the MPA NRW for many years to monitor people working with ionizing radiation in their job.

The ordinance on radiation protection demands: For persons which are exposed to radiation at the workplace the limit of the effective dose is 20 Millisievert per year. These workplaces exist in doctor's surgeries and hospitals if X-ray machines or radioactive material are used there, and also in research and industry. The employees must wear the film badge that has the size of a business card during their entire working period on their working clothes. Once a month the film contained in the badge is exchanged and sent to the MPA NRW

The computer evaluation of the film badges is widely automatized. Only spooling-in is still done manually.



where it is developed and evaluated. The results are sent to the respective customer as well as to the Central Radiation Protection Register of the Federal Office for Radiation Protection.

The procedure at the MPA NRW is widely automatized and can therefore be offered for a very reasonable price. Even if the process is rapid the system reliably raises alarm if a measuring result diverges from the norm. Furthermore, it can be determined by the image of the film due to the construction of the badge whether the work coat together with the badge was just hanging in the irradiation room for a longer time or if it was continuously worn by its user.

“The film badge gives us an image from which we can draw several conclusions if required”, says Dr. Frank Busch, head of the dosimetry service of the MPA NRW, “in this point it still is superior to the digital systems.”

The MPA NRW evaluates 100,000 of these film badges per month. Besides, the specialists from Dortmund offer their clients further devices for special fields of application, for example the ring dosimeter or the environmental dosimeter.

Some day the film badge will be replaced by other systems. For instance by the solid state dosimeter that works on the basis of reusable detectors. This system also works passively, which means that the dosimeters will continue to be sent to the dosimetry service for evaluation.

Whatever will follow the film badges, “due to the experience and the equipment of our dosimetry service”, so Dr. Busch, “we are always in the position to adapt to new legal demands and to offer our clients a reliable evaluation of radiation values.”

■ ■ ■ | Dosimetry

The MPA NRW offers various measuring instruments for nearly all applications:

The film badge

... as whole-body dosimeter indicates X-rays and gamma-rays; it offers additional information about the direction of radiation, movement during irradiation, beta-radiation and photon energy

The ring dosimeter

... monitors the partial body dose (gamma-rays and X-rays as well as beta rays) at the hands.

The Albedo neutron dosimeter

... determines the personal dose with four different detectors in mixed photon and neutron radiation fields.

The environmental dosimeter

... measures the local dose in photon or neutron fields; e.g. monitoring of nuclear facilities.

The radon dosimeter

... determines the radon concentration at workplaces and in buildings.



Dr. Frank Busch, head of the measuring point, with film badge and ring dosimeter

MPA contacts

① **Dr. Frank Busch, graduate physicist**
Tel. (0049) 231. 4502-517

■ ■ ■ | Staff members

The department "Metal Building Products" has reorganised itself with focus on teamwork. Its members are (on the photo from left to right):

Frank Opitz: prestressing steels, post tensioning systems, reinforcing steel products; **Dr. Helena Eichenmüller (team leader):** ductile cast iron pipes and fittings for the drinking water and gas supply, for the waste water disposal, cast iron pipes and clutch connection systems for building drainage systems, manhole covers, thin-walled steel strip building products and failure analyses;



A rare moment: all members of the "Team Steel" together in Dortmund

Joerg Becker: reinforcing steels, reinforcing steel products, fasteners, thin-walled sheet metal building products, scaffolding systems; **Ulrich Tenbusch:** reinforcing steels, reinforcing steel products, thin-walled sheet metal building products, scaffolding systems; **Stefan Lipkowski:** fulfilment of welding requirements, prestressing steels, post tensioning systems, reinforcing steels, reinforcing steel products, manhole covers; **① Yolanda Mota de la Cruz**
Tel. (0049) 231. 45 02-451

■ Team spirit

■ ■ ■ The generation change at the MPA NRW has led to a different labour organisation in some departments: from the lone fighter to a team worker

"The tasks have become so complex that we can only handle them together", says Frank Opitz. The graduate engineer together with Joerg Becker, Stefan Lipkowski and Ulrich Tenbusch – all also graduate engineers – and also the graduate physicist Dr. Helena Eichenmüller are the members of the "Team Steel" as it is called inside the company. Officially the department is called "Metal Building Products" and ranges from

result in certificates. These are of a fundamental economic significance for our clients. Our work must be done fast, have a high quality and withstand in court."

Their field of operation is not only North Rhine-Westphalia. The "Team Steel" also attends to clients on the European market. In the jungle of EU standards that is sometimes hard to overlook, the MPA NRW is a reliable pilot and partner: "We support the client with new products", says Ulrich Tenbusch, "until he has attained the certification. For this we also undertake long journeys: some clients erect a manufacturing plant in the Far East and want to have it certified according to the national and international regulations." The travel activity of "Team Steel" is increasing, "the moments where we meet personally in Dortmund have become rarer", says Joerg Becker. But the team communication functions smoothly. Everybody is informed about the current jobs in the department due to mobile phone, E-mail, online data access via laptop and of course through Yolanda Mota de la Cruz, the secretary who has all communication firmly under control.

In spite of team spirit one thing remains unchanged in the department, as Dr. Helena Eichenmüller emphasises, "Our clients still have a direct person of contact."

concrete steel, reinforcing steel and prestressing steel over prefabricated parts e. g. for facades up to cast iron manhole covers. The test within the scope of the certification procedure refers to the client's products, their production process and the client's production control.

While in the past "lone fighters" carried the responsibility at the MPA NRW, the labour organisation has now changed due to the generation change. Due to the extended tasks and the speed with which they have to be dealt with the focus is now on "team spirit". Stefan Lipkowski explains: "We furnish expert opinions and test reports which then

■ Imprint

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