

## July 2020 Vol. 4

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

*Keep Up-to-Date During Corona Isolation with PPN*

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NEWSMAKERS: \* AGRU \* Dixon \* ExcelPlas \* GF Piping \* Iplex \* PE100 \* PPI \* SABIC \* SeaDrain™ \* Sino Iron \* WSAA

#### **World's Largest Fully Pressure-Resistant HDPE pipe (OD of 3260 mm) Installed at KALI Project in Kuwait (NEW)**

AGRU produced the pipe in the XXL Pipe Production Facility and towed it across the Atlantic and Indian Ocean to Kuwait. AGRU manufactured extra long pipe strings with maximum lengths of 523 m and maximum OD of 3260 mm for the seawater intake and outfall line of the process water circuit in its XXL Pipe Production Facility in the United States.

<https://www.agru.at/en/news/latest-news/article/agru-award-2020/>

#### **GF Piping Systems Launches 'Encrustation Free' SeaDrain™ White Polypropylene Piping System (NEW)**

<https://marineindustrynews.co.uk/gf-piping-systems-launches-encrustation-free-seadrain-white-piping-system/>

#### **WSAA Approves Iplex Pipelines - Millennium® High Stress Crack Resistant Polyethylene Pipe**

<https://www.wsaa.asn.au/appraisal/iplex-pipelines-millennium%C2%AE-high-stress-crack-resistant-polyethylene-pipe>

**SABIC Patents Novel Multilayer Water Pipe for Mining Operations (NEW)**

<https://patents.google.com/patent/US20200200298A1/en>

**Korean Company Patents New Pipe Resin and Pipe with Superior Strain Hardening Characteristics to PE100 (NEW)**

<https://patents.google.com/patent/US20200190238A1/en>

**Electrofusion Fittings Solution Facilitates The Upgrade Of A Wastewater Treatment Plant (NEW)**

<https://agruamerica.com/our-projects/electrofusion-fittings-solution/>

**PPI Issue Warning Over Installing Plastic Pipe Near Recessed Lighting Due to Heat Degradation Concerns (NEW)**

<https://plasticpipe.org/pdf/ppi-bcd-tn56-news-release-july-9-2020.pdf>

**PPI Releases Free HDPE Pipe for Horizontal Directional Drilling Design Calculator (NEW)**

<https://plasticpipe.org/pdf/ppi-pcd-design-calculator-july-7-2020.pdf>

**New Patent for Restrained Gasket for PVC Pipes**

<https://patents.google.com/patent/US20200200311A1/en>

**PE100 and PE100RC Polyethylene Resins Slow Crack Growth Testing based on Strain Hardening Modulus and Crystallinity (NEW)**

<https://ieeexplore.ieee.org/abstract/document/9122227>

**Experimental Approach for the Fatigue Assessment of PE100 Pipe Materials (NEW)**

<https://www.sciencedirect.com/science/article/pii/S2452321620304479>

**Addressing Environmental Stress Cracking Using FNCT Enhanced by Optical Fracture**

### **Surface Analysis (NEW)**

<https://opus4.kobv.de/opus4-bam/frontdoor/index/index/docId/50939>

### **Relaxation Behaviour of Polyethylene Welded Joints**

<https://1library.net/document/yee033ry-relaxation-behavior-of-polyethylene-welded-joints.html>

### **Sino Iron Seeking Polywelders to join the team at Citic Pacific Mining Sino Cape Preston Site (NEW)**

- \* Electrofusion / Butt Welding Polyethylene Plastic Pipeline Certificate required
- \* Previous experience constructing piping at a Tailings Storage Facility required
- \* Experience with welding T900, Dixon 630 & 355 are essential

<https://www.seek.com.au/job/50242668?type=standout>

### **Pipeline Rehabilitation – Structural PE, Semi Structural PE and Spray Liners (Video Tutorial)**

<https://www.youtube.com/watch?v=o4OPC0pjZ9Q>

### **Low Velocity Impact and Internal Pressure Behaviors of Unaged E-Glass and S-Glass/Epoxy Composite Elbow Pipe Joints**

<https://ascelibrary.org/doi/10.1061/%28ASCE%29PS.1949-1204.0000493>

### **PPN Now Reaching Over 10,000 Readers in the Plastic Pipe Industry Worldwide (Free Subscriptions)**

<https://www.polypipenews.com.au/>

### **Standards Australia Unwarranted Push to Ban All Plastic Pipes Below PN16 From Hot Water Applications in Australia and New Zealand (Breaking News)**

In the new draft of AS3500.4, recently released for Public Comment, a new clause 2.5.2 (h) has been quietly added that requires ALL hot water piping to have a minimum PN16 rating. The current AS3500 Standard already dictates that piping must meet an operating pressure of 1.0MPa at 60 deg C. Long standing PN12.5 rated polymer pipes meet this requirement and have performed without fail for more than a decade both in Australia and New Zealand. PPN and many of the PEX pipe manufacturers see absolutely no reason to include this new clause.

<https://consultation.abcb.gov.au/engagement/b8393f82/>

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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 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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