

# August 2021 Vol. 6

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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*

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NEWSMAKERS: \* Advanced Drainage Systems (ADS) \* Auspex \* ASTM \* Class Action \* Douglas Keller \* ExcelPlas \* Failure Analysis \* GF Piping \* Iplex \* Life Cycle Assessment (LCA) \* NIBCO \* Notch Pipe Test \* PE100 \* PEX \* PPI \* PPN \* PP-R \* PVC-A \* Rautitan® \* Rehau \* Reliance \* RWC \* Sharkbite™ \* Uponor \* Vinidex

### INDUSTRY NEWS

**Plastics Pipe Institute, Inc. (PPI) Announces that Douglas Keller (Technical Lead – Americas for Equistar Chemical’s Pipe Resins) is Now the Chair of its Board of Directors**  
<https://waterfm.com/ppi-appoints-new-board-of-directors-chair/>

**Canadian Pension Fund Pumps US\$350 Million into US Polyethylene Pipe Manufacturer (Breaking News)**  
<https://www.cppinvestments.com/public-media/headlines/2021/cpp-investments-to-invest-in-advanced-drainage-systems>

**Pipe Extruder Advanced Drainage Systems to Benefit from \$110 Billion in New Infrastructure Spending**  
<https://www.portman.senate.gov/newsroom/press-releases/pandora-senator-portman-visits->

[advanced-drainage-systems-discusses](#)

### **Politics, Plastic Pipes and Infrastructure**

<https://www.plasticsnews.com/blog/promoting-pipes-and-infrastructure>

### **Why Uponor PEX Pipes are Failing (Class Action)**

Because the outside surface of Uponor PEX is depleted of antioxidants after the flame treatment, the outside surface prematurely becomes brittle and develops microcracks when the tubing is expanded during installation

<https://www.classaction.org/news/discontinued-red-blue-uponor-pex-piping-plagued-by-cracking-defect-class-action-alleges>

### **NIBCO Defective PEX Pipe \$7.65M Class Action Settlement**

Claims based on qualifying leaks occurring after the settlement effective date and before the end of the Claim Period, May 16, 2025

<https://topclassactions.com/lawsuit-settlements/consumer-products/household/1027632-alabama-and-texas-nibco-defective-products-7-65m-class-action-settlement/>

### **Reliance RWC Uploads AUSPEX PEX Piping for Fire Manual (Aug 2021) [PDF]**

[https://www.auspex.com.au/wp-content/uploads/2021/08/Auspex\\_Fire\\_Manual\\_0821\\_final.pdf](https://www.auspex.com.au/wp-content/uploads/2021/08/Auspex_Fire_Manual_0821_final.pdf)

PIPE FAILURE

### **An Effective Package of Antioxidants for Avoiding Premature Failure in Polypropylene Random Copolymer (PP-R) Plastic Pipes under Hydrostatic Pressure and High Temperature**

<https://www.mdpi.com/2073-4360/13/16/2825/pdf>

### **Plastic Pipe Testing Services Worldwide**

ExcelPlas plastic pipes testing services help determine strength and ageing properties of piping materials and systems, serving plastic pipe materials manufacturers, pipe extruders, certification bodies and utility companies worldwide, helping water and gas supplies run smoothly.

Schedule a meeting with one of our experts to learn more about how we can help you to develop better products, save time and money, and minimize potential risk to your business. Specialists in failure analysis of HDPE, PEX, PP-R, PB, PVC and GRP Piping.

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

## TECHNICAL PAPERS

**Life Cycle Assessment (LCA) of PVC-A Polymer Alloy Pipes for Impacts Reduction in the Construction Sector [PDF]**

<https://www.aidic.it/icheap15/programma/444marson.pdf>

**Guidance For Field Hydrostatic Testing Of High Density Polyethylene Pressure Pipelines: Owner's considerations, Planning, Procedures, and Checklists**

[https://plasticpipe.org/Shared\\_Content/Publications/General-Litature/Technical-Notes/TN-46-Main.aspx](https://plasticpipe.org/Shared_Content/Publications/General-Litature/Technical-Notes/TN-46-Main.aspx)

**ASTM Issue New Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter**

<https://www.astm.org/Standards/D3035.htm>

**Accelerated Notch Test for Pressure Pipe ISO 13479 – Laboratory Round Robin (Declassified) [PDF]**

A Round Robin Test (RRT) on the accelerated notch pipe test (aNPT) was organised by PE100+ among 6 laboratories.

<https://cloud.excelplas.com/s/CUDBejgerBzT3k1#pdfviewer>

**Benefits of RAUTITAN PEX-a vs Traditional Copper in Large Bore Installations**

<https://www.myrehau.com/blog/20>

## GRP PIPES

## **Optimizing Winding Angles of Reinforced Thermoplastic Pipes Based on Progressive Failure Criterion**

<https://link.springer.com/article/10.1007/s11802-021-4663-x>

## COURSES

### **Vinidex Sponsored Course on Electrofusion Weld Polyethylene Pipelines - 11 October 2021 Perth WA - includes EF Certification**

<https://www.irrigationaustralia.com.au/events/event/electrofusion-weld-polyethylene-pipelines-11-october-2021-perth-wa-includes-ef-certification>

## JOBS

### **GF Piping Systems Seek Production Manager with Lean Manufacturing Experience**

<https://live.solique.ch/georgfischer/job/details/2719392/>

### **Iplex Pipelines Seeking National Logistics Manager**

<https://www.careerone.com.au/jobview/national-logistics-manager/2ff517e3-f55e-4f4a-b128-42b9fc5e6c45>

## PLASTIC PIPE TESTING

### **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/>

## **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>

MORE POLY 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>

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## **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](mailto: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](mailto:john@excelplas.com)

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



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