July 2021 Vol. 3

Author : PPN

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

Global News on Plastic Piping and Fittings

NEWSMAKERS: * ADS * AGRU * Borouge * ExcelPlas * ImerTech * IPLEX * PIPA * PE100 * PE-RT * PEX * PPI * PPN * Reliance Worldwide * RWC * SAPPMA * Uponor * Wavin

INDUSTRY NEWS

Pipemaker ADS Seeking More Recyclables as It Turns Discarded Plastics into Pipes
https://cloud.excelplas.com/s/3mVCNqTFmE0r42D#pdfviewer

Uponor Expanding PEX Pipe Manufacturing Capacity in Two Facilities
https://www.supplyht.com/articles/104146-uponor-expanding-manufacturing-capacity-in-two-facilities

AGRU Introduces Novel Plastic Composite Pipe Which Prevents Diffusion
https://www.worldpipelines.com/equipment-and-safety/15072021/novel-plastic-composite-pipe-prevents-diffusion/

Reliance Worldwide (ASX:RWC) Set to Acquire LCL Assets for $37 Million

https://www.finnewsnetwork.com.au/archives/finance_news_network349197.html

ImerTech Patent New HDPE Pipe Composition with Functional Fillers
https://www.freepatentsonline.com/11067204.pdf

Six Frequently Encountered Problems in PE Pipes And Their Solutions
https://www.madisonpipe.com/blog/6-problems-in-pe-pipes-and-their-solutions/

Wavin Takes Over Dura-Line Manufacturing Facility in Hyderabad
https://www.thehindubusinessline.com/companies/wavin-takes-over-dura-line-manufacturing-facility-in-hyderabad/article35186531.ece

PIPA POP007 - Metal Backing Flanges for use with Polyethylene (PE) Pipe Flange Adaptors
https://pipa.com.au/wp-content/uploads/2021/06/PIPA-POP007-Metal-Backing-Flanges-for-Use-with-Polyethylene-PE-Pipe-Flange-Adaptors-Issue-2.6.pdf

HDPE Pipe Bursting Webinar – 27th July 2021
http://www.pepipe.org/july-27-2021

The First Eco & Hybrid Pipeline for Dredging in the World – With Wireless Remote Control
https://www.dredgingtoday.com/2021/07/21/the-first-eco-hybrid-pipeline-for-dredging-in-the-world-with-wireless-remote-control/

New 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

PIPE FAILURE

Eliminating The Risks Of Plastic Piping Degradation From Oxidation In Residential Water Systems
https://www.flowguardgold.com/en-us/blog/eliminating-the-risks-of-piping-degradation-from-orp-in-residential-water-systems

Cautionary Warning: Some PEX Piping is Prone to Development of Cracks Due to Early Oxidation
ExcelPlas Labs have developed a three-step testing program to detect early failure of PEX pipe and their expected service lifetime.
The 3 Step Testing is based on:

- Oxidative Induction Time (OIT) testing to determine the residual level of oxidative stability (i.e. thermal stability)
- Quantitative Additive Analysis (QAA) to determine the type and level of protective antioxidants and stabilizer present.
- Scanning Microscopy on inner surface after bend back to image developing microcracks

Samples of PEX pipe just 10 cm long are needed for the analysis. 7 Day turnaround on test reports.
https://www.excelplas.com/wp-content/uploads/2020/01/Excelplas-A4-Brochure-4pp-Plastic-Pipe-Testing-NTs.pdf

REINFORCED PIPES

Stress Distribution and Fracture Toughness of Underground Reinforced Plastic Pipe Composite
https://www.mdpi.com/2073-4360/13/13/2194/htm

Optimisation of Waisted Tensile Test Specimen Geometry and Determination of Tensile Energy Welding Factors for Different Polyethylene Pipe Wall Thicknesses
https://bura.brunel.ac.uk/handle/2438/22945

Characterizing Mechanical Behaviour of Polyethylene Pipe Using Finite Element Method
https://era.library.ualberta.ca/items/f6929648-58c5-4cc4-810c-3ad35ccac758

NEW RESEARCH

Mechanical and Processing Enhancement of a Recycled HDPE/PPR-Based Double-Wall Corrugated Pipe via a POE-g-MAH/CaCO3/HDPE Polymer Composite
https://pubs.acs.org/doi/10.1021/acsomega.1c02354

OTHER NEWS

Update on SAPPMA Activities
George Diliyannis, Technical https://www.engineeringnews.co.za/topic/service Leader at Safripol (Pty) Ltd, is responsible for heading up the HDPE committee, supported by Lesley Geyser, QC Manager and Production Planner at The Rare Group. Current areas of focus for this working group include addressing issues relating to the mixing and contamination of polyethylene, updating SAPPMA's MFR document and addressing queries that relate to specific standards, i.e. SANS 21138 and ISO 4427:2019.
PVC committee
Renier Snyman, Technical Manager at Sun Ace SA, chairs the PVC committee with the support of Tanya van Rensburg, Production Co-Ordinator of Eurocelt. Issues that are currently being addressed by this working group include the SANS 967 (strap-on saddles), SANS 966-2 (HSIT alternatives), SANS 1601 (sockets and seals) and queries
regarding https://www.engineeringnews.co.za/topic/pipe-company lengths.
https://www.engineeringnews.co.za/article/sappma-forms-three-new-specialist-standing-committee-with-specific-areas-of-focus-2021-07-15/rep_id:4136

MORE PIPE NEWS

New 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/

Australian 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 3 mm to 80 mm. ExcelPlas Laboratories provide a comprehensive service to Industrial & commercial companies, environmental consultants, Government bodies and local Authority customers throughout Australia & NZ. All testing is carried and out in accordance with ISO & ASTM methods and is fully accredited to ISO 17025 by NATA.
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 20mm 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/