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Your Global Source of Poly Pipe News and Technology

Preventing Electrofusion Welding Pipe Failures (Special Feature)
https://plumbingconnection.com.au/electrofusion-making-sure-you-get-the-basics-right/

PEX Pipe Design Manual for Water, Oil, Gas & Industrial Applications (2018)
https://plasticpipe.org/pdf/pex-design-manual.pdf

Polyethylene Pipe Systems for Wastewater - Presentation Modules (Free Download)
https://www.mill-pro.com.hk/media/2288/pe-workshop-topics-picker-v01.pdf

PIPA Publishes New Industry Guidelines for PVC Pressure Pipes Design For Dynamic Stresses (AUGUST 2018)
https://www.pipa.com.au/sites/default/files/document/attachment/pop101_0.pdf

New Conference – Plastic Pipes Inside Buildings 2018 (16-18th October 2018)
https://www.plastic-pipes.events/

Correlating Polyethylene Microstructure to Stress Cracking; Correlations to Post Yield Tensile Tests
https://www.sciencedirect.com/science/article/pii/S0032386118307274

Damage to Plastic Pipelines and its Consequences
https://cloud.excelplas.com/index.php/s/VYV404N0MvWVLPe

South Australian Government Issue Advice on Hydrostatic Pressure Testing Procedure for Polyolefin Pipes (MDPE, HDPE)
Polyolefin pipes can change dimensions during testing to 1700 kPa due to their elastic nature. Expansion of the pipe may mean it's not possible to secure a fixed pressure gauge reading without using a unique testing procedure. As the pipe expands, the pressure will reduce and not meet the requirements of a firm 1700 kPa reading. The Office of the Technical Regulator (OTR) will only accept a steady pressure gauge reading of 1700 kPa.
https://www.sa.gov.au/__data/assets/pdf_file/0006/258765/Fire-Hydrant-and-Fire-Hose-Reel-Services.pdf

NEW Tariff Concession Order Granted for PIPE, POLYETHYLENE COMPOSITE, cross helically-wound steel wire skeleton, pressure rating NOT less than 2.5 MPa and NOT greater than 7.5 MPa,
https://www.homeaffairs.gov.au/Domesticmanufacturersandproducers/Documents/tc-18-31.pdf

GEM Industrial Installs HDPE Piping for Hanson Wollert Leachate Collection
http://www.gemindustrial.com.au/?project=hanson-wollert-leachate-collection

ACP Australian Custom Pipes Pty Ltd - Polyethylene (PE100) Pressure Pipe Approved by WSAA
https://www.wsaa.asn.au/appraisal/acp-australian-custom-pipes-pty-ltd-polyethylene-pe-pressure-pipe

Hydroflow (AUS) Pty Ltd - Plastitalia Electrofusion Fittings Approved by WSAA
https://www.wsaa.asn.au/appraisal/hydroflow-distributors-aus-pty-ltd-plastitalia-electrofusion-and-spigot

Viadux SUPREME® PE Metric Compression, Fuse PE electrofusion and PE Pushfit Fittings Approved by WSAA
https://www.wsaa.asn.au/appraisal/viadux-water-network-solutions-supreme%C2%AE-pe-metric-compression-fuse-pe-electrofusion-and-pe

ASA Plastics Pty Ltd - BLUELINE Polyethylene (PE100) Pressure Pipe Approved by WSAA
https://www.wsaa.asn.au/appraisal/asa-plastics-pty-ltd-blueline-polyethylene-pe-pressure-pipe

Qenos exhibiting its PE100 HSCR Resin for Piping at APGA 2018 Annual Convention (8-11th September, 2018)
https://alkadyne.com.au/qenos-exhibiting-at-apga-2018-annual-convention/

Plastic Pipe Failure Analysis Laboratory (ExcelPlas Australia)

Failures of plastic piping systems and components often result in costly downtime and can cause damage to facilities, the environment, and people. Increasingly, modern industry and regulatory demands place a tighter operating envelope around nearly every product or process. These increased constraints push materials and processes to the limit. The rapid pace of innovation as well as a backlog of fixed infrastructure maintenance and upgrades is a perfect recipe for sudden catastrophic failure. At such critical times, skillful testing, investigations and reconstructions are needed to uncover the circumstances leading to failure.

The ExcelPlas team can provide:
* Failure Analysis
* Fractography & Microstructural Evaluations
* Oxidative Stress Cracking due to Chlorine
* Butt and Electrofusion Welding & Joining Process Evaluation
* Polymer Materials Selection
* Incident Investigation
* Fitness for Service Evaluation
* Risk Based Inspection

ExcelPlas has a wide variety of lab assets, including tensile testing, pressure testing, microscopy, strain monitoring, polymer science, etching and polishing equipment, Scanning

Electron Microscope/Energy Dispersive X-Ray Spectroscopy, and DSC, TGA thermal analysis. Our decades of industry experience, the use of sophisticated failure analysis techniques, and specialized laboratory equipment combine to identify the active damage mechanism(s) and the root cause(s) of failure. This translates into long-term cost saving benefits as well as improved safety and reliability. We work to your unique requirements. Whether you need a simple failure analysis or a comprehensive root cause investigation that involves intensive laboratory and field work, our diverse team of experts has you covered.
http://www.excelplas.com/

ExcelPlas has extensive experience investigating plastic pipe system failures, and can provide a root cause diagnosis.
The transportation of liquids and gases from one point to another has become an integral part of our lives. Plastic pipe systems (extruded pipes and injection moulded fittings) are used in many service installations including potable water, water heating, sprinklers or compressed air and in underground applications such as sewerage and land drainage. The application will dictate the type of pipe system specified - for example systems based on UPVC, CPVC, ABS, etc.
With most pipe system installations consisting of kilometres of pipe and potentially thousands of fittings, failures over time are an unfortunate but common occurrence.
Our experience shows these typically originate from four key sources:

- Faults in the original pipe or joint components (manufacturing)
- Faulty installation / engineering (workmanship)
- Contamination effects, e.g. solvent cement effects (environment)
- System operating outside of design criteria (end-user operation)

The consequences of such failure can vary dramatically dependent on the final application and location - from small scale failures in the home to potentially catastrophic industrial installation failures with significant associated damage and financial loss.
Supported by our extensive microscopy, analytical, material and product testing laboratories ExcelPlas are able to fully characterise polymer composition and mechanical performance in order to assess the cause of product / material failure. This can involve recommendations for remedial or corrective actions to minimise the risk of further failure. Our capabilities and experience investigating plastic pipe system failures provides valuable support to the service installation sector.
http://www.excelplas.com/

ExcelPlas - the Australian Pipes & Fittings Testing Laboratory

- The Australian Pipes & Fittings Testing Laboratory is 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

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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
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