

Edition No. 2 2017 | 10th April 2017

TECHNEWS

technews@aquatherm.de



aquatherm

state of the pipe



Main stand in hall 4.0 / E15

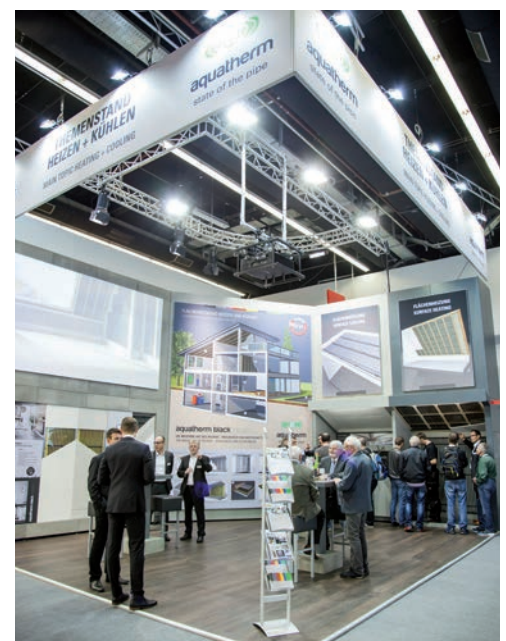
ISH FRANKFURT 2017

This year, aquatherm was also represented at the ISH in Frankfurt, the world's leading trade fair for bathrooms, building, energy, climate technology and renewable energies.

At the ISH, 2,482 exhibitors (Germany 889, foreign: 1,598), including all international market leader, presented their global innovations on an area of 260,000 square meters.

The visitor numbers of the exhibition speak for themselves: 200,114 visitors (2015: 196,777) from the fields of crafts, trade, engineering, architecture, housing construction and real estate companies, service providers, authorities and universities travelled from all over the world to look at the trade fair innovations. The ISH has become much more international: 64 % (2015: 61%) of the exhibitors and 40 % (2015: 39%) came from abroad. The most represented countries were Italy China, France, The Netherlands, Switzerland, Great Britain, Poland, Belgium, Austria and Spain. As always, the strongest group of visitors at the ISH, with a share of one third, formed the SHK trade.

Also this year, aquatherm received many visitors on its two stands, the main stand with the focus on prefabrication in hall 4.0 E.15 and the topic of heating and cooling in hall 6.0 D08. Many international and regional guests visited the both stand parties on Wednesday and Friday, so that a lively exchange could take place.



Topic heating and cooling in hall 6.0 / D08

ISH FRANKFURT 2017

The international evening on Wednesday was a good occasion to bid farewell to Alois Sieler (Head of International Sales & Area Sales Manager). After 21 years of seniority at aquatherm and 11 ISH trade shows, he is going in his well-deserved retirement in June of this year. Dirk Rosenberg, representative for the entire management, thanked him for his dedication and praised him as a reliable and highly competent partner. In his speech, Senior principal, Gerhard Rosenberg, looked back on the many shared journeys. As a farewell present, Alois Sieler was given two aquatherm cycling jerseys, as he enjoys cycling with his wife in his leisure. The jerseys were not simply handed over, but were "presented" by his future successor Jorge Quintana and Christof Schmidt (Head of Sales Germany/Austria). "Looking back, for me it was the best career decision to join aquatherm", said Alois in his speech.

THE BEGINNINGS OF AQUATHERM AT THE ISH

This year aquatherm was already exhibiting at the ISH for the 21st time. We owe this proud number of trade fair participations our Senior manager Gerhard Rosenberg, who had recognized the importance of this fair for the company at an early stage:

"I had attended many trade fairs already in my time as a master at the heating and plumbing company Gastreich. Therefore, it was clear to me: If I wanted to expand the customer base of my own company, I had to present my company – best at the International Sanitation and Heating Exhibition (ISH), which takes place every two years in Frankfurt.

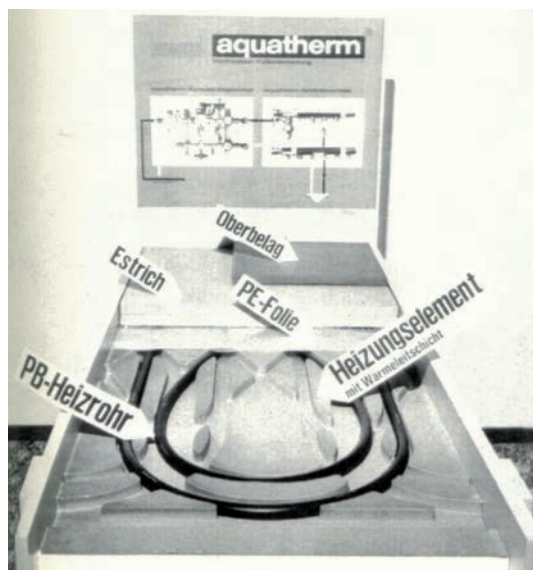
In autumn 1974 I called the exhibition organizer and rented an area of about 4 m² for the next ISH in March 1975. On this small area I built my four red exhibition walls and fixed the black panel of our floor heating, the pipes and the controls. On a table laid the brochures with a photo of the heating in our living room. One chair stood behind the table – that was all. These four square meters were enough to make me and my company aquatherm known beyond the borders of the Sauerland.



f.l.t.r.: Dirk and Gerhard Rosenberg, Alois Sieler, Maik und Christof Rosenberg



Christof Schmidt und Jorge Quintana at the jersey presentation



Exhibition element at the first fair booth of aquatherm at the ISH in Frankfurt, March 1975

Edition No. 2 2017 | 10th April 2017

TECHNEWS

technews@aquatherm.de



aquatherm

state of the pipe

WITH HISTORY OF SUCCESS, JOHN E. GREEN SELECTS AQUATHERM PP-R PIPING FOR SCHOOL EXPANSION

We would like to share the following articles of the Mechanical Contractor Association of America (MCAA) with you. It reports on the use of aquatherm blue pipe and aquatherm green pipe in an expansion of the University of Detroit. In particular, this report goes into details with the handling and the initial experience with our systems.

The complete report can be found at the following link:

https://www.mcaa.org/smart_sol_article/with-history-of-success-john-e-green-selects-aquatherm-pp-r-piping-for-school-expansion/?platform=hootsuite



U of D Jesuit's chilled-water system features Armstrong pumps and Daikin air handling units, like the one seen here. To meet the construction schedule and save on labor costs, John E. Green had some sections of the new system fabricated at aquatherm North America's Londen, UT, facility.



On the roof of the new STEM center, John E. Green paired aquatherm's Green Pipe with a 142-ton Daikin air-cooled scroll compressor chiller. Because of their light weight compared with metal pipe, aquatherm fabricated spools were carried manually to the roof without a mechanical assist.



The chilled-water aquatherm Green Pipe in hangers on the rooftop of U of D Jesuit's new STEM center required protection from ultraviolet rays because it is exposed to sunlight.



Pipefitter Foreman Josh Umphrey (left) and Pipefitter Jason Young of John E. Green found that aquatherm pipe is much lighter than metal pipe, so they can work faster and save on labor costs. The light weight and heat-fusion joining process also improve jobsite safety.



John E. Green installed aquatherm Green Pipe for U of D Jesuit's 45° F chilled-water application, keeping the building cool even on hot, humid days.

AQUATHERM AND LEED V4

What aquatherm's Life Cycle Assessment (LCA) and Environmental Product Declaration (EPD) mean to designers, engineers, and building owners and how the company's polypropylene piping systems contribute to LEED v4 points.

Life-Cycle Assessments (LCAs)

LCAs provide a comprehensive evaluation of the upstream and downstream energy and environmental impacts associated with a product. They are comprised of five parts: Goal, Scope, Life-Cycle Inventory Analysis, Results, and Interpretation. aquatherm has chosen the cradle-to-gate approach for its LCA „Life Cycle of Polypropylene Pressure Piping Systems“ encompassing the product life cycle from the extraction of raw materials through manufacturing and product distribution.

Environmental Product Declarations (EPDs)

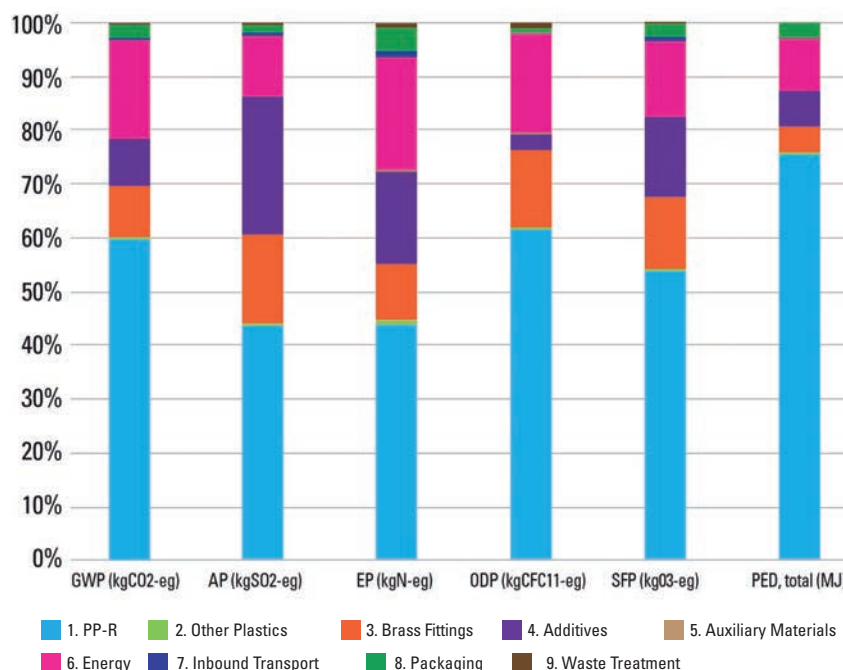
The EPD is the document used to convey the LCA's results to the products' users and specifiers. It focuses on information about a product's environmental impact such as global warming, ozone depletion, water pollution, ozone creation, and greenhouse gas emissions.

EPDs typically are verified following the processes described in ISO 14025, EN 15804, and ISO 21930 for construction products. These steps include: 1) Finding or developing a Product Category Rule (PCR); 2) Generating the input data and performing an LCA according to a specific PCR; 3) Compiling information in the EPD; 4) Verification of the EPD and LCA; and 5) Registration and publication.

aquatherm utilized ThinkStep as independent third party to conduct an ISO-conformant LCA for its following product lines: green pipe, blue pipe, lilac pipe, red pipe and the black system for radiant heating and cooling, and red pipe. In the study, one meter (3.2 ft) length of pipe was selected as functional unit per the requirements of the respective PCR "Piping Systems for Use for Sewage and Storm Water (Under Gravity)". The declared product was defined as a representative average of the five aquatherm product offerings.

Two different test methodologies were chosen to analyze the products in the LCA: Tool for Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI) 2.1 and CML 2001, a method developed by the Institute of Environmental Sciences at the University of Leiden in the Netherlands. The TRACI 2.1 method utilized impact categories, including Global Warming Potential (GWP), Acidification Potential (AP), Eutrophication Potential (EP), Ozone Depletion Potential (ODP), and Smog Formation Potential (SFP). The results of the findings are summarized in the following table.

Environmental impacts and Primary Energy Demand of aquatherm PP-R piping systems according to TRACI 2.1



Edition No. 2 2017 | 10th April 2017

TECHNEWS

technews@aquatherm.de



aquatherm

state of the pipe

Upon completion of the aquatherm product-specific LCA, aquatherm submitted its products, the LCA, and supporting documentation for independent verification by NSF International. The verification process included a review by an independent panel of experts, an audit of the manufacturing facilities and records, and a confirmation of material formulations. aquatherm's Product-Specific Type III third-party verified EPD was published Dec. 18, 2015: <http://info.nsf.org/Certified/Sustain/ProdCert/EPD10069.pdf>

Within the EPD, you will find information on aquatherm, its product descriptions, data quality requirements, raw-materials origins, a manufacturing diagram, a declaration of parameters per the PCR, and the lifecycle-impact conclusion for aquatherm pipe.

Advantages of PP-R piping systems and radiant panels compared to metall systems

The analysis has shown that polypropylene comprises nearly 50% or more of the impact contribution depending on the impact category. Also Primary Energy Demand (PED) is mainly driven by polypropylene. However, this is because of the embodied energy content of the resin rather than fuel consumption upstream. In other words, aquatherm polypropylene has available energy within the material that can be recovered later in the product's life cycle during recycling. This differs greatly compared with metals. With metal systems, all of the energy is used in the original processing of the raw material. Metals do not provide energy to the recycling process.

Thus aquatherm PP-R piping systems and radiant panels can provide a more sustainable, lower environmental impact option to designers, engineers, and building owners when compared with other piping and radiant panel systems.

How is aquatherm's EPD relevant to LEED v4 points?

LEED stands for „Leadership in Energy and Environmental Design“ and is one of the most popular green building certification programs used worldwide. It was developed by the U.S. Green Building Council (USGBC) in 1998 and has defined various standards for environmentally friendly, resource-saving and sustainable construction.

LEED v4 incorporates point structures to encourage the use of products/ materials that environmentally, economically, and socially support preferable life-cycle impacts. Point structures were developed to reward the selection of products from manufacturers who have verified improved environmental life-cycle impacts.

aquatherm's green pipe, blue pipe, lilac pipe, red pipe and black system products have attained Type III EPD status through independent verification by NSF International. They now can be utilized as a portion of the 20 permanent products engineers must have throughout their LEED-certified buildings. aquatherm's EPD also carries double the weight of the Industry-Wide (Generic) EPD in terms of LEED product value and four times the weight of a self-certified Product-Specific Declaration by a manufacturer.

aquatherm has continued its industry leadership position by becoming the first piping manufacturer to have an independently verified, Product-Specific Type III EPD and by supporting building owner to achieve LEED certification.

For further information please see our White Paper:

http://www.aquatherm-pipesystems.com/fileadmin/template/img/4.%20Service/PDF/aquatherm_LEEDv4_english.pdf

Edition No. 2 2017 | 10th April 2017

TECHNEWS

technews@aquatherm.de



aquatherm

state of the pipe

APPROVAL OF AQUATHERM GREEN PIPE SDR 9 MF RP IN AUSTRALIA

This year in January the aquatherm green pipe SDR9 MF RP was awarded with the "New SAI Global Certificate", the official approval for the field of pipe systems for hot and cold water applications, valid until 24th of January 2022. The complete certificate is obtainable from the e-mail address: technik@aquatherm.de



CERTIFICATE OF CONFORMITY

SAI Global hereby grants:
Aquatherm GmbH

Biggen 5, D-37439, Attendorn, Germany

WaterMark Certificate of Conformity – Level 1

Evaluated to:
AS 4176.2-2010 - Multilayer pipes for pressure applications - Multilayer piping systems for hot and cold water plumbing applications - Pipes (ISO 21003-2:2008, MOD)

"the WaterMark Licensee" the right to use or arrange the use of the WATERMARK as shown below only in respect of the goods described and detailed on the product schedule identified on www.saiglobal.com which are produced by the WaterMark Licensee or on behalf of the WaterMark Licensee* and which comply with the appropriate Standard referred to above as from time to time amended. The Licence is granted subject to the rules governing the use of the WATERMARK and the Terms and Conditions for certification. The WaterMark Licensee covenants to comply with all the Rules and Terms and Conditions

Certificate No: WMKA02437/1
Issued : 25 January 2017
Expires : 24 January 2022

Originally Certified : 25 January 2017
Current Certification : 25 January 2017


Nicole Grantham
General Manager SAI Global Certification Services.



WaterMark

* For details of manufacture, refer to the licensee
The WATERMARK is a registered certification trademark of Australian Building Codes Board
ABN 74 599 608 295 and is issued under licence by SAI Global Certification Services Pty Limited
(ACN 108 716 669) ("SAI Global") 680 George Street, Sydney NSW 2000, GPO Box 5420 Sydney
NSW 2001. This certificate remains the property of SAI Global and must be returned to SAI Global
upon its request. Refer to www.saiglobal.com for the list of product models.



SAI GLOBAL
INFORM. INSPIRE. IMPROVE.



APPROVAL OF AQUATHERM GREEN PIPE SDR 9 MF RP IN SPAIN

Also in Spain the aquatherm green pipe SDR 9 MF RP for the field of pipe systems for hot and cold water applications was approved. This is certified by the "Certificate of conformity Plastics" from 8th of February 2017, valid for five years. For obtaining the complete certificate, please send an e-mail to technik@aquatherm.de

AENOR	
Certificate of conformity Plastics	
001/006656	
AENOR certifies that the organization	
AQUATHERM GmbH	
registered office	BIGGEN, 5 - D-57439 ATTENDORN (Alemania)
supplies	Polypropylene random with modified cristallinity pipes (PP-RCT) and glass fiber (PP-RCT)/PP-RCT+GF (PP-RCT) for installation of hot and cold water inside the building structure
in compliance with	TECHNICAL SPECIFICATION TO RP 001.78
DESCRIPTION	TRADEMARK: AQUATHERM GREEN PIPE SDR9MF-RP FIBERGLASS CONTENT: 6% FIBERGLASS CONTENT OF THE MIDDLE LAYER: 15%
SERIE	4
DIAMETERS (mm)	32 - 40 - 50 - 63 - 75 - 90 - 110 - 125 - 160 - 200 - 250 - 315 - 355
APPLICATION CLASS / DESIGN PRESSURE (bar)	1/8 ; 2/8 ; 4/8 ; 5/6
OPACITY	YES
Production site	BIGGEN, 5 - D-57439 ATTENDORN (Alemania)
Certification scheme	In order to grant this Certificate, AENOR has tested the product and has verified the quality system implemented for its manufacture. AENOR performs these tasks periodically while the Certificate has not been cancelled, in accordance with Specific Rules RP 001.78.
First issued on	2017-02-08
Validity date	2022-02-08
	
Avelino BRITO General Manager	
Original Electrónico	
AENOR INTERNACIONAL S.A.U. Génova, 6. 28004 Madrid. España Tel. 91 432 60 00 - www.aenor.com	