

POLYWELD TECH

PROSPECTUS



polyweldtech.com.au





Polyweld Tech Academy is your premier destination for mastering the art and science of polyethylene welding, more commonly known as poly welding.

Our academy offers a comprehensive curriculum carefully crafted to empower participants with practical expertise in this specialised field. Our courses delve into essential techniques such as Butt Welding, Electrofusion Welding, and Extrusion Techniques, all tailored specifically for polyethylene materials.

With convenient locations in Perth, Brisbane, Adelaide, and Melbourne, as well as the flexibility to provide training at various locations across Australia, we ensure accessibility and thorough training experiences for our students. Additionally, we offer Refresher/Biennial Welder Assessments to help professionals stay updated with the latest advancements in poly welding practices.

Our NATA accredited testing facilities are dedicated to quality assurance tests relevant to poly welding, ensuring the highest standards are upheld in every aspect of this specialised discipline.

Embark on a rewarding journey in the world of poly welding with Polyweld Tech Academy, where we combine technical expertise, cutting-edge technology, and hands-on training to equip you for success in this vital and dynamic industry. Your future in poly welding starts here.

VISION

EMPOWER PEOPLE THROUGH PROFESSIONAL SKILLED TRAINING



CORE VALUES

RO

- T TEAMWORK
- R RELIABLE
- UNIQUE
- s SKILLED
- T TRANSFORMATION



Polyweld Tech Academy is an Australianowned and operated company that specialises in enhancing polyethylene techniques to ensure the highest quality standards.

Our core competency revolves around offering certified poly welding courses and comprehensive training in Butt Welding, Electrofusion Welding, and Extrusion Welding.

COURSES

Butt welding

Electrofusion welding

Extrusion welding



PMBWELD301E

JOIN POLYETHYLENE PLASTIC PIPELINES USING BUTT WELDING



What is Butt welding?

Butt Fusion stands as a prevalent technique for connecting HDPE Pipe. Butt welding is a welding technique used to join two pieces of plastic material together along a common edge in a linear fashion. The term "butt" in butt welding refers to the ends of the two pieces being butted together. This method is commonly employed in the welding of HDPE pipes.

In the context of HDPE pipe welding, for example, the process involves heating the two pipe ends using a welding machine, often to a molten or semi-molten state. Once heated, the two ends are pressed together with force, and the material cools and solidifies, creating a strong and durable weld. The key feature of butt welding is that it produces a continuous and smooth joint along the entire length of the welded seam.

Butt welding is widely used in various industries where a continuous and robust joint is essential, such as in the construction of pipelines, fabrication of structural components, and manufacturing of pressure vessels. The process requires careful control of temperature, pressure, and alignment to ensure a high-quality and reliable weld. This process involves the utilisation of a Butt-Welding machine to securely grip, align, and heat the two pipe ends. Subsequently, these heated ends are hydraulically pressed together and held in position until the fusion is complete, seamlessly welding the two ends into a cohesive joint.

Our Butt welding training comprehensively covers the following key aspects:

- Identifying Material Compatibility: Understand and recognise the compatibility of materials essential for effective welding.
- Calculating Pipe Welding Parameters: Acquire the skills to calculate and determine the precise welding parameters necessary for optimal results.
- Maintaining and Adjusting Welding Equipment:

Learn the intricacies of equipment upkeep and the ability to make necessary adjustments for seamless welding operations.

Performing Butt Welding Operations:

Master the techniques and procedures involved in executing butt welding operations with precision and efficiency.

• Visual Inspection of Completed Joints:

Develop the capability to visually inspect and evaluate completed joints, ensuring adherence to quality standards.

Upon successful completion of the training, attendees receive a comprehensive set of credentials, including:

Statement of Attainment:

An official document certifying the successful completion of the training program.

Welding Stamp with Unique Welder Number:

A personalised stamp equipped with a unique welder number for official recognition and traceability.

Digital Welder's Card:

A digital card providing convenient access to your welding credentials, ensuring quick and easy verification of your qualifications. Elevate your professional profile with our thorough and recognised certification process.



PMBWELD302E

JOIN POLYETHYLENE PLASTIC PIPELINES USING ELECTROFUSION WELDING

What is electrofusion welding?

Electrofusion is a highly effective method for joining HDPE and other plastic pipes, utilising specially designed fittings with integrated electric heating elements to seamlessly weld joints.

One of the primary advantages of electrofusion welding is its operator-friendly nature, eliminating the need for complex or hazardous equipment. A trained Electrofusion Welder is guided through the process, with welding parameters tailored to the type and size of the fitting. The quality of electrofusion fittings varies, and precision in positioning the energising coils ensures uniform melting, resulting in a strong joint with minimised welding and cooling times.

Operators must be qualified according to local and national regulations. In Australia, an Electrofusion Course, typically completed in 8 hours, is essential. Training emphasises the accurate fusion of electrofusion fittings, covering both manual and automatic fittings and focusing on critical factors such as preparation, timing, temperature, pressure, and cooldown.

To maintain qualification, operators can subject their fittings to testing, involving the examination of weld integrity through the careful dissection of the fitting. This thorough process ensures ongoing competency and adherence to quality standards in electrofusion welding.

Our Electrofusion training comprehensively covers the following key aspects:

 Identifying Compatibility of Commercial Electrofusion Control Systems:

Gain proficiency in recognising and understanding the compatibility of various commercial electrofusion control systems.

Maintaining and Adjusting Electrofusion Control Unit Equipment:

Learn the intricacies of equipment upkeep and the ability to make precise adjustments to electrofusion control units for optimal performance.

Performing Electrofusion Welding Operations:

Acquire hands-on experience and mastery of the techniques involved in executing electrofusion welding operations with precision.

 Visually Inspecting Completed Electrofusion Joints: Develop the skill to visually inspect and evaluate finished

electrofusion joints, ensuring adherence to quality standards and specifications.



Upon successful completion of the training, attendees receive a comprehensive set of credentials, including:

Statement of Attainment:

An official document certifying the successful completion of the training program.

Digital Welder's Card:

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PMBWELD309E

WELD PLASTIC USING EXTRUSION TECHNIQUES



What is Extrusion welding?

Extrusion welding is a plastic welding technique used to join thermoplastic materials, such as high-density polyethylene (HDPE), polypropylene (PP), or polyvinyl chloride (PVC). This method involves melting and extruding a plastic welding rod directly into the joint, creating a strong and continuous bond. Extrusion welding is commonly used in various applications, including the construction of plastic tanks, pipes, sheets, and other fabricated plastic structures. It provides a reliable and efficient method for creating robust connections in thermoplastic materials, and it is particularly useful for large-scale projects where the continuous welding of long seams is required.

Our Extrusion training comprehensively covers the following key aspects:

Material Suitability Assessment:

Thoroughly evaluate the compatibility of materials for welding, ensuring optimal adhesion and performance.

Plastics Welding Conditions Analysis:

Assess and analyse the specific conditions required for effective welding of plastics, considering factors that influence the welding process.

Equipment Maintenance and Calibration:

Maintain and calibrate welding equipment meticulously, guaranteeing its reliability and precision for seamless extrusion welding.

• Welding Execution:

Skilfully perform the extrusion welding process, utilising precise techniques to melt and fuse the welding rod, creating a robust and continuous joint.

• Quality Assessment of Completed Joints:

Conduct a meticulous evaluation of the finished joints, ensuring they meet stringent quality standards and specifications.

Upon successful completion of the training, attendees receive a comprehensive set of credentials, including:

Statement of Attainment:

An official document certifying the successful completion of the training program.

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Digital Welder's Card:

A digital card providing convenient access to your welding credentials, ensuring quick and easy verification of your qualifications. Elevate your professional profile with our thorough and recognised certification process.

BOOK NOW >





Polyweld Tech is a NATA accredited laboratory offering:

- Specialising in tensile testing for butt welds and peel decohesion for electrofusion welds, coupled with an extensive range of QA/QC tests.
- Our advanced technology, combined with the expertise of our seasoned technicians, ensures precise and swift results.

With our QA/QC quality inspections and NATA accredited testing facilities, we empower your company to uphold superior joint techniques. Operating nationwide, we bring our services to your doorstep, offering training, inspection, and poly testing at your organisation's convenience. Elevate your polyethylene practices with Polyweld Tech Academy, where excellence meets expertise.







NATA Accredited Laboratory Tests include:

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    Tensile Testing of Butt-Welded Joints to ISO 13953:
Evaluation of the tensile strength and failure mode in Polyethylene (PE) pipes and fittings, adhering to
ISO 13953 standards.
    Bend Testing of Butt-Welded Joints to BS EN 12814.1 - 2000:
Comprehensive testing of welded joints, employing bend tests in accordance with
BS EN 12814.1 - 2000 standards.
    Electrofusion Joint Peel Decohesion Testing to ISO 13954:
Peel decohesion tests for electrofusion assemblies, conducted following ISO 13954 standards.
    Hydrostatic Strength Testing to ISO 1167:
Hydrostatic pressure and resistance to internal pressure (hydrostatic strength) to ISO 1167-1 - ISO1167-4.
    Hydrostatic Pressure Testing to ISO 17025 (AS/NZS 2033):
Evaluation of Mechanical Performance of pressure plant, pipelines & Equipment, section 7.2.1 - 7.2.3.
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Our In-House Laboratory Tests encompass a diverse range:

Electrofusion Joint Crush Decohesion Testing to ISO 13955:

Rigorous testing for crushing decohesion of polyethylene (PE) electrofusion assemblies, in line with ISO 13955 standards.

Shear and Peel Strength Tests on Geomembrane HDPE Liners to ASTM D6392:

Determination of the integrity of non-reinforced geomembrane seams produced using thermo-fusion, following ASTM D6392 standards.

Oxidation Induction Time (OIT) Testing to ISO 11357-6:

Evaluation of oxidation induction time, adhering to ISO 11357-6 standards.

Melt Flow Rate Testing to ISO 1133:

Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics, following ISO 1133 standards.

Uifferential Scanning Calorimetry (DSC) to ISO 11357-1:

Application of differential scanning calorimetry, adhering to ISO 11357-1 standards, for a comprehensive understanding of thermal properties.

LOCATIONS

We have multiple locations across Australia to meet your business and project needs.

Adelaide:	2/28 Heath Street, Lonsdale, SA, 5160
Kalgoorlie:	14 Broadwood Street, West Kalgoorlie, WA, 6430
Melbourne:	48 Abbott Road, Hallam, Victoria, 3803
NSW:	19-21 Burns Road, Heathcote, NSW, 2233
Brisbane:	Unit 5 Lavarack Ave, Pinkenba, QLD, 4008
Head Office Perth:	110 Kelvin Road, Maddington, WA, 6109

Experience our personalised training services, delivered by expert trainers at your preferred location.

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To book training at your premises contact us on **1300 36 7659** or **info@polyweldtech.com.au**.

TESTIMONIALS

What Our Clients Are Saying

G Completing the Polyweld Tech course on butt welding and electrofusion welding was an eye-opener to the practical nuances of the welding field. Unlike other programs, Polyweld Tech places a strong emphasis on hands-on learning, immersing participants in real-world scenarios. The instructors, who bring a wealth of field experience, not only demonstrated the dos and don'ts but also shared invaluable insights into potential hazards that can arise during welding projects. This practical approach added a layer of authenticity to the training, allowing us to grasp not just the techniques but also the critical safety measures needed in the field. From understanding the intricacies of equipment to navigating potential challenges, the course went beyond theory to provide a comprehensive understanding of what it truly means to weld in the field. The emphasis on safety measures and hazard awareness was particularly noteworthy, ensuring that participants are not only skilled but also well-prepared for the practical realities of the welding profession. For anyone seeking a program that goes the extra mile in bridging the gap between theory and field experience, Polyweld Tech is undoubtedly the way to go."

Igm Ramadiartha

F I recently completed the Polywelding certification program at Polyweld Tech Academy, and I must say it was an outstanding experience from start to finish. The instructors were highly knowledgeable and professional, guiding us through every aspect of the course with expertise and patience. The hands-on training was invaluable, allowing us to practice our skills in real-world scenarios.

The curriculum was well-structured and covered all the essential topics in-depth. I felt fully prepared and confident to take on the challenges of polywelding after completing the program.

The academy's facilities were top-notch, providing a conducive learning environment. The equipment was modern and well-maintained, ensuring a seamless learning experience.

The administrative staff was friendly and helpful, answering all my questions promptly and assisting with any concerns throughout the certification process.

Overall, I highly recommend the Polywelding certification program at Polyweld Tech Academy to anyone looking to enter the field or enhance their skills. The quality of education and support offered here is second to none.

Thank you, Polyweld Tech Academy, for providing such an excellent training program. I truly appreciate the knowledge and experience gained, and I am excited to put my new skills to work in my career.

Taegwan Hong (Hector)

Ratings and reviews are verified and are from people who

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Contact us

