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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: * Abu Dhabi * ADS * Advanced Drainage Systems * Borouge * Borsafe™ * Chevron Phillips * Doppler * Dura-Line * ExcelPlas * Failure Analysis * GRP Pipes * Hydrogen Transport * McElroy * Microplastics * OMEGA * PPN * Union Pipes Industry (UPI)

INDUSTRY NEWS

Borouge Lands Key Polyolefin Pipe Resin Supply Contract in UAE
https://www.zawya.com/en/business/energy/borouge-lands-key-polyolefins-supply-contracts-in-uae-djqpguah

Chevron Phillips Announce Corporate Sponsorship of Plastic Pipes Conference PPXXI (Set. 25-27, 2023)
https://www.plasticpipe.org/common/Uploaded%20files/1-PPI/News%20Releases/Chevron%20Phillips%20Chemical%20Corporate%20Sponsor%20of%20PPXXI.pdf

US HDPE Pipe Plant Suffers Major Storm Damage
https://www.13wmaz.com/article/weather/dura-line-plant-in-sandersville-has-roof-ripped-off-by-early-morning-storm-in-georgia/93-639b1c2f-c67b-497c-9865-50d5363541e5

Advanced Drainage Systems (ADS) Eyes Florida Site for New PE Pipe Plant
ADS to ship in recycled HDPE pellets and produce pipe at the Lake Wells, Florida site.
https://cloud.excelplas.com/s/cmh8hlQuKlhX48S

Game Changer: High-Accuracy, Non-Invasive, Clamp-on Temperature Sensor for Plastic Pipe Applications
https://finance.yahoo.com/news/omega-announces-expansion-groundbreaking-non-140000669.html

McElroy the World Leader in Butt Fusion Equipment for Plastic Pipes Announces New Broken Arrow Campus
https://www.mining-technology.com/contractors/cables/mcelroy/pressreleases/broken-arrow-campus/

Novel Electrochemical Recycling of Waste PVC Pipes
https://news.umich.edu/u-m-team-recycles-previously-unrecyclable-plastic/

Union Pipes Industry (UPI) General Manager Mohamed Hageb said its collaboration with Borouge had played an important role in enabling strategic and national projects such as Borouge 4
https://www.zawya.com/en/business/energy/borouge-lands-key-polyolefins-supply-contracts-in-uae-djqpguah

Phased Array Ultrasonic Testing (PAUT) Inspection of HDPE Pipe Fittings for Flaw Detection
https://www.ndt.net/search/docs.php3?id=27650

Global Plastic Pipe Failure Experts
The plastic pipe consultants at ExcelPlas Consulting have the expertise and the diversity of experience on a broad range of topics in the plastic pipe sector.
Our experts have a background in an extensive array of plastic materials from PEX and PERT to commodity HDPE and PVC.

https://www.excelplas.com/contact-us/

FAILURE OF POLYMER PIPES

Failure Analysis on Premature Fracture of Polyethylene Pipe for Floor Heating System [PDF]
https://cloud.excelplas.com/s/Li722S6NfN1UuDj

Mechanical Behaviour and Failure Mechanism of HDPE Corrugated Pipeline Subjected to Blasting Seismic Wave
https://www.sciencedirect.com/science/article/pii/S1110016822008365

RELEASE OF MICROPLASTICS

Microplastics Release from Plastic Pipes and Tanks Due to Polymer Oxidation
https://cloud.excelplas.com/s/aMjN665119kQDtj

H_2 TRANSPORT IN PE PIPES

Investigations Reveal the Hydrogen Permeation Mechanism of Polyethylene Pipeline Materials
Hydrogen Gas Permeation and leakage are more obvious for hydrogen delivery using PE pipelines than those using metal pipelines.
https://www.sciencedirect.com/science/article/abs/pii/S0167732222023121

NEW RESEARCH

Lifetime Predictions for Borsafe Bimodal HDPE Pipe Resin under Creep: Experiments

and Modelling
https://www.mdpi.com/2073-4360/15/2/334/pdf?version=1673252888

Study on Effect of Multimodal Polymerization on Thermal, Sagging Resistance, and Mechanical Properties of HDPE Pipe Resin
https://link.springer.com/article/10.1007/s10965-023-03445-8

Assessment of Commercially Available Polyethylene Recyclates by a Novel Environmental Stress Cracking Method
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9823600/

Use of HDPE Pipe for Geothermal Energy Pile Foundation, Its Construction, Design and Thermal Testing
https://irispublishers.com/gjes/pdf/GJES.MS.ID.000747.pdf

Anti-scaling Performance of PP-R and ABS Pipe with Aged Landfill Leachate
https://iwaponline.com/wst/article/doi/10.2166/wst.2023.002/92964

Degradation and its Characterization Methods of Polyethylene Gas Pipes After Natural and Accelerated Aging [PDF]
https://cloud.excelplas.com/s/cieIjPLMF7lcNLn

New Method for the Mechanical Properties Evaluation of Aged Polyethylene Gas Pipelines with Portable Hardness Testers
https://www.mdpi.com/2411-5134/7/4/125/pdf

GRP PIPES

Experimental Study of the Effect of Temperature on the Circumferential Bending Performance of GFRP Pipes

https://www.mdpi.com/2073-4360/15/2/392

Experimental Investigation on the Structural Behaviour of Novel Non-metallic Pultruded Circular Tubular GFRP T-Joints Under Axial Compression
https://www.sciencedirect.com/science/article/abs/pii/S0263823122010643?dgcid=rss_sd_all

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
To subscribe, visit https://www.polypipenews.com.au/subscribe/

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