

WAGAZINE

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GEORG FISCHER
PIPING SYSTEMS

In this issue:

The supporters of 25 years
MULTI/JOINT®

Sophisticated water system
in Kos Greece

Rod and lug harness belong
to the past in Amsterdam!

...and more



Introduction

The look of quality and the people behind it

As good as a product may be, if the organization behind it is not focused on quality it will get very difficult to market the product.

The people behind the product

In this Wagazine we introduce a number of people to you, who fulfil an important task within the production process of the MULTI/JOINT® 3000 Plus. The people that the customer rarely gets to meet. Yet they personally feel responsible for the quality of the product that you or your customers receive.

The people in the field

"It takes a believer to make a believer". In other words to be able to transfer the feeling of quality, you have to be convinced yourself. This creates a feeling of solidarity; "one team". For that reason I am proud of our colleagues at the distributors/stockholders and Georg Fischer companies who are very dedicated to nourishing the quality thinking. Because no matter if it is the soggy, subsiding ground in Amsterdam or the rocky ground of the isle of Kos (Greece) the solution is often found in our MULTI/JOINT® 3000 Plus

fittings. You can read more about this on pages 8 – 11.

Quality laid down in tender specs

Quality can be defined. For that reason we have laid down our quality solutions in tender specifications. On page 18 you can read how Georg Fischer Italy successfully benefitted from this.

I wish you enjoyable reading and I hope that the enthusiasm in the articles is catching!

Edwin Sonneveld



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Product news → hexagonal bolts

For many years Georg Fischer Waga used carriage bolts in the MULTI/JOINT® fittings. Recently we switched to hexagonal bolts though.

Why did we use carriage bolts in the past?

Because of the user-friendliness. The shank of the bolt is circular for most of its length, as usual, but the portion immediately beneath the head is formed into a square section. Since the clamp ring of the MULTI/JOINT® fitting has a square hole, this perfectly fits the carriage bolts, thus securing the carriage bolt, making it easier to tighten the nut.

Why did we switch to hexagonal bolts?

Because of even better user-friendliness. It may occur that securing the bolts with a torque wrench might be difficult. Since the manual of the MULTI/JOINT® clearly outlines the use of a torque wrench for the MULTI/JOINT®, we have come up with a solution. This solution can be found in reversing the bolt direction. To realize this, we restyled the clamp ring. This no longer has a square hole, but now has a round hole with small ridges all around. This does

not only secure the hexagonal bolt, but also the nut. In case of reversed installation, the nut is clamped between the ridges, while the bolt head is fastened. An additional advantage is that the bolt can be replaced by a standard hexagonal bolt when reusing the fitting.

Quality of the hexagonal bolts

The hexagonal bolts are obtainable in A2 (AISI 304) and A4 (AISI 316) quality. Both have a PTFE coating. The colours of the coating have not changed.

Bolt sets

Meanwhile all MULTI/JOINT® fittings are supplied with the new hexagonal bolts. Should you require new bolts for an "old" fitting, you can simply order the hexagonal bolts set.

For further information please contact our inside sales.



- ← The MULTI/JOINT® 3000 Plus with hexagonal bolts
- ↓ The new hexagonal bolts A2 (AISI 304)



The people → supporters of 25 years MULTI/JOINT®

In 2014 it has been a stunning 25 years since the first MULTI/JOINT® was produced. A revolutionary quality product that added a new dimension to the wide range principle.

Quality product

A technical high quality product like the MULTI/JOINT® requires high quality of raw materials in all parts. But high standards for the quality have to be secured. After all, we promise our customer a good product and “value for money”.

The organization behind our quality product

Our production and shipping employees are an important link in securing the quality of our products. They follow the parts from incoming goods thru the shipping of the ready product to our customers. Quality awareness has become their second nature and we are happy to introduce them to you:

The people ↓



← Name: Bert Dunk
Job: quality inspection incoming goods
With Georg Fischer Waga since 1997

“The goods can only be processed after the shipment has been approved. Rejects are always discussed with supply chain management. In the end this has to lead to higher quality and fewer rejects from a particular supplier.”

I see all parts that come in. It is part of my job to check at random if the incoming goods meet our requirements. Important for me are the dimensions, the quality of the casting itself and the coating. After checking, I give a number to the bodies and send them to the pressure test machine.

Over the course of the years I have gained a lot of experience and that counts for something at Georg Fischer Waga. I get involved in new developments and I check sample shipments of new suppliers. My opinion is respected, based on my experience and that feels good!

What I do is important. I know that as a company we can and we have to excel in quality. I feel particularly responsible for every shipment that gets processed. Because it is my job to take care that my colleagues on the work floor have good parts to assemble. So I feel I play an important role in the quality of our products.

With the way we set up the quality control on all incoming goods, the quality is guaranteed. Next to that I also count on my colleagues paying attention. Because in the end all of us together are responsible for the quality of the finished product!





← Name: Johan Foeke
Job: assembly & pressure test machine
With Georg Fischer Waga since 2003

“I feel personally responsible for the quality of the cast iron bodies that I test and approve”

I place the numbered bodies in the pressure test machine. I then test them by means of water, to check their leak tightness. If I find a defect, I report back to my colleagues of incoming goods. Based on the marked numbers, they can track back the incoming shipment of that particular body. Sometimes this means further testing of that specific batch.

Some 10 years ago the number of rejects was much higher. I also had to pay attention to other things, such as burrs and welding seams. Over the years the quality of our regular suppliers has improved so much that we get much fewer rejects now. This also means less work at the

pressure testing machine.

But also at the assembly table I can contribute to the quality of supplies. I personally handle every fitting and I pay attention to what I see and feel. I assemble and put the product in the pallet box. Before I put my name on the accompanying paper, I check the order. Because I do want that our customers get the right products.

In 2012 we won a company achievement prize, called the Top Performance Award. It feels good to know that I made a contribution to that. Working together, and sharing together, as one team. That is what I love about Georg Fischer!



← Name: Albert Dijkgraaf
Job: assembly and deputy foreman
With Georg Fischer Waga since: 2012

“You can only improve by learning from your mistakes. We do that by closely monitoring each other and by constructive criticism. Because trust is good, but checking is better.”

As soon as incoming goods has cleared a shipment the parts are placed in the racks.



The people → supporters of 25 years MULTI/JOINT®

It is my responsibility to provide the assembly tables with the right materials on time. This allows for a timely assembly of exactly the fitting the customer ordered.

My colleagues at the assembly tables rely on me placing the right parts. But fortunately my colleagues at the table always double check. If something can be improved we discuss this in the team. This way we minimize the risk of mistakes and constantly try to improve ourselves.

After we won the company achievement prize, the Top Performance Award, I wanted more! To me this is like a recognition of my work in this company and this team. I hope that in future I will be able to continue to actively contribute to and improve our quality of supplies!



← Name: Hans Boveree
Job: shipping employee
With Georg Fischer since: 2009

“I feel personally responsible for every pallet to arrive with the customer in good order”

When the products have been assembled they are packed in a pallet box at the assembly table. It is my job to collect the pallet boxes from the assembly tables and check the contents based on the packing list. I then make sure the products are secured in the box. For this purpose we recycle packing materials to fill up the boxes. Finally I close the boxes and I weigh the pallet. Pallets with loose boxes get wrapped in foil.

I am the final stage in the quality process. If my colleagues did their job, I can give a green light on the packing list and I will have nothing to discuss with my colleagues from the assembly. In those very few cases

where the product on the packing list and the product in the box do not match I go back to the colleague. We try to find out how this could happen and how we can prevent it in future. Because as a department, we try to get a 100% accuracy score.

I personally feel good when we achieve our goals. Because fewer complaints means more satisfied customers. The competition is fierce and you want to keep your customer satisfied. So you have to make sure that your products arrive in good order. It makes me feel good to know that I can make a substantial contribution.



When the end product is good, I know I contributed to that”



- ← Bert measures the thickness of the casting
- ↓ Johan assembles a series of MULTI/JOINT 3007 fittings
- ↙ Albert collects the approved parts for assembly
- ↓↓ Hans is on his way to collect the next pallet box for shipment



Kos Greece → sophisticated water system



On Kos they tried to increase the output of the drinking water production by reducing the number of leakages. Olympios Trading S.A., our Greek distributor / stockholder successfully accepted the challenge!

The island

Kos is a Greek island in the Aegean sea and is the third largest island of the Dodekanesos (Twelve Islands). The island that consists mostly of rocky ground is situated just off the Turkish coast near Bodrum, northwest of Rodos and southeast of Samos. The island is 40 km long and 8 km wide and has a surface of about 290 km². The capital of Kos is the city of Kos, located on the north-eastern side of the island. Tourism is one of the major sources of income for Kos.

Tourism

The infrastructure of the city of Kos might be sufficient for its own population (approx. 33.000 inhabitants). But from April thru October several hundreds of thousands of tourists flood the island, mainly concentrated in the

city of Kos. These tourists, who come to Kos for the sun, the sea and the entertainment, set higher standards to the drinking and sewage water systems. So if the water companies want to be up to the peak loads, continuously measuring the pressure inside the pipes on several locations, is of vital essence.

Water loss and wish list

The water loss on Kos is estimated to be 45 - 50%. To improve the availability of the drinking water and to tailor it to the peak loads in the summer months the output of the water production needs to be improved. High on the wish list for the city of Kos was the increase of the water production and at the same time the reduction of leakages. Moreover the total energy consumption needed to be reduced. Several suppliers received the wish list.

Olympios made a plan to tackle the problems and we are happy to report, they did so successfully!

Long life span; the solution

Several parts of the distribution network of Kos are more than 50 years old. However, renovating the network by replacing large sections of pipe is not an option (yet). Because of the inconvenience for traffic and tourism, they chose to start with reducing the water loss by reducing the pressure and thus increasing the life span of the pipes. By means of improved measuring and regulating efficiency is improved, which should lead to an ultimate 15 – 18% less water loss. In the long run this system will have to lead to a total water loss of 15 – 20%, which is very acceptable, considering the age of the network.

Measuring and regulating pressure and flow

The water supply on the island is regulated through water reservoirs and pump stations. With the Olympios solution the capacity of these reservoirs is constantly monitored. Besides that throughout the total network there are 200 locations where the pressure in the pipes is constantly

monitored and another 43 locations where both pressure and flow are measured. Subsequently there are at least 14 locations in the network where the pressure can be adjusted, enabling a more even pressure in the network, even at peak loads.

Reporting pressure loss by text message

With this system, sudden pressure loss in a pipe will immediately initiate an alarm with a text message. This quickly informs the responsible technicians about the location of the problems. The technicians can immediately analyse and if necessary act quickly to reduce the inconvenience for the users as much as possible.

Time pressure calls for Georg Fischer Waga products

To get all this up and running before the tourist season 2014, they needed products that can easily be installed and save time. This is the main reason to select the MULTI/JOINT® 3057 flange adaptor and the Georg Fischer Waga tools. When the first tourists set foot on Kos again early April, the city will be ready and waiting!



- ←← detailed section of the chamber
- ← overview of the chamber

Rod and lug harness → in Amsterdam they belong to the



There is a well known Dutch rhyme that says “Amsterdam, big city, built on poles”. And they need these poles because otherwise all buildings in Amsterdam would slowly but surely sink into the soggy ground.

Everything trembles

It is hard to imagine really how soggy and soft the ground is until a truck drives by and everything starts to tremble. Of course this also has an effect on the pipes in the ground. Obviously this highly influences the choice of materials for gas and water pipes.

Bury and forget

Once a pipe has been placed, stabilized and secured, you want to keep it that way. Bury and forget it, might be the thought that comes to mind. But gas and water pipes in

Amsterdam are not excluded from wear and tear any more than elsewhere and maintenance is inevitable.

Renovation district West

Take this pipe line in district West. The steel gas pipe DN400 was getting rather thin and needed maintenance. The network provider in Amsterdam decided to replace part of the pipe by PE100. Another part of the pipe would not be replaced but would be relined. They chose the technology that provides the inside of the pipe with a plastic sleeve. This sleeve is rolled out inside the pipe and

e past!

then glued to the pipe inner walls.

Restraint connection

After relining it, the steel pipe had to be connected to the PE100 pipe. Because of the risk of instable ground conditions this needed to be a restraint connection. Up until recently they used a rod and lug harness to restrain pipes where pullout might occur; "restraint and 100% safe". However, it is a very labour intensive way of working. The new MULTI/JOINT® 3000 Plus DN400 restraint version, could not have come at a better time for them.

Happy with the result

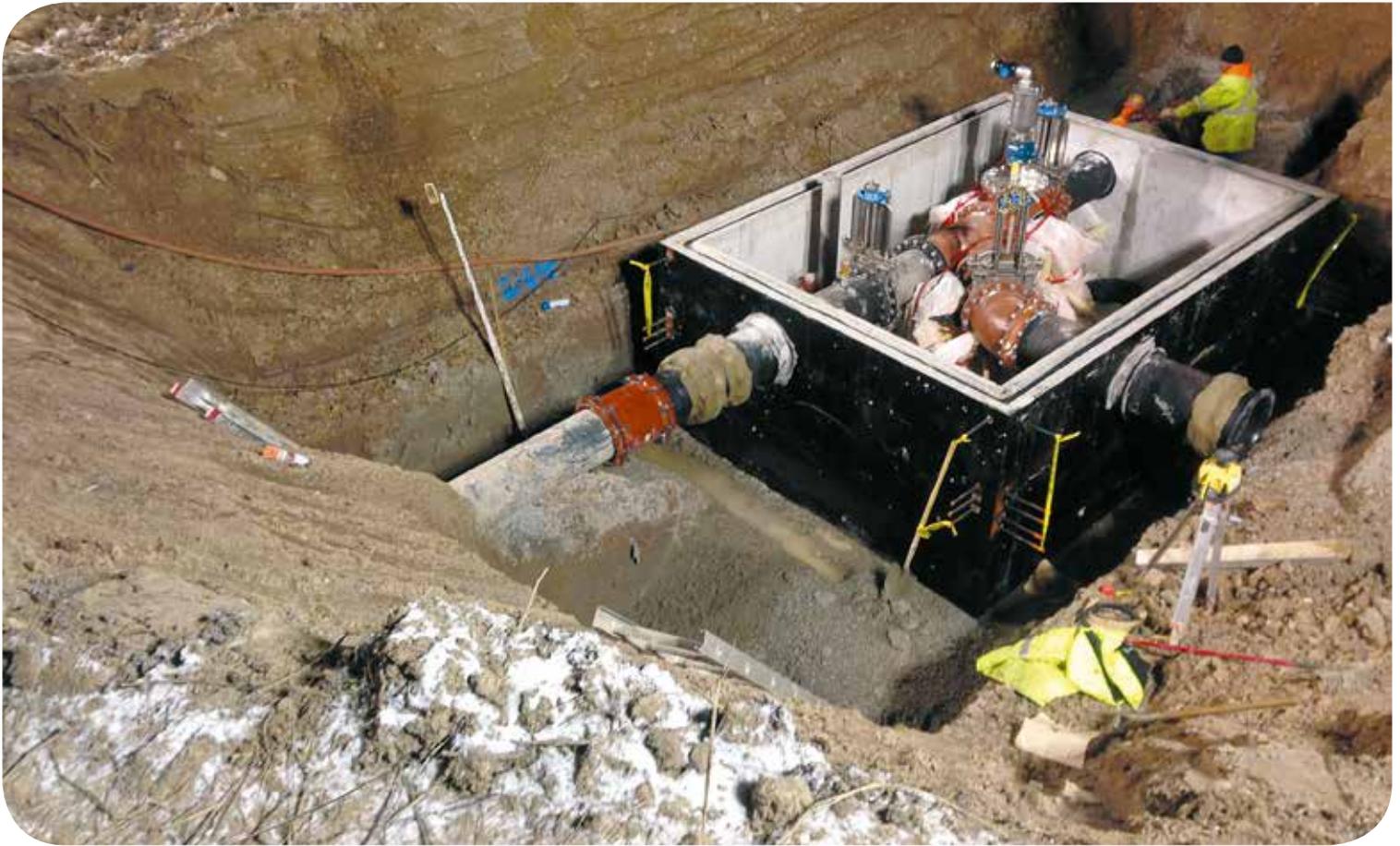
Both the project leader of the network provider and the project supervisor were extremely happy with the result. The lifting eye on the fitting makes it very easy to install and thanks to the Uni/fiks ring the fitting has a firm grip on the pipe. This makes complex rod and lug harness constructions obsolete for all pipes up to DN400. It also saves a lot of time and this first DN400 installation for Amsterdam will therefore certainly be continued.



- ←← The steel pipe is prepared for the MULTI/JOINT® 3057 DN400
- ← Easy lifting on site with the lifting eye
- Quick and safe allocation between the pipe ends
- ↙ No risks when lowering into the trench
- ↘ Rod and harness constructions are no longer needed



MULTI/JOINT® → successful scoop in Canada



Making a connection in the middle of the night at -20 °C is not easy. Especially if you have to connect HDPE SDR11 to HDPE SDR 32,5 you are in a world of trouble. But not if you use the MULTI/JOINT® 3000 Plus.

The situation at Fort Erie

The town of Fort Erie is located in the southwest of Canada, near Lake Erie. Fort Erie is a small border town with 30.000 inhabitants and a rich history, located some 30 km's south of the Niagara falls. Near one of the main roads around the town a 41 year old sewage pipe needed to be diverted for a water treatment plant. The old DN400 pipe needed a new valve group. The old age of the pipe however, was not the only problem. It was an HDPE SDR 32,5 pipe, which is very thin-walled. The customer needed to connect this HDPE SDR 32,5 pipe to an HDPE SDR 11 and demanded a guaranteed connection.

Advice from Mr. Glen Steele of GF Piping Systems

Inquiries were made on how to connect the prefab unit

and the old pipe. Welding is not an option when it comes to connecting HDPE SDR 32,5 to SDR 11. Mr. Glen Steele, sales manager at GF Canada, advised to use a "new" product, which can mechanically make a restraint connection between different pipe diameters; a MULTI/JOINT® 3000 Plus, DN400 (16"). Until then a relatively new product in Canada.

Executing the plan

In order to cause as little inconvenience as possible the project engineer came up with the following idea:

- fully prepare and build the valve group, which will then only have to be connected
- the valves will be installed in an HDPE SDR11 pipe
- the connection would be made during the night.

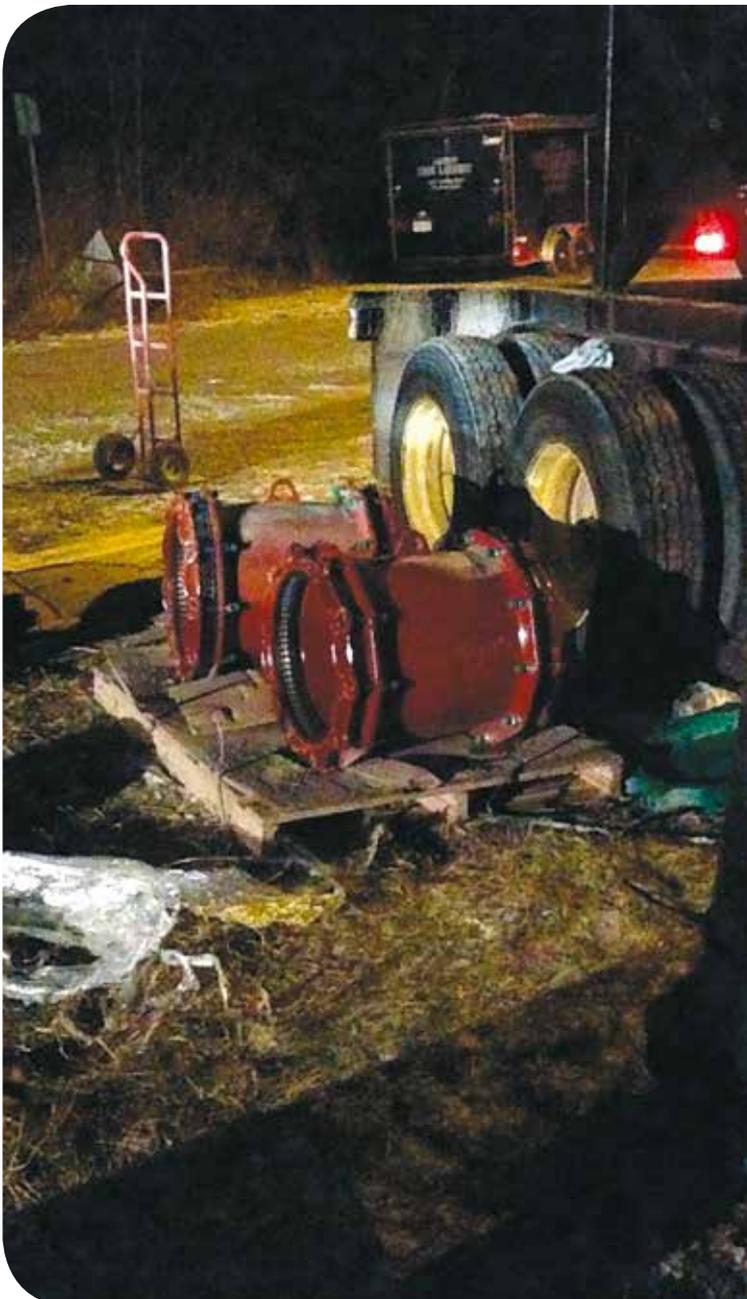
Simple installation even at extremely low temperatures

The installation was done in the middle of the night at -20°C feeling even colder by the wind. The installation went well nonetheless. After the old pipe was sawed off, an insert was installed on both sides. Then the MULTI/JOINT® 3000 Plus DN400 was lowered by its lifting eye and installed on the pipe. Finally the prefab unit was lowered into the trench with a crane and connected to the existing pipe with

the MULTI/JOINT® 3000 Plus couplings.

Successful scoop in Canada

Both the contractor and the customer were more than satisfied with this first experience with the MULTI/JOINT® 3000 Plus couplings. And next time they certainly will not hesitate to use Waga products in similar projects!



- ←← Quick and easy installation of the prefab unit, causing minimum discomfort for the connected house holds
- ← MULTI/JOINT® 3000 Plus DN400 couplings shortly before installation
- ↓ The prefab unit is lowered into the trench



Aquatech → the water cycle



From 5 thru 8 November the Rai in Amsterdam hosted the 24th edition of the Aquatech Fair.

Big success

With over 750 stands and an estimated 18.500 visitors the Fair was a big success. Of course Georg Fischer could not afford to miss this. So at an early stage we reserved the space for a large, eye-catching stand in the most important hall. At this stand the water cycle was depicted by means of a waterfall.

The MULTI/JOINT®

For the MULTI/JOINT® 3000 Plus we had a magnificent opportunity to focus on the angularity. For a number of visitors this was a very appealing and convincing product

presentation. Of course we also had to display our latest addition to the range, the MULTI/JOINT® 3157 DN150x100.

Catching up

We got to meet many of you on our stand, allowing us a moment to catch up again. And of course it was good to relax at the Waga Event, where we also had the time for small talk.

For your agenda 2015

The next Aquatech Amsterdam will take place from 3 thru 6 November 2015. Don't forget!

One team → tour through Italy wins us the tender



Sometimes a good product needs a little more power of persuasion to prove its quality. In Italy it was no different and quality had to compete against price...

In 2012 Georg Fischer Waga product manager Mr. Vladimir Perisic toured through Italy with the sales men of Georg Fischer S.p.A. Potential customers were informed about the extended product range of Georg Fischer Waga. To enforce their arguments they brought a pressure test unit with them to show the working of the Georg Fischer Waga products on the spot.

The proof is in the pressure test

The technical manager of one of the water companies attended one of the demonstrations in Florence. This particular manager is responsible for the water supply in 3 cities; Massa Carrara, Lucca and Pistoia. The pressure test and therewith the proven quality of the MULTI/JOINT® impressed him so much, that he decided to improve product demands and specifications for the next tender right then and there.

Accurately but generally formulated

It is not allowed to mention specific product names in a public tender. This means it is important to describe the

technical specifications in such a way that the customer will receive the preferred fitting. Georg Fischer S.p.A. played an important role in accurately formulating the technical specifications.

One team is our strength

The combined action of local market knowledge and presence, in combination with product specialisation from the manufacturer can lead to an increase in the sense of quality. After all, this is how the interested technical manager of the water company was convinced of the quality of our products. Winning the tender based on technical specification. That is icing on the cake!

Tender specs available

So if ever your customer is enthusiastic about the MULTI/JOINT® 3000 Plus and he would really like to apply it, but the tender specs leave too much room for alternatives, please contact your area sales manager or local contact at Georg Fischer. Maybe teamwork can prove its added value to you too!

WAGAZINE

Contributors to this issue:

Edwin Sonneveld
Rick van Kesteren
Rudy Woudenberg
Vladimir Perisic
Bert Dunk
Johan Foeke
Albert Dijkgraaf
Hans Boveree
Nikolas Petroulias (Olympios)
Robert Hopman (Alliander)
Glen Steele (GF Canada)
Leon Waller (GF Netherlands)

Published by Georg Fischer Waga N.V.
P.O. Box 290
8160 AG EPE, The Netherlands
T +31 (0)578 678 378
F +31 (0)578 620 848
waga.ps@georgfischer.com

Chief Editor
Eva Houtjes
T +31 (0)578 678 215
eva.houtjes@georgfischer.com

Layout and Design
Roelina Jut



www.waga.nl
www.multijoint.nl

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