

# **OUR CAPABILITIES**

**Mechanical Engineering & Drafting** 

Weld Engineering, Supervision & Inspection

**Fabrication & Welding** 

**QA & QC Inspection** 

**Quality Systems Design & Maintenance** 

247ENGINEERING.COM.AU



### **WHO WE ARE**

Developed over several years of manufacturing, project management, and quality management expertise, particularly within the industrial, mining, oil & gas sectors, 24/7 Engineering aims to provide optimised solutions to its customers.

We pride ourselves on 24/7 Engineering being 100% owned and operated in Australia, based in Melbourne, Victoria.

Here at 24/7 Engineering, we thrive on completing high quality tasks delivered in full and on time.



### WHAT WE DO

#### **FABRICATION**

All steels for all industries. We can design, machine, fabricate, weld and apply any desired coating system to your product.

Our quality management system allows for excellence in our manufacturing and a quick turn-around on the supply.

#### **ENGINEERING & DRAFTING**

Need something engineered or drafted? Reach out to us for any of the below or beyond:

- 3D modelling
- FEA (Finite Elemental Analysis)
- CFD (Computational Fluid Dynamics)
- Detailed design including agreed review intervals
- Detailed Drawings



#### **WELDING & INSPECTION SERVICES**

All steels for all industries. We can design, machine, fabricate, weld and apply any desired coating system to your product.

- Procedure Qualification Design, supervision and recording (PQR)
- Weld Procedure Specification (WPS) Writing and client liaising where required
- Welder Performance Qualifications (WPQ) writing and managing
- Inspection and Test Planning and Management, including NDT
- Welding joint design to ensure desired mechanical properties and weld metal chemical composition are compatible
- Stainless steels and dissimilar materials joining weld metal compositions tested and analysed through WRC-1992 diagram measuring hot cracking resistance and carbon segregation is kept to a minimum using the FN ferrite number prediction ensuring confident results
- Weld metal chemical composition advice to achieve fit-for-purpose in its service environment and holds crack resistant microstructures
- Weld Mapping and weld traceability including piping isometric and structural detailed drawings
- PWHT design and advice based on chemical and mechanical requirements including predictive cold cracking NDT intervals
- Corrosion inspection and fatigue design inspection
- Failure Analysis
- Distortion and jig design to minimising residual stresses and costly rework



- In-house destructive testing and welders qualification testing
- Third party auditing of fabricator's WPS, QA system and QC methodology. ITP and upskilling welder qualifications, if required.
- Repair procedures and field service inspections of materials, welding and repair work
- Capability assessment of your staff and manufacturing experience to help you win your next contract
- Machine and inspection calibration ensuring confident measures are taken and accurate whilst on the job
- Understanding and implementing lean manufacturing methods to improve productivity and lower production costs enabling you to remain competitive and compliant.

We are experienced with a broad range of standards, including (but not limited to): AS1554.1 to 6, AS/NZ 1101.3, AWSD1.1, AWSD14.6, ASME IX, AS4458, AS3992, AS4041, AS4100, AS3992, ISO5801, ISO15614, ISO9606-1, ISO5817, ISO14731, ISO/TR15608, BS-EN1101-2, ISO 3834 (1 to 5 series) Eurocode 3 (design of steel structures – fatigue) and BS-7608 (Guide for fatigue designing and analysis).

We can take the stress out of welding management and ensure your organisation is continually welding to the desired standards, including project stakeholder management.



#### **QUALITY CONTROL & EXPEDITING**

We can arrange for quality inspections at agreed Witness/Hold points and prepare comprehensive reports. With decades of quality management and manufacturing experience at 24/7 Engineering, we will always work to ensure your requirements and timelines are met.

We can prepare and coordinate all non-destructive testing and destructive testing requirements for welders qualification test and final production pieces, and handle all communication to your client regarding welding and inspections for product conformity.

If something is in relation to an investigation regarding failure due to welding imperfection, materials failure or insufficient QA/QC non-conformances, we can assist you and represent you in the matters delegated, if needed, and help coordinate additional testing to prove mechanical properties and main causes of failure.

### **QUALITY SYSTEMS DESIGN, IMPLEMENTATION & MANAGEMENT**

We can design quality systems that allows flexibility for your operations, including maintenance to ensure continual compliance. We have extensive knowledge and understanding of operating systems and quality systems such as ISO 3834-2 and ISO 9001 which bids to the market for



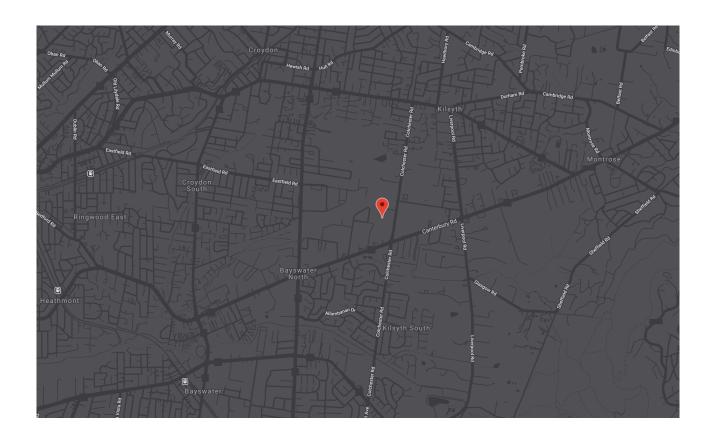
manufacturing at the highest level of quality requirements to produce products both local and internationally.

If your company wishes to obtain or already has this certification, we can prepare both the staff and workshop for third party approval, including continuing to work with your business as the acting responsible welding coordinator for your business.



## **WHERE WE ARE**

We are located in Bayswater (south-east Melbourne) - but can meet with you at a location that is most convenient to you.



Door 6, 176 Colchester Road, Bayswater VIC 3153

Please get in touch if you have any questions or inquiries



info@247engineering.com.au

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