

November 2020 Vol. 3

Author : PPN

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

Keep Up-to-Date During Corona Isolation with PPN

NEWSMAKERS: * ADS * Chevron Phillips * ExcelPlas * LyondellBasell * McElroy * Polypipe Middle East * PPN * Vinidex * WL Plastics

INDUSTRY NEWS

McElroy Pipe Fusion Industry Leader Passes Away Due to Coronavirus

<http://press.mcelroy.com/mcelroy-mourns-death-of-jim-craig/>

Polypipe Middle East Launches New HDPE Drainage Solution

http://www.tradearabia.com/news/CONS_374885.html

Chevron Phillips Publishes List of Global Licensees that can Make Marlex Pipe Resins and their Capacities

<https://www.cpchem.com/what-we-do/solutions/polyethylene/licensees>

LyondellBasell grants 450 KTA Hostalen ACP License for Pipe Resins to Hengyi Industries SDN BHD

<https://www.webwire.com/ViewPressRel.asp?ald=266503>

Study on Buried HDPE Buried Pipes to an Explosion Due to Sabotage or Terrorism

<https://content.sciendo.com/downloadpdf/book/9788395720413/10.2478/9788395720413-023.pdf>

Chinese Pipe Producer Shares Surge

Zhejiang Weixing New Building Materials Co., Ltd. engages in the manufacture and sale of plastic pipes. Its products include polypropylene random (PP-R) pipes and fittings, composite pipes, polybutylene (PB), polyethylene of raised temperature resistance (PE-RT) pipe system, polybutylene (PB) pipe system, high-density polyethylene (HDPE) pipes, corrugated pipes, and drainage pipes.

<http://cloud.excelplas.com/s/Yu1OrEvEL2NjdGB?>

FAILURE PREVENTION

New PodCast on HDPE Pipe Failure Mechanisms

Peter Dyke (Alliance for PE Pipe) and Dusty Langston (VP Engineering, WL Plastics) Discuss the Material Science Behind the Resin and Slow Crack Growth of HDPE Pipe

<http://podcast.pepipe.org/1194764/6229279-join-peter-dyke-and-wl-plastic-s-dusty-langston-vp-engineering-as-the-two-men-discuss-hdpe-markets-the-material-science-behind-the-resin-historic-pe-failure-mechanisms-and-other-interesting-pe-topics?play=true>

Study on the Environmental Stress Cracking Resistance of High Density Polyethylene (HDPE)

https://www.researchgate.net/profile/Fares_Alsewailam/publication/344469661-On-the-Environmental-Stress-Cracking-Resistance-of-High-Density-Polyethylene-HDPE

Failure Analysis and Design of Grouted Fibre-Composite Repair System for Corroded Steel Pipes

<https://www.sciencedirect.com/science/article/pii/S135063072031503X>

Pipe Failure Probed as Cause of TPC Explosion

<https://www.industrialfireworld.com/581567/pipe-rupture-probed-as-cause-of-tpc-explosion>

Understanding Slow Crack Growth (SCG) of Plastic Pipes

These fractures are characterized by the stable growth of a crack with little deformation in the plastic material. SCG testing involves accelerating the growth mechanism and can be done through elevated temperature, concentrated stress, constrained geometry, surfactants or some combination of these factors. These test methods are applicable to polyethylene (HDPE), polypropylene (PP-R) and polybutylene (PB) piping.

ExcelPlas Labs test plastic pipe to verify they meet the required durability, performance and service criteria.

<https://www.excelplas.com/wp-content/uploads/2020/01/Excelplas-A4-Brochure-4pp-Plastic-Pipe-Testing-NTs.pdf>

Failure Risks with Polybutylene Plumbing Pipes

<https://www.squareoneinsurance.com/resource-centres/getting-to-know-your-home/poly-b-plumbing>

Comparing Failure Rates of HDPE and PVC Pipes

PVC has a failure rating of 1 in 48,650 incidents, where HDPE is 1 in 10,000,000.

<https://blog.unitedpolysystems.com/blog/hdpe-pipe-vs-pvc-pipe>

NEW MATERIALS

Patent Granted for HDPE with Multimodal MWD for Pressure Pipes

<https://www.freepatentsonline.com/EP2930205B2.pdf>

TRAINING

Vinidex Supported Course on Electrofusion Welding of Polyethylene Pipelines - 18 November 2020 - includes Certification as a CEF

This Partnership combines Vinidex's industry knowledge and experience with Irrigation

Australia's ability to deliver high quality nationally accredited qualifications
<https://www.irrigationaustralia.com.au/events/event/electrofusion-weld-polyethylene-pipelines-18-november-2020-includes-certification-as-a-cef>

UPCOMING WEBINARS

New Cyclic Pressure Design Method for PVC Pipe (2 December 2020)

<https://www.uni-bell.org/Events/Webinar-Enrollment?WebinarId=35>

Utilizing Online Design Calculators for PVC Pipe (9 December 2020)

<https://www.uni-bell.org/Events/Educational-Webinars>

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 butt weld 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/>

2020 Copyright ExcelPlas Labs