



INTERNATIONAL NEWS

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Smooth progress in London's Olympic Docklands

London. A smooth PE 100 water pipe has recently been installed around the perimeter of the new London Olympic stadium. With a diameter of 160 mm, it will provide chilled water at 8 bar – enough pressure say the pipe experts to fully sustain all the facilities for 80,000 spectators and 17,200 athletes and officials.

Behind the two tier stands, ten sanitary pods and a spacious VIP area are now being supplied with plastic pipes and WC cisterns. And when English weather takes a turn for the predictable worst and releases its abundant showers, plastic pipes will channel the run-off with the speed and effectiveness for which they were specially designed.

This news service can report that construction work on the EUR 545 million stadium is progressing well ahead of schedule. Centrepiece of the 2012 Summer Olympics, the stadium now has a lower tier for permanent seating of 25,000 spectators and a demountable lightweight steel and concrete upper tier to host a further 55,000. They will all be accommodated upon plastic seats.

A multitude of plastic pipe applications is now being installed. These applications include electricity ducts as well as communication and camera cables that link control rooms with the TV platforms in the bowl dugout. And while the pace of construction work leaps ahead, an extensive network of small diameter blue PE pressure pipes is providing building teams with instant access to water wherever required on this enormous site.

Correct Choice for Industry seminar in Hanover

Bonn. KRV, On 27 October 2009, the German Plastic Pipe Association is organizing a seminar in Hanover on the subject of plastic pipes in industry. Entitled "Plastic Pipes: the correct choice for Industry", this technical session in the German language will bring together experts in the field of chemical engineering and industrial plant design.

Plastic pipes are increasingly used for industrial applications. Dr. Elmar Löckenhoff, Director of the KRV explains: "Plastic pipe production in Germany grew by 6.7 percent in 2007. One particular growth sector was the use of plastic

pipes for a whole range of industrial activity from food processing and brewing through to the chemical production of non-organic and also difficult organic compounds. Our seminar will share a wealth of experience and expertise from this fascinating and technical area.”

“The economic benefits of these pipes are considerable and they are increasingly replacing conventional materials. And the larger the plant, the more important the aspects of energy conservation and economy become. We shall therefore be looking at the technical and legal requirements that determine their use.”

During the various sessions, a specialized team from the KRV will provide practical hands-on experience. Also covered are the project aspects of planning, consultation, production, installation and cost benefits. For registration and further information go to:

<http://www.krv.de/content/view/650/93/>

Hope springs eternal – green shoots for plastic pipes

Geneva. Green shoots for plastic pipes are springing more abundantly than water leaks if recent figures released by the European Environmental Agency (EEA) are anything to go by. Plastic pipes are used extensively for the rehabilitation and renovation of antiquated pipelines and the Swiss based EEA reports that leakages are on the decline in most European countries.

Most significant are the figures for Germany. Since 1995, water losses within the water distribution system have decreased from nine percent to just under seven. This contrasts dramatically with say Ireland that has lost as much as 33% of its urban water supply.

What the European water league tables are unable to portray are the efforts to secure an even greater non-porous future. According to Peter Rebohle, Vice President of the Federal Association for Energy and European Water (BDEW): “Over EUR 25 billion have been invested into the modernisation of German water services. In 2007 alone, EUR 1.2 billion flowed into the enhancement of the distribution network.”

Top of the league are the Netherlands whose leak free performance is not even charted. The Dutch are followed by the Danish (6.7%) with excellent marks going to their capital city (just under 4.0% for Copenhagen).

Efforts in Ireland to plug the leaks have also been instrumental. Irish Water authorities started to invest in new plastic pipe networks in the early sixties. These networks were and still are ideal for serving the needs of urbanisation and more importantly public health and sanitation. However, old non-plastic networks were largely overlooked and today, hundred year-old pipes are cracking under the strain. In Dublin alone, around 280 km (174 miles) of old cast iron water pipes are being replaced by plastic pipes in a EUR 118 million scheme run by Dublin City Council.

Bottom of the league are Croatia (39.3%) and Bulgaria (50%). However, EU funding is prompting many Central Eastern States to rapidly upgrade their water delivery systems.

PE pipes: energy costs an important factor says engineer

Oslo. Einar Grann-Meyer, a senior civil engineer from Norway has emphasized the need to include energy costs when choosing the eventual design of PE pipe for transporting fluids, water, gas and oil.

He says that in many cases where energy is required for pumping, the equivalent loss of energy must be converted into a kind of "today's cost", to be considered in the total cost picture. Examples are commonly seawater intakes, pumping mains for sea or fresh water, and hydroelectric power plants. In these types of projects, HDPE pipes, both solid and structured wall, are very valuable and applicable within a pressure range of -1.0 to +25 bar.

He argues in favor of finding the optimized piping system within a certain area. This can be accomplished through calculating the optimized flow velocity (V_{opt}) as a function of the flow, Q , in m^3/s , the unit price of the pipe and its installation, the unit price of electricity (one kWh) and the pipe's SDR figure.

Grann-Meyer points out that the value of V_{opt} will have a margin of say $\pm 20\%$ (see below). And when the formula is analysed with respect to the unit cost of energy, the following can be concluded:

$U_c^{1 \text{ kWh}} = 100\%$	$V_{opt.} = 100\%$	$d_1 = 100\%$
$= 200\%$	$= 82\%$	$= 110\%$
$= 300\%$	$= 73\%$	$= 117\%$

The inference is that with increasing energy costs, the diameter of the HDPE pipe must be increased to keep the flow velocity at an optimized level.

Whereas the formula has been developed for HDPE solid wall pipes, it is applicable to all conventional plastic pipe materials. Educated at the Norwegian Institute of Technology, Einar Grann-Meyer has dealt with many different types of pipe material.

"In facing competition from other pipe materials, engineers should utilize the advantages of PE pipes as much as possible. The pipe structure should be optimized in order to be competitive in price and the hydraulic transport should be optimized with respect to its operational costs. The knowledge is available so why not use it?" Grann-Meyer states.

Source: *Pipe World*

More than 100 years lifetime expectancy for sewer pipes

Den Haag. Dutch research confirms that the expected lifetime of in service PVC sewer pipes is in excess of 100 years. Pipe experts anticipate that this development will have a major influence on plastics conversion worldwide.

Studies carried out on old non-pressure pipes by the TNO research company follow on from similar studies undertaken four years ago on PVC pressure water pipes. This latest work was commissioned by the Dutch plastic pipes association (BureauLeiding). "We are delighted with the TNO research findings. They were intensive and conclusive!" says Roger Loop, Director of BureauLeiding.

"Very old service pipes were assessed by visual inspection, microscopic inspection, geometrical analysis and deformation, surface roughness and inner surface degradation. The Netherlands was one of the first countries in Europe to use PVC pipes for sewer applications. Their performance has withstood the test of time."

BureauLeiding will shortly publish a Report on the work undertaken by TNO. "Companies and municipal authorities who manage sewer systems will now be able to develop more realistic and effective replacement schemes. Although buried and out of sight, their pipeline assets have just become all the more valuable!" concludes Loop.