company profile



Matrix
Composites & Engineering Ltd


matrix has developed a wide range of proprietary and bespoke products based on experience built over 25 years of industry involvement.

company profile

Matrix Composites & Engineering Ltd is an Australian owned and operated engineering business located in Perth, Western Australia. The company is part of the MC&E group of companies which has provided engineered product solutions to the offshore oil & gas, marine, military and mining industries since 1980.

The Matrix Group offers specialised products and services to the Upstream and Downstream sectors of the Oil & Gas sector. The company is a global leader in the field of composite materials and polymer technology for engineered product applications and provides field and equipment services that complement the company's product range and capabilities.

Specifically the company services the following sectors on a global basis:

- SURF (Subsea, Umbilicals, Risers & Flowlines) Equipment & Services
- Marine Riser Engineered Products and Services
- Well Construction Equipment
- Marine Operations Equipment, Products & Services
- Downstream LNG Engineered Products
- Offshore Services
- Connectors, Casing & Riser Services

Matrix was listed on the ASX (Australian Stock Exchange) in 2009 and has demonstrated a strong track record in revenue, earnings and reputation both domestically and internationally.

In 2010 Matrix's subsidiary Begley International underwent a name change to Matrix Offshore Services & Engineering to further integrate the two organizations and promote the group under a common banner.

Matrix
Offshore Services & Engineering

Begley
International
An MC&E Ltd Company

locations

Matrix is headquartered in Perth Western Australia and has several manufacturing locations throughout the Perth Metro area including the company's new state of the art dockside facilities in Henderson. Matrix also has authorised repair & service facilities in Singapore, Houston & Brazil and has sales office locations in North Asia and Europe.

occupational health & safety

At Matrix Composites & Engineering our Occupational Health and Safety (OHS) Policy is based on a belief that the well being of people employed at work, or people affected by our work, is a paramount consideration. People are our most important asset and their health and safety is our greatest responsibility. The public, including contractors and visitors, shall be given equal priority to that of our employees, and MC&E operates an OHS system that complies to the measurements of AS4801 and is now a member of IFAP.

"Nobody Gets Hurt – Nothing Gets Harmed"

People

The Matrix workforce represents a wide range of skills and qualifications and staff numbers now exceed 400 with recent key appointments and the expansion of the engineering and business development sectors.

Our staff are personally aligned with our core values of safety and wellbeing, integrity, achievement, teamwork and loyalty.

"Our People are our greatest Assets"

quality assurance

Matrix Composites & Engineering and Matrix Offshore Services & Engineering are accredited to ISO 9001:2008 by the accreditation body SAI global.

The quality systems at Matrix undergo a process of continuous improvement to ensure that the products and services provided by Matrix meet or exceed client and industry expectations.

In addition to client or product specific requirements such as API 16F, API 5CT, API 6A or API 10F, Matrix utilises proprietary systems such as the MODMAN database that enables full traceability materials and processes used in the manufacture of syntactic foam components to the requirements of API Q1.

As part of the company's continuous improvement strategy, Matrix has employed the latest product identification technology and in 2010 introduced RFID tagging which reduces the reliance on labelling a process that has significant advantages in marine product applications.

Business Systems

Matrix operates the Vantage enterprise resource planning system which integrates all commercial, manufacturing, engineering, quality and shipping functions of the business.

CERTIFICATE OF REGISTRATION

This is to certify that:

Matrix Composites and Engineering Ltd

ABN 54 009 435 250

42 Truganina Road MALAGA WA 6090 AUSTRALIA
283 Treasure Road WELSHPOOL WA 6106 AUSTRALIA
9 Agett Road MALAGA WA 6090 AUSTRALIA
5 Carson Road MALAGA WA 6090 AUSTRALIA

operates a

QUALITY MANAGEMENT SYSTEM

which complies with the requirements of

ISO 9001:2008

for the following scope

The registration covers the Quality Management System for the design and manufacture of buoyancy modules and polyurethane components for the oil and gas industry.

Certificate No: QEC27216

Issued: 22 February 2010
Expires: 15 February 2013

Originally Certified: 16 February 2010
Current Certification: 16 February 2010

Alan Eurell-Smith
General Manager – Certification Services

Duncan Lilley
Global Head – Assurance Services

ISO 9001

SAI GLOBAL

CERTIFICATE OF REGISTRATION

This is to certify that:

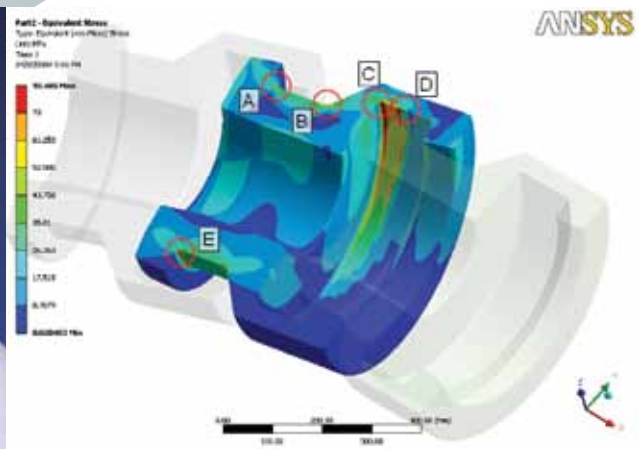
Specialist Engineering Services (Aust) Ltd

Trading As:

Matrix Offshore Services & Engineering

SAI GLOBAL

engineering & design



Matrix's engineering, product testing and design department comprises of a talented multi disciplined team with backgrounds in mechanical, chemical, subsea, composites and offshore engineering skills. Armed with the latest diagnostic, design and modelling tools Matrix's engineering processes are centred around developing engineered solutions that meet or exceed the performance expectations of clients whilst considering the operational rigours experienced in the Oil & Gas Industry.

Tools such as 3D CAD/CAM, FE Analysis, CFD and 3D solid printing complement a rigorous product testing regime ensure solutions that are practical, exhibit a high degree of reliability and maximise the unique advantages of Matrix's material technology suite.

Mechanical Testing

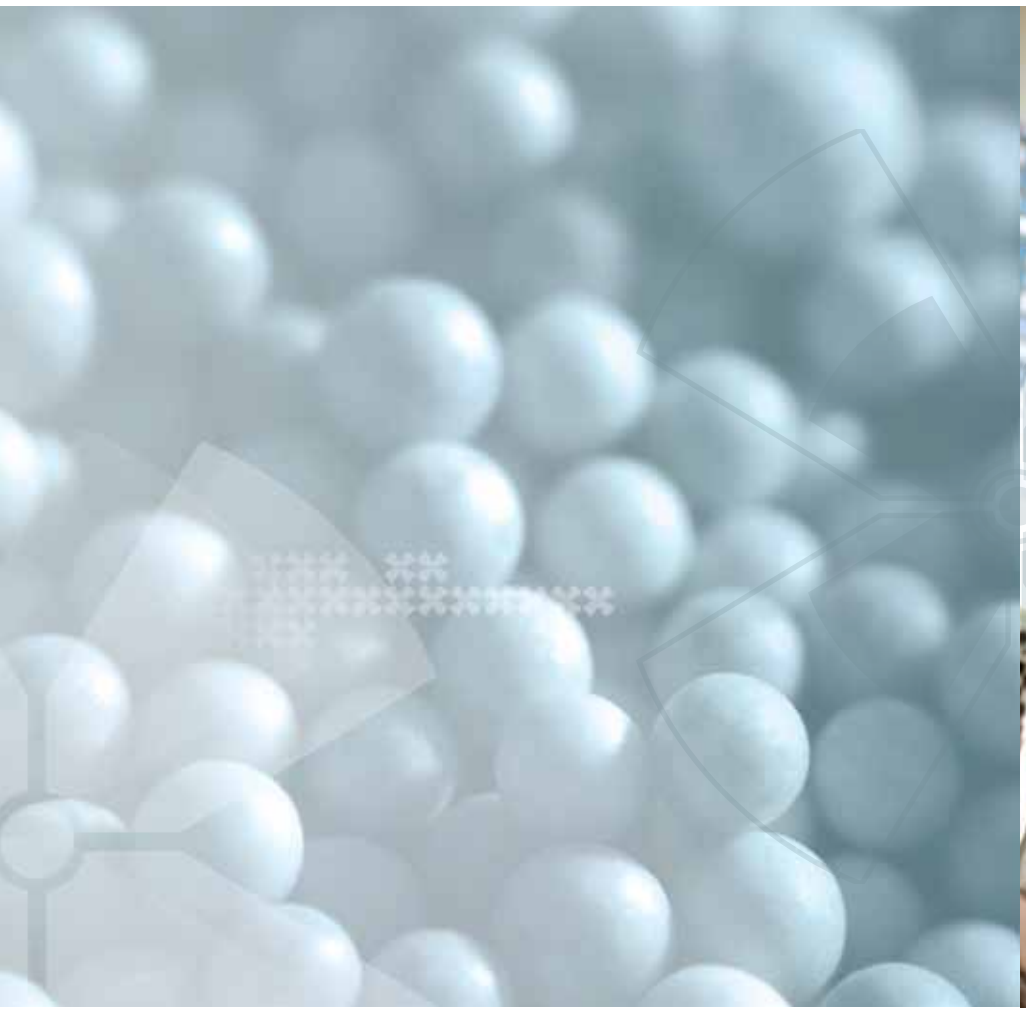
Factory Acceptance Testing (FAT) mechanical testing is an integral part of almost every product design, custom or standard. This may include integration testing of riser buoyancy, load testing of buoyancy through members and destructive testing of bend restrictors. A wide variety of test rigs are available for this purpose.

Materials Testing

Matrix uses in house and third party facilities to pre-qualify or type test materials. Mechanical, creep, weathering, disbondment and corrosion properties are routinely tested. Typically these tests are carried out at Matrix's in house materials testing laboratories.

matrix's engineering processes are centred around developing engineered solutions that meet or exceed the performance expectations of clients

materials technology & development



Matrix is a world leader in Syntactic Materials Technology. Syntactic Foams are a unique family of engineering materials that are characterised by low density, low levels of water absorption and high compressive strengths. The company has developed a wide variety of Syntactic Foam Systems for applications ranging from insulation products to buoyancy systems designed to operated at water depths from surface to full ocean depth.

Matrix's material development laboratory facilities located in Henderson utilises the latest mechanical testing equipment which enables that company to control and test in process production and develop the next generation of syntactic materials.

The company also specialises in the design, application and manufacture of the following material families

- PUF Technology – "Cetrafoam™"
- Thermoplastic Composites – Short Fibre Reinforced Thermoplastics and Thermoplastic Directional fibers
- Thermoset Composites utilising Aramid, Glass and Carbon Fibre Reinforcements
- Polyurethane Elastomers

facilities & capabilities

Syntactic Foam Production

The Henderson and Malaga facilities are capable of mass producing and testing composite syntactic foam structures in virtually any size or configuration in a variety of material grades.

- Composite Syntactic Buoyancy Structures & Systems from surface to 5000msw water depth.
- Specialised Syntactics for insulation, ultradeepwater buoyancy to full ocean depth, fire suppression, energy absorption and structural applications.

Composites

- Pre-Preg processing with carbon fibre, glass fibre, Aramid and other synthetic fibre processing.

PUF Production

- CNC controlled processing and automated moulding of Cetrafoam™ rigid celluar foams.

Urethane Production

- Computer controlled dispensing and moulding of elastomers and rigid urethane systems for engineered product applications. Moulding sizes range from a few grams to 1000kg +.

Thermoplastic Composites

- Moulding of large short fibre reinforced thermoplastics for engineering applications.
- Moulding of directional fibre reinforced thermoplastic laminates.

Hydrostatic Testing

- Instrumented, full scale hydrostatic chambers 60" & 63" ID rated to 3,300msw and 5,000msw respectively.
- Range of smaller chambers to full ocean depth capability.

surf equipment & services

Subsea

- Syntactic epoxy and urethane pipe, spool and jumper insulation systems.
- Field Joint Coatings
- Clamping Systems
- Deepwater Installation Buoyancy
- Deepwater Mooring Buoyancy
- TurtleShell™ Impact & Dropped Object Protection

Riser

- Distributed Buoyancy for flexible risers
- Composite Bend limiters, Bend Stiffeners & Restrictors
- Marineshield™ Impact protection
- Marineshield™ Splash Zone protection
- Flexible & Rigid Riser Clamping Systems
- Steel Centenary Riser Buoyancy
- Hybrid Tower Buoyancy Systems
- Marineshield™ VIV (Vortex Induced Vibration) Suppression Systems
- Mid Water Arch Systems
- Insulation Systems
- Clamping and Centraliser Systems

Umbilical Ancillaries

- Distributed Buoyancy
- Composite Bend limiters, Bend Stiffeners & Restrictors
- Marineshield™ Impact & Abrasion protection

Flowline

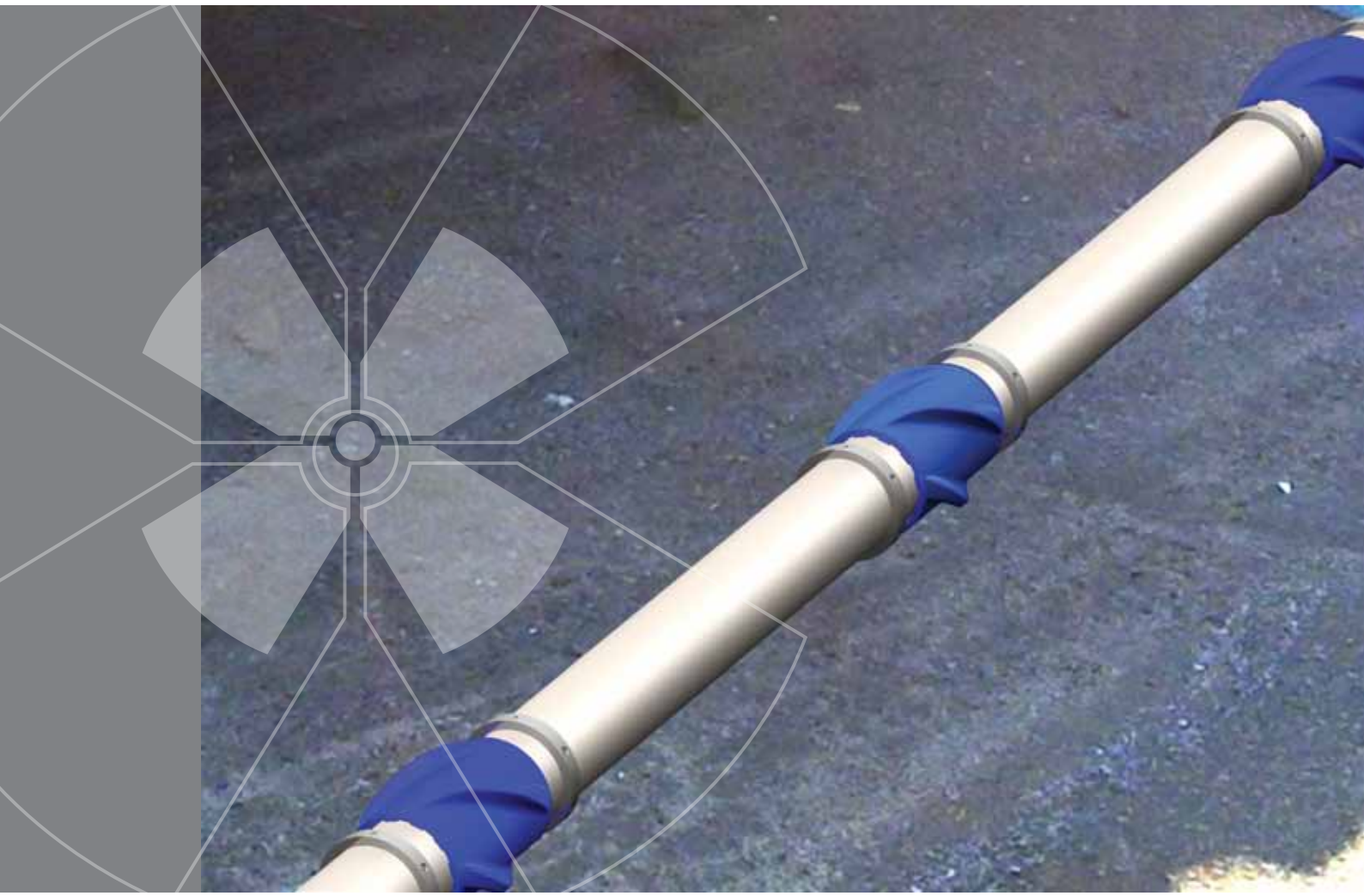
- Piggyback Pipeline Clamps
- Flow assurance solutions
- Installation equipment, towheads, mid depth tow installation buoyancy
- Pipeline Buckle Mitigation Buoyancy

marine riser engineered products and services

Matrix is the world's leading manufacturer of Marine Riser Buoyancy designed to handle the operating conditions experienced with modern drilling practices.

- MacroSyn™ Ultralight High Efficiency Riser Buoyancy
- Aramid Fibre Integral Composite Skin Systems
- TurtleShell™ Removable Buoyancy Impact Protection System
- Buoyancy Inserts – Designed to maximise uplift and reduced trapped water between ancillary line voids.
- Hi-Stack™ High Stacking Load Buoyancy Designs
- Composite Riser and Thrust Clamping Systems
- Composite Riser Shims
- Stacking Aids
- VIV Suppression Systems

well construction equipment



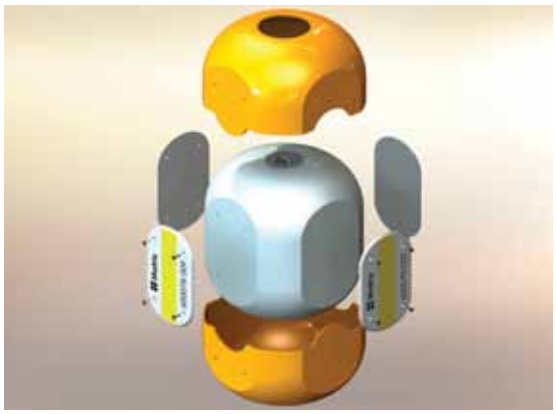
- **Matrix Centraliser** *(patent applied for)* - High Load, Low Friction all composite Centralisers and collars for Drilling & Completion applications
- **XirShoe™** - PCD Drillable Composite Guide Shoes, Eccentric Profile Cementing Shoes and Completions Shoes
- **XirCrush™** - Crushable High Strength Syntactic Foam for Casing Annulus Protection

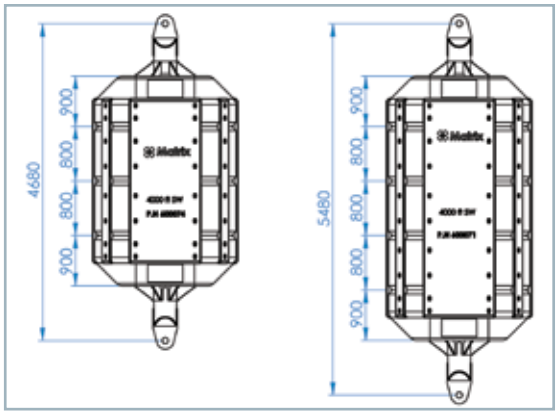
marine operations equipment, products & services

Image courtesy of Total Marine Technology

- Deepwater ROV & AUV Buoyancy Systems, Custom Designed and Standard Part Systems to Water Depths of 5000msw
- Modular Installation and Mooring Buoyancy Systems
- Deepwater Installation Buoyancy – Standard Products
- Oceanographic Buoyancy – Syntactic buoyancy for oceanographic applications

Matrix has applied for Australian, European and US Patent protection for the Turtle Shell™ removable impact cover concept.





downstream lng engineered products

- Cetrafoam™ LoDust moulded insulation products for elbows, tees, flanges and bends.
- Cetrafoam™ LoDust moulded pipe sections
- Integral Mylar Skin Systems
- Cryogenic Pipe Support Insulation Blocks

manufacturing & service support facilities

Machining

Large Capacity CNC Machining : CNC milling machines, turning centres and lathes

Welding processes

- SAW, GMAW, FCAW compliant with ASME, AWS and API standards
- Inconel 624 & 8630 Inlay processes

Tubular welding & fabrication

- Large OD tubular processing for riser and cassion applications

Testing

- High pressure internal testing to 28,000PSI, tubular, spools, risers and valve systems

Inspection

- CMM and Faro ™ automated inspection equipment

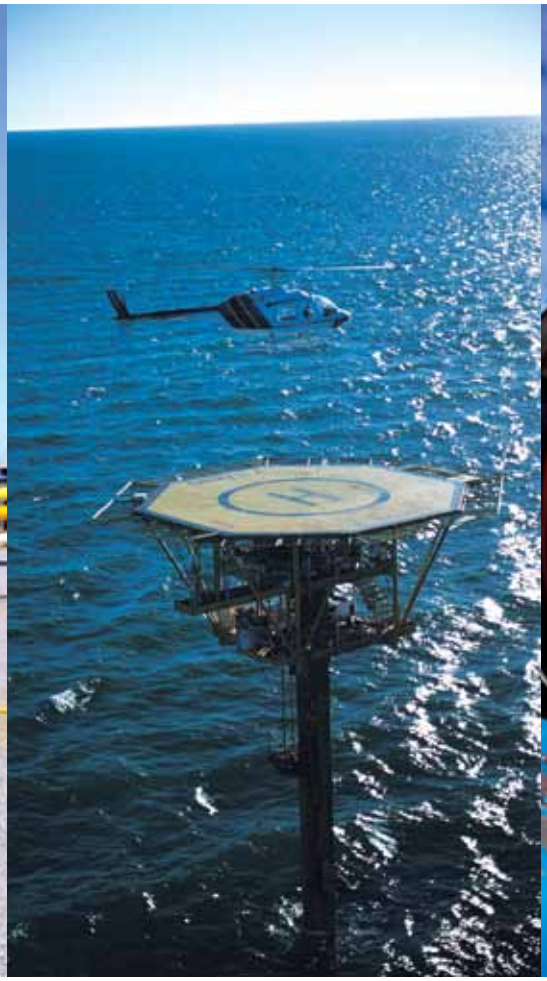
Assembly

- Shop and field assembly of mechanical equipment

Site Services

- HUET qualified trades people qualified to carry out offshore and onshore mechanical, installation and service work

offshore services

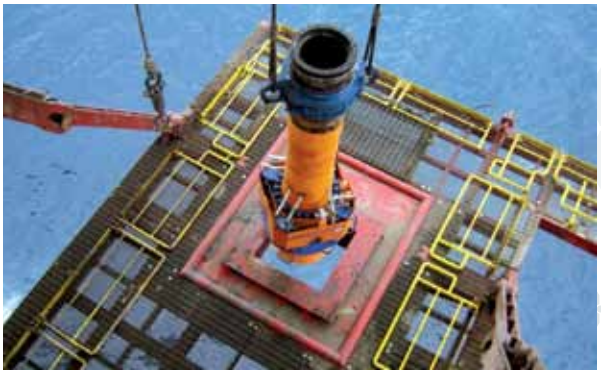


- On Site Machining – Cold Cutting, Seal Repair, Cold Weld Repair
- Mechanical Installation and Well Construction Service - VIV System, MarineShield™, Clamping System and Well Construction Equipment installation
- Composite Repair & Installation – Structural Repair & Strengthening, Buoyancy Repair Services, Engineering and Materials Selection
- Insulation Services – Field Joint Coating Services, Site Insulation, Jet Fire Protection Installation Services.

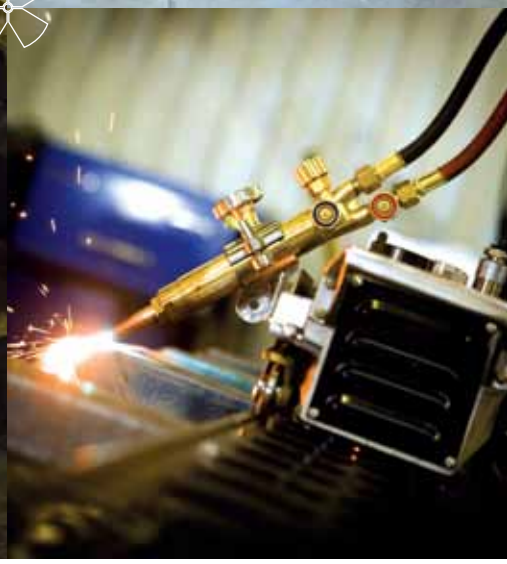
connector, casing & riser services

Connector Casing & Riser Systems

- Oilstates Licencee in Australia for the OSI Range of weld on connectors
- Supply & Stocking programs for large diameter caissons (20”OD or greater)
- Riser and Casing Servicing
- Spool Servicing & Repair
- Bespoke High Pressure Riser Systems for Jackups
- Equipment Storage & Maintenance
- Marine Riser & telescoping Joint Repair Surveying and Maintenance



tooling



- Production of high accuracy machined steel tooling for VTRM composite manufacturing processes
- Tooling repair modification & maintenance
- High accuracy fabricated and monolithic tooling systems

matrix provides a fully integrated engineering service from the inquiry to design to manufacturing, testing, delivery and aftermarket service.

Matrix Composites & Engineering

Offices

Head Office - Australia
Matrix Composites & Engineering Ltd
150 Quill Way, Henderson, Western Australia 6166
PO Box 87 Wattleup, Western Australia 6166

T: +61 8 9412 1200
F: +61 8 9412 1299
E: matrix@matrixap.com.au
W: www.matrixap.com.au

Matrix Composites & Engineering (US), Inc
Houston, Texas, USA

T: +1 713 461 0552
E: billy.nitsche@matrixap.com.au

Matrix Composites & Engineering (Europe) Ltd
Newcastle Upon Tyne, England

T: +44 0 191 206 4114
E: ben.crouch@matrixap.com.au

Matrix Composites & Engineering (Brasil) Ltda
Rio de Janeiro, Brasil

T: +55 21 3385 4198
E: bruno.schauerte@matrixap.com.au

Matrix Offshore Services & Engineering

185 Camboon Road, Malaga, Western Australia 6090
PO Box 2100, Malaga, Western Australia 6944

T: +61 8 9249 3300
F: +61 8 9249 3327
E: reception-mose@matrixap.com.au
W: www.matrixap.com.au

Agents

Neptune Energy – Busan, Korea
T: +82 51 245 2221
E: neptune@neptunekorea.co.kr

Delcom Oilfield Services Sdn Bhd – Kuala Lumpur, Malaysia
T: +60 3 22957788
E: dossb@delcom.com.my

Certified System
Quality
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