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PPN- The Leading Source of Industry News on Polymer Pipes and Plastic Pipe Testing

Global News on Plastic Piping and Fittings in Real-Time

NEWSMAKERS: * Advanced Piping * Aliaxis * Borealis * ExcelPlas * Failure Analysis * PEX Pipe * Plastic Pipe Failures * Polybutylene Pipe Failures * Strain Hardening Modulus * UPONOR * Valencia Pipe Company * WasteWise

INDUSTRY NEWS

Aliaxis Completes Acquisition of Valencia Pipe Company's Manufacturing Division Further Expanding its Presence in the United States
https://www.gulfagriculture.com/aliaxis-completes-the-acquisition-of-valencia-pipe-companys-manufacturing-division-further-expanding-its-presence-in-the-united-states/

New Study Reveals Plastic Pipework Failures as One of the Biggest Causes of Insurance Claims
https://www.hvpmag.co.uk/Study-reveals-plastic-pipework-as-one-of-the-biggest-causes-of-insurance-claims/16733

Law Firm Targeting PEX Pipe Failures
https://www.frplegal.com/pex-piping/

Researchers Develop Non-intrusive Sensor for Plastic Pipeline Monitoring
https://techxplore.com/news/2023-03-non-intrusive-sensor-pipeline.html

Copper Pipe Producers Say Plastic Leaks
https://www.theconstructionindex.co.uk/news/view/copper-pipe-producers-blame-leaks-on-plastic

Finnish Climate Fund Provide 4.2 Mill EURO Loan to Wastewise for Recycling of PEX Pipes
The unique technology developed by Wastewise is particularly effective for dealing with hard-to-recycle plastics. The pyrolysis oil produced in the process can replace crude oil in plastic and chemical production, effectively reducing the reliance on virgin materials. In a groundbreaking demonstration, Wastewise utilized their pyrolysis technology to produce cross-linked polyethylene pipes (PEX) from chemically recycled PEX waste, in collaboration with partners Neste (pyrolysis oil refiner), Borealis (recycled plastic manufacturer), and Uponor (PEX pipe manufacturer).
https://www.helsinkitimes.fi/world-int/23833-finnish-climate-fund-provides-4-2-million-loan-to-wastewise-for-hard-to-recycle-plastics-reuse.html

Digging Deep to Deliver an Australian-First HDPE Solution
https://www.advancedpiping.com.au/blog/digging-deep-australian-first-solution/

Uponor North America Named Top Workplace in USA
https://www.aspe.org/pipeline/uponor-north-america-named-top-workplace-in-minnesota-and-usa/#:~:text=%E2%80%9CBeing%20named%20a%20top%20workplace,says%20Uponor%20North%20America%20President

NEW RESEARCH ON PIPE FAILURE

Lifetime Prediction Method of Pressured Gas Polyethylene Pipes by Strain-Hardening Modulus and Tensile Test
https://www.mdpi.com/2076-3417/13/13/7965/pdf?version=1688719124

Experimental Investigations of Distributed Fibre Optic Sensors for HDPE Water Pipeline Monitoring
https://www.researchgate.net/publication/372199216_Experimental_Investigations_of_Distributed_Fiber_Optic_Sensors_for_Water_Pipeline_Monitoring

NEW DEVELOPMENTS

Ultrasonic Defect Detection of HDPE Pipe Materials Using FIR filtering and Block-wise Singular Value Decomposition
https://www.sciencedirect.com/science/article/abs/pii/S0041624X23001646

Influence of Gas Mixtures of Hydrogen With Methane on the Operational and Thermophysical Characteristics of Polyethylene Pipes of Operating Gas Distribution Networks
https://www.etars-journal.org/index.php/journal/article/view/349

Advances in Structural Analysis and Process Monitoring of Thermoplastic Composite Pipes
https://www.sciencedirect.com/science/article/pii/S2405844023051265

Review of Analytical Methods for Stress and Deformation Analysis of Buried HDPE Water Pipes Considering Pipe-Soil Interaction
https://www.researchgate.net/publication/372153315_Review_of_analytical_methods_for_stress_and_deformation_
analysis_of_buried_water_pipes_considering_pipe-soil_interaction

CONDITION ASSESSMENT

ExcelPlas Pipe Condition Assessment (PCA)
Owners and operators of plants have been using thermoplastics for many years, transporting water, gas and chemicals along their process. However, for operational and maintenance

purposes, the asset integrity of the piping system is required. This could be for a number of reason, such as piping system maintenance, ability to maintain current service conditions. EP offers its 30 plus years of plastic piping application experience to assess the fitness for service of used piping. Our specialists inspect the samples in our state-of-the-art accredited materials testing laboratory for piping components, to give our clients the necessary information to make an informed decision and next steps during a project's operational, maintenance or design phases resolve threats to client assets. ExcelPlas offers the following testing to determine the condition of plastic pipes:
Technical Data:

- Visual Inspection
- Dimensional check
- Oxidation Induction Time (OIT)
- Melt Flow Rate (MFR)
- Fourier-transform Infrared Spectroscopy (FTIR)
- Hydrostatic Test
- Differential Scanning Calorimetry test (DSC)
- Vicat test
- Microscopic analysis
- Report with assessment of the integrity of the piping material

PLASTIC PIPE CONSULTANTS

Plastic Pipe Consulting Experts and Services
If you need a team of pipe plastic experts, then ExcelPlas Consulting is the obvious choice - our size is our strength in a market dominated by single consultants.
We provide services on everything from material selection, product testing, processing to failure analysis
https://www.excelplas.com/contact-us/

PIPE FAILURE ANALYSIS

ExcelPlas Investigating Poly Pipe Failures
Through failure analysis & forensic chemistry, we help clients improve product performance, increase profits, & resolve product liability claims with plastic pipes and fittings.
We are dedicated to unmatched excellence in failure analysis, investigative chemistry, material

testing, and expert witnessing for plastics, polymers and composites.
With over 25 years of investigative experience, the staff at ExcelPlas are uniquely positioned to help clients resolve the most challenging performance and processing issues related to materials and finished pipes and fittings.
https://www.excelplas.com/contact-us/

MORE POLY PIPE NEWS

PPN the Digital News Platform for Communicating to the Global Plastic Pipe Industry
Send Us Your News!!! PPN Publishes weekly.
https://www.youtube.com/watch?v=eUKxWbOZY10

ExcelPlas Labs Pipe Failure Investigations
ExcelPlas Labs have created a new benchmark in failure analysis of HDPE, PP-R, PB and PEX pipes in addition to PVC & CPVC pipes as well as composite GRP and GRE pipes. When a plastic pipeline fails to perform as intended, our team can determine the root cause of failure (e.g. oxidative failure, chemical failure, creep failure, over-stress failure, fatigue failure, design failure, etc). ExcelPlas are experienced with all plastic piping failure modes and mechanisms including Slow Crack Growth (SCG) Rapid Crack Propagation (RCP), Environmental Stress Crack Resistance (ESCR), Oxidative Stress Cracking (OSC), cyclic fatigue, manufacturing defects, and polymer material problems.
http://www.excelplas.com/

ExcelPlas Strain Hardening Test (SHT) for HDPE Pipes
The SHT in accordance with ISO 18488 is a relatively new, but excellent way to obtain a rapid indication of the Stress Crack Growth (SCG) resistance of your piping material. This tensile test performed at 80°C has become in just a few years the new standard for Batch Release Testing (BRT). And not without reason. The test requires only a very small amount of material, the results are very reliable with a very low inter-laboratory scatter and the results are available within a few days, regardless of the PE grade. The SHT is usually performed on resin material but it can also be performed on samples taken directly from pipes or sheets. As accredited lab, EXCELPLAS is happy to discuss the possibilities with you, whether it is for BRT, benchmarking, quality control of your (high performing) PE grade or for polymer compliance/ validation.
http://www.excelplas.com/

Australia's Plastic Pipe Testing Laboratory

ExcelPlas Laboratories provides a comprehensive plastic pipe joint testing service and is equipped with a state-of-the-art laboratory to test a range of polymer materials including polyethylene and polypropylene. ExcelPlas can carry out testing on plastic tube and pipe ranging in wall thickness from 3mm to 1200mm. ExcelPlas Laboratories provide a comprehensive service to Industrial & commercial companies, environmental consultants, Government bodies, and local Authority customers throughout Australia and Asia. All testing is carried and out in accordance with ASTM, ISO & WIS methods and is fully accredited to ISO 17025 by NATA.

- Butt Fusion Weld Testing
- Weld Testing
- Testing of Electro-fusion Welds
- Tear on saddle joints
- Crush De-cohesion of Electro-fusion welds
- Polymer & Plastics Identification
- Chemical & Thermal Testing
- Site Audits

http://www.excelplas.com/

ExcelPlas - the Australian Pipes & Fittings Testing Laboratory

- Accredited to ISO 17025 by the National Association of Testing Authorities (NATA) Australia, and is Australia’s largest laboratory dedicated for the testing of plastic pipes and fittings to various Standards which include Australian, European and International Standards.
- The staff employed at the laboratory have a combined experience of more than 85 years within the plastics industry specifically with manufacturing, quality control and the research and development of plastic piping systems including HDPE, PEX, PP-R, PVC, U-PVC, M-PVC, O-PVC, ABS, GRP, GRE and PB.
- Services provided include conformance testing, compliance testing, batch release testing, root cause analysis for field failures and non-destructive testing of samples.

http://www.excelplas.com/

ExcelPlas Lab Specialising in HDPE Pipe Condition Monitoring, Failure Analysis and Testing

In the event of a HDPE buttweld or electrofusion weld failing during initial testing, or in service, we can conduct investigations to assist in identifying the root cause of the failure.
This service also extends to the premature failure of the pipe or fitting itself.
http://www.excelplas.com/plastic-pipes

ExcelPlas Pipe Testing is a Leader in the Field of Polyethylene (PE) and High-Density Polyethylene (HDPE) Testing

ExcelPlas is accredited with the National Association of Testing Authorities (NATA) for butt weld tests, bend and tensile tests, peel decohesion tests on electro fusion sockets and failure mode determination
http://www.polypipetesting.com.au/butt-fusion-welds/

New UHMWPE Pipe for Tailing Offers Greater Than 4X the Abrasion Resistance of PE100 (Australia wide)

http://slurrypipes.com.au/

ExcelPlas Poly Pipe Weld Inspection Lists Top 7 Causes of Weld Failure:

- Lack of scraping
- Inaccurate scraping
- Contamination from dirt, water, oil or clays
- Lack of Paralell-ness of fusion faces
- Misalignment of surfaces
- Time, temperature and pressure deviations
- Not adhering to cool times

We have extensive experience in inspection of poly pipe welds for assuring welded joint quality. Direct Poly Pipe Inspection ensures that operators are following the proven welding procedure; this reduces the occurrences of operational errors which lead to defects such as inclusions, lack of fusion (LoF), porosity and misalignment.
More information, contact john@excelplas.com

Get Your HDPE Pipe Products or Services Noticed – Advertise in Poly Pipe News (PPN) Australia
https://www.polypipenews.com.au/advertise/

This Newsletter is brought to you by Excelplas Labs, Australia's Largest group of Poly Pipe Testing Labs.

Pipe Poly News (PPN) is now Australia's most current and comprehensive source of news on Polyethylene pipes and Poly Pipe Welding;

Poly Pipe News is now sent to over 4500 Poly Pipe Industry Members every week.

Any news requests should be sent to john@excelplas.com
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