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TECHNEWS

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aquatherm

state of the pipe

Dear aquatherm partner,

Again, there are many news from all over the aquatherm world that we would like to share with you.

In this TechNews edition you will receive some important information on the planning and design of our products for compressed air applications. We will take a closer look at BIGGEXCHANGE, the international symposium and networking event that took place at our headquarters in September. In the report about the classic car centre Depot3 you can discover how latest building services engineering with aquatherm products provides the perfect environment for historic vehicles. Last but not least, aquatherm successfully took part in the SMM: The leading international maritime trade fair.

Enjoy reading!

Dirk, Maik und Christof Rosenberg



NOTICE ON PLANNING & DESIGN OF COMPRESSED AIR APPLICATIONS

When planning and designing pipe systems for compressed air applications, the following working pressures are to be observed.

aquatherm blue pipe SDR 11	aquatherm green pipe SDR 9
10 bar	15 bar

This chart is valid for temperatures from 10 °C to 40 °C. For temperatures and conditions other than those noted in the chart, please contact our technical service department.

Warning: Failure of a compressed gas (air or inert gas) system can be extremely violent and dangerous. In a compressed gaseous media piping system, energy is applied to compress the gaseous media in addition to pressurizing the system. If failure occurs, both energies can be suddenly released and can be extremely violent compared to failure during leak testing or system operation with an incompressible liquid testing media.

aquatherm recommends that thermoplastics piping intended for the transport of compressed air or other compressed gases should be installed by burial, encasement in shatter-resistant material or other appropriate means, to prevent or minimize the possibility of mechanical damage. The piping must also be protected from other sources of degradation such as ultraviolet light (UV) exposure, chemical effects, temperature and oxidation.

Always make sure to eliminate risks for persons near compressed air systems, also observing the applicable national and international regulations of installation, accident prevention and safety for the installation of pipe systems, as well as the applicable laws, standards, guidelines and technical rules.

CHALLENGES, SOLUTIONS OF THE FUTURE DISCUSSED AT BIGGEXCHANGE INAUGURAL EVENT DRAWS MORE THAN 270 PARTICIPANTS FROM AROUND THE WORLD

More than 270 architects, planners, engineers, contractors, wholesalers and suppliers from around the world accepted Aquatherm GmbH's invitation to gain insights into the latest trends in the commercial and industrial construction industries at the inaugural BIGGEXCHANGE. The event, which took place Tuesday, September 11 through Thursday, September 13 at Aquatherm's world headquarters in Attendorn, Germany, drew attendees from across the globe, including Germany, the United States, South Korea, China, Finland, and New Zealand. They came to gain the perspectives of 16 world-class experts from architecture, industry, and science.

Presentations Tackle Today's Topics

One focus of the event was an in-depth examination of building information modeling (BIM). Professor David Chua from the National University of Singapore spoke about BIM in the context of manufacturing and assembly-ready product design. „The future of construction lies in the field of prefabrication and integrated BIM,“ Chua said. Dr. Ing. Matthias Jacob from Implenia Hochbau GmbH, demonstrated how innovative tools are changing the construction industry. His presentation included 3D-printed concrete houses, a digital wood construction process with the help of robots, and the collection of data by drones, which is becoming increasingly important in the construction industry. Management Consultant Robert Egger explained how the latest findings from neurophysics can help boost worker efficiency. Communication expert Peter Heinrich discussed the importance of voluntary corporate social responsibility (CSR). Heinrich, the managing partner of Heinrich GmbH - Agency for Communication in Ingolstadt, explained to the participants of the BIGGEXCHANGE which points are essential to successful CSR communications. Steve Butler, Senior Industry Strategist for MEP at Autodesk, noted that low productivity and environmental concerns are forcing changes in how buildings are designed, constructed, and maintained, and discussed some of the emerging trends that are enabling those changes and suggest where the commercial MEP industry might be headed in the near future. The speech of futurologist Matthias Horx was met with great interest as he explained various megatrends, countertrend trends, and the resulting syntheses between the two. Eleven other experts gave the audience plenty of food for thought, including Arab Hoballah, who served for 25 years as an expert on urbanization and sustainability for the United Nations. „We have the technology to do business sustainably, but we do not use it,“ Hoballah said, noting that he sees it as a responsibility of politicians to change this situation.

Networking, Exchanges of Expertise a Priority

The numerous lectures were an important part of the event, but of equal importance was the exchange of expertise. „Intense communication between people means that today's visions can be put into reality tomorrow,“ explained Dirk Rosenberg, a managing director, along with his brothers Malik and Christof, of Aquatherm. To that end, the attendees were provided with numerous opportunities to network, at two evening events as well as the breaks between lectures.

Unlocking the Potential of the Construction Industry

The idea of holding a symposium and networking event for the leaders of the construction industry was triggered by a study by McKinsey, an international business and strategy consultancy, titled „Reinventing Construction – A Route to Higher Productivity.“ „The result of the study was that the construction industry has the greatest potential for the future compared to other sectors of the economy,“ said Dirk Rosenberg. „Quite quickly, my brothers and I came to the realization that many valuable and leading minds are needed for a binding design and a compelling acceleration of the industry. This realization led us to the laying of the foundation stone of this first BIGGEXCHANGE.“ This vision was suggested to the guests by the name of the event. In BIGGEXCHANGE, the word „exchange“ indicates networking and sharing ideas, while „big“ has three meanings: large buildings, which are playing an increasingly important role in the world because of urbanization and sustainability; the presence of the leaders in the construction industry to whom the event was directed; and a local reference to the Bigge River that flows through the event grounds and is the namesake of nearby Biggesee Reservoir. Maik Rosenberg said that with this inaugural BIGGEXCHANGE, „We have now put into practice our vision at the time of organizing a trend-setting international symposium and network event for the construction industry and plant engineering. We must tackle things and there were many people at the event who wanted exactly that. That's why we bring a lot of positive energy and look forward to the challenges the future holds.“ Christof Rosenberg said the enthusiasm of the attendees has the company „intensively“ considering a second BIGGEXCHANGE even.



More than 270 people accepted our invitation to the inaugural BIGGEXCHANGE.



Professor David Chua Kim Huat from the National University of Singapore spoke about building information modeling (BIM).



Managing directors Christof, Dirk and Maik Rosenberg (from left).

THE DEPOT3 CLASSIC CAR CENTRE: LATEST BUILDING SERVICES ENGINEERING PROTECTS HISTORIC VALUES

Everything that makes the heart of true automobile enthusiasts beat faster is provided by Ralph Grieser's Depot3 classic car centre in Mühlheim Kärlich (Germany) which opened in early 2017. In the showroom between 15 and 20 automobile classics are continuously waiting for potential buyers. Beside restoration and workshop services, the professional accommodation and storage of vintage cars is a focus of the Depot3 specialists. A reliable temperature control of the vehicle hall was of enormous importance to Ralph Grieser. Only constant temperatures of approximately 15 °C offer ideal climatic conditions for the storage of these vehicles, because temperature fluctuations would result in the formation of condensation water in the cavities of the car body. Looking for an intelligent solution for a constant and energy-efficient room temperature control, the owner of the classic car centre came across the aquatherm black system. Thanks to its low panel thickness, the system can be integrated into the floor, wall and ceiling. Depending on the chosen water temperature, aquatherm black system panels can optionally heat and/or cool.

One system for many applications

For the paddock and workshop hall, the planner decided to insert aquatherm black system panels into the 20 cm high concrete layer of the base plate. The panels with a length of up to five meters were already produced object-specifically at the aquatherm headquarters.

The connection of the surface heating and cooling system was realized by Tichelmann manifolds consisting of 40 mm aquatherm blue pipes. The product was designed for the transport of cooling and heating media in closed systems and is therefore suited for various industrial applications. In the classic car centre Depot3, aquatherm blue pipe was also installed for supplying the individual workplaces with compressed air.

High degree of prefabrication ensures short installation times

The corrosion-resistant and diffusion-tight aquatherm blue pipe manifolds for Depot3 were realized in aquatherm's industrial prefabrication department.

The aquatherm black system panels could be connected very quickly on site and with lowest use of tools thanks to their high prefabrication degree. In the heart of Depot3, the workshop, aquatherm black system plays off further advantages as industrial floor heating: No draught and thus no increased dust exposure. In the showroom of the classic car centre the panels were additionally mounted on a steel frame suspended from the hall ceiling. The low weight of the panels of 4.1 kg (incl. water filling) per square meter was essential for this solution.

The project Depot3 classic car centre impressively shows how excellently state-of-the-art and sustainable building technology helps to preserve automotive treasures.



In the showroom of Depot3, the aquatherm black system panels were mounted on a steel frame suspended from the hall ceiling.



The industrial floor heating consisting of prefabricated panels provides spatial freedom and a healthy working climate in the workshop.

A RELOCATION WITH CHALLENGES: INJECTION-MOULDING SECTION HAS MOVED INTO THE NEW HALL COMPLEX

At aquatherm we are looking back to some very special weeks at our headquarters in Attendorf: The relocation of the injection-moulding section to the new hall complex was clearly visible both for employees and visitors. 34 injection-moulding machines had to be moved with big cranes from the old to the new production hall without interrupting the production.

This was the third move for the injection-moulding department: After aquatherm's settlement in the Biggen industrial area in the late 1970s, the injection-moulding and extrusion sections were originally accommodated in Building 1. Thanks to steady company growth and the corresponding expansion of fitting production, two further relocations were made. The new move to Building 2 became necessary as the space limits in the old hall were reached. Besides, the employees were challenged by the low ceiling height while retooling the large machines.

At first the cellar areas were modernized, then substantial renovations of some parts of the former extrusion hall began. A production hall of 1,200 square meters (about 12,900 sq ft) was torn down to make way for the new hall. When the building works were completed, 34 injection-moulding machines were relocated within just eight weeks. The machines were set up according to output quantity and optimized material flow. Only two days after the relocation, the first fittings were produced in the new hall.

The new building provides an area of 4,750 square meters (about 51,000 sq ft). The hall height of approximately nine meters (about 30 ft) allows the employees to work more efficiently now. Crane systems with a load capacity of up to 10 tons were installed and can reach almost any corner of the hall. In the future, the tool maintenance team will be in the basement of the production hall, where storage for 360 pallet spaces and work places for the preparation of approximately 400 tools were built.

Of course, aquatherm's own products were applied in this project: aquatherm orange system was installed for industrial floor heating, aquatherm black system in the tool maintenance area provides surface heating in the wall, aquatherm red pipe handles the sprinkler system, and aquatherm blue pipe is used for the process water supply.



Relocation of injection-molding machines and loading with a crane.



aquatherm blue pipe was installed to provide process water.



AQUATHERM SUCCESSFULLY TOOK PART IN THE WORLD'S LEADING MARITIME TRADE FAIR

Around 50,000 visitors from more than 120 countries met each other during the SMM fair in Hamburg from September 4-7, 2018. aquatherm successfully presented its innovative pipe systems made of polypropylene for the shipbuilding industry.

At the booth, visitors received information about the various applications of the aquatherm products, for example in the field of ballast water, heating and cooling or potable water. But also aquatherm's prefabrication capabilities played an important role. A large-sized manifold enabled the attendees to get an idea of a customised solution planned and built at the factory and shipped ready-to-install at any place.

One issue addressed by many visitors was the reduction of the admissible value for sulphur emissions caused by ship fuels. A corresponding guideline of the International Maritime Organization (IMO) will globally become effective in 2020. To achieve the prescribed values, among other things exhaust gas purifiers must be used which aquatherm can deliver the appropriate products for.

The „aquatherm – Maritime Solutions“ flyer was presented at the SMM for the first time and met with a big response. It features important information about corrosion resistance, certificates and applications of the company's polypropylene pipe systems.

Not only aquatherm employees from Germany, but also our partners from South Korea and China were part of the booth team. This allowed us to get even better into conversation with international visitors. A lot of new contacts were established and already existing business relations were deepened. All persons involved spoke of a successful participation in the SMM in Hamburg.

