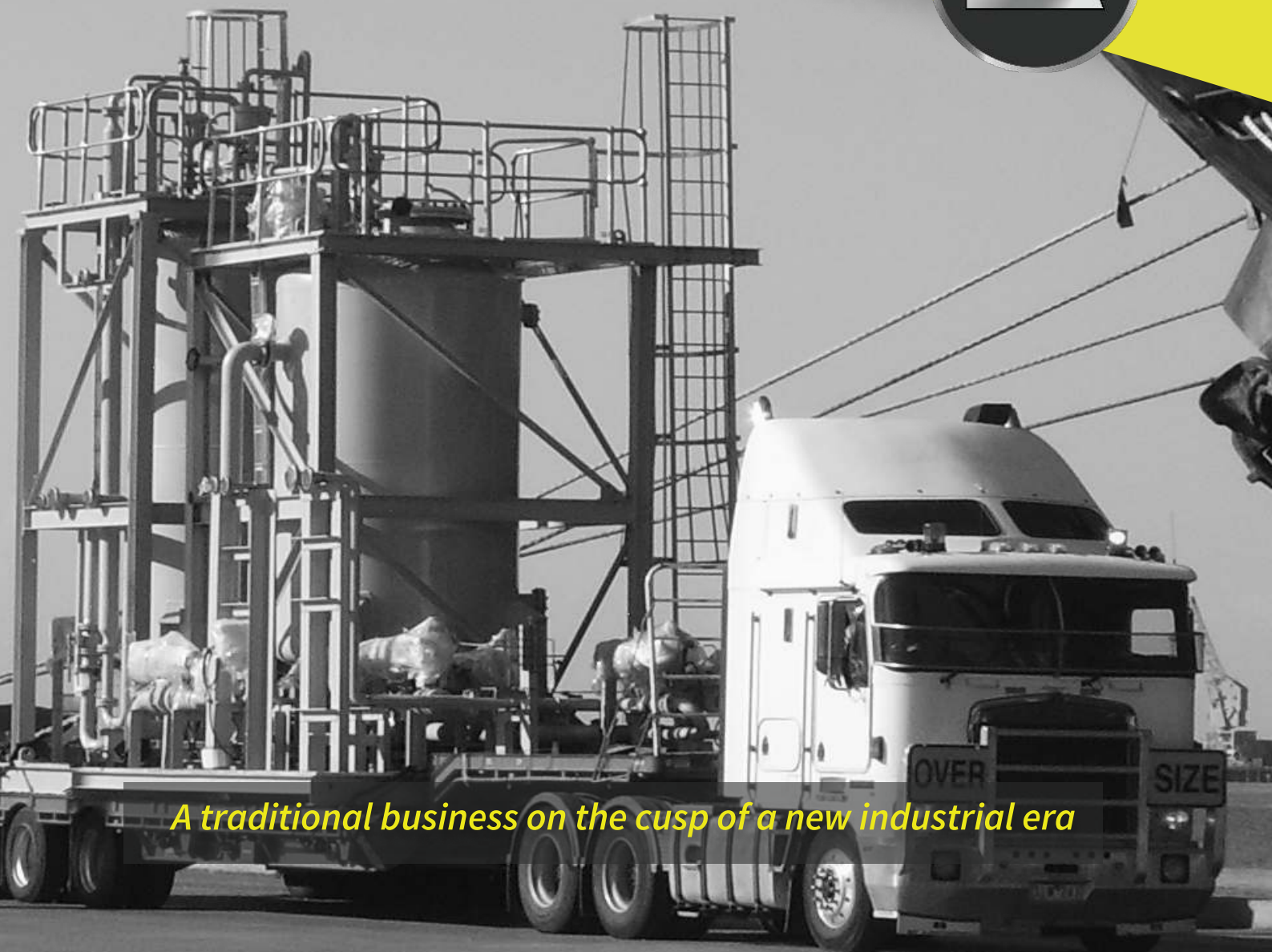


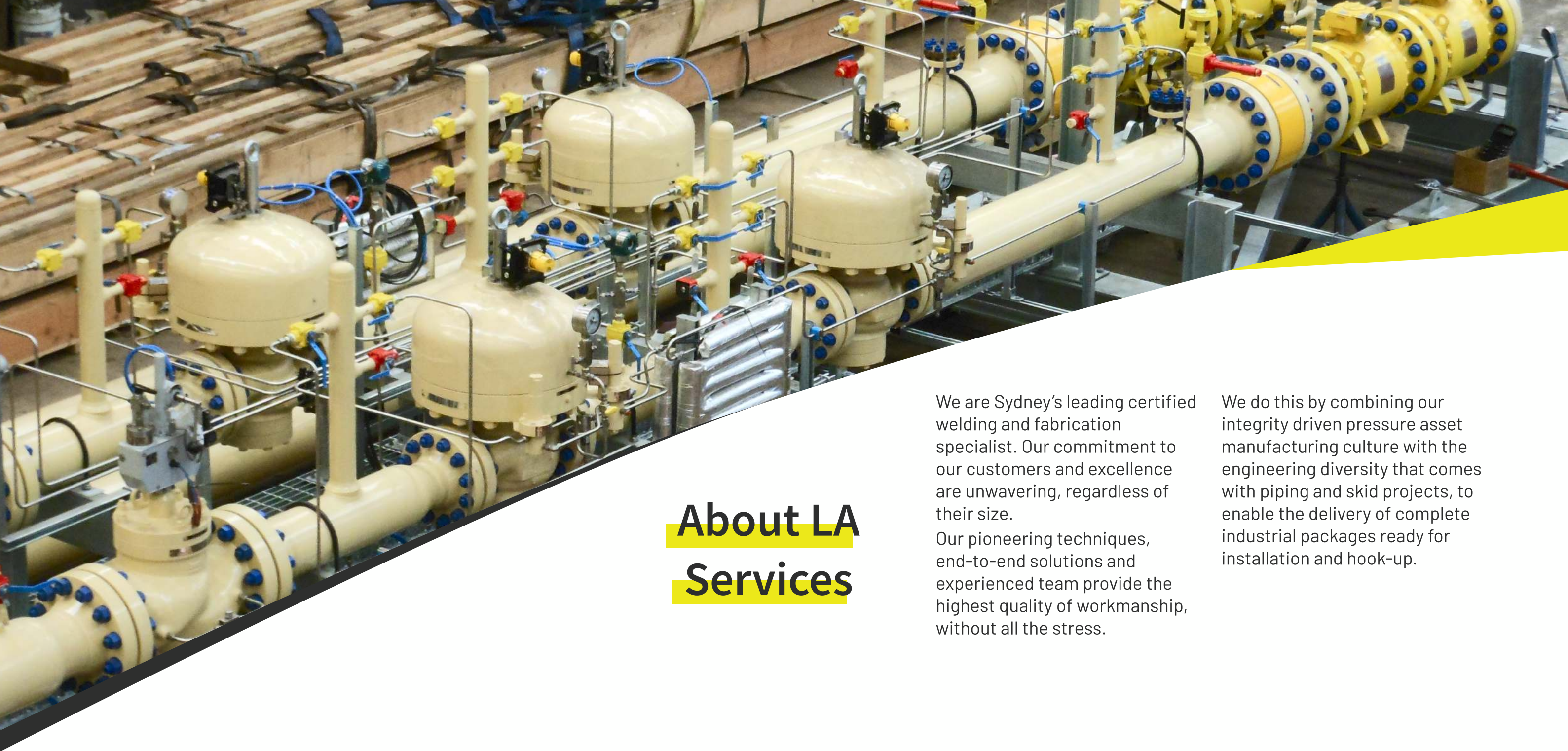
# PIPING & SKIDS

*Portfolio*



*A traditional business on the cusp of a new industrial era*





## About LA Services

We are Sydney's leading certified welding and fabrication specialist. Our commitment to our customers and excellence are unwavering, regardless of their size.

Our pioneering techniques, end-to-end solutions and experienced team provide the highest quality of workmanship, without all the stress.

We do this by combining our integrity driven pressure asset manufacturing culture with the engineering diversity that comes with piping and skid projects, to enable the delivery of complete industrial packages ready for installation and hook-up.

## Piping & Skid Capability

The two main workshop bays are serviced by 9 overhead cranes boasting up to 6m under hook, enabling parallel production activities and trial assembly before dispatch to our qualified surface treatment partners.

Finally assembly activities such as electrical & instrument, heat tracing, insulation, factory acceptance testing and drying are all supported through subcontractor partners to provide a complete ready to go skid package.

Drawing on our lifting, transport and logistics experience in moving heavy oversize industrial assets we are also competent across lifting and transport activities to ensure compliance with Chain of Responsibility (CoR) and all incoterm scenarios.



# PROJECTS

## Water Treatment Package

2010

### Client : Clough

End User : Apache Energy

Duration : 10 months

#### Engineering:

##### Vessel

- Design, draft, verify and register pressure vessel
- Pressure: 1800/FV kPa (18 Bar)
- Temperature: 0/80°C
- Standard: AS1210 Class 1

##### Piping & skid

- Design, pipe stress analysis & ISO's
- Test Pressure 1550 kPa (15.5 Bar)
- Code: ASME B31.3

#### Materials:

- Pressure vessel shell & ends; AS1548-7-460R
- Pipe, nozzles & flanges; A105 & A106B
- Valves & instruments; free issue

#### Manufacturing:

- 2 off Hydrocyclone vessels, NDE to AS1210 CL1 & hydro test
- Piping for skid, NDE 100% of Butt joints & hydro test - 3 coat system
- Skid frame & grating, NDE 10% UT & MT, Galvanized
- Mechanical assembly of vessels, spools free issue valves
- Electrical, instrument & FAT - by LA



The contract was to supply a water treatment skid package for the Apache Energy Devil Creek project in Western Australia. The project required a high level of material traceability, which included integrating records for free issue equipment. In addition the project had a high level of customer presences to oversee the nominated testing points during the manufacture process. LA Services provided the mechanical design and undertook all manufacturing, deliverables were two hydrocyclone vessels with a highly durable internal coating, process piping, the skid base, mechanical assembly and completion of the Ex Rated rated electrical and instrument hook-up followed by factory acceptance testing.



The contract was to supply two separator vessels as skid packages for the Santos' West Mereenie project in the Northern Territory. LA Services worked with Santos' consulting engineers to align the vessel's design (LA Services scope) with the skids footprint and processing piping (the consulting engineers scope). Like all Oil & Gas projects material traceability and onerous project specification needed to be incorporated into the quality planning for the high pressure low temperature vessel and piping. LA Services scope include the fabrication and surface treatment of the separator, piping, and structural parts. Following fabrication and testing the skid was assembled and delivered to South Australia for installation of E&I components before shipment to site.

## Separator Vessel & Skid

2013

### Client : Santos

End User : Santos

Duration : 6 months

#### Engineering

##### Vessel

- Scope: Design, draft, verify and register pressure vessel
- Pressure: 9280 kPa (92.8 Bar)
- Temperature: -10/100 °C
- Standard: AS1210 Class 1

##### Piping & skid

- Scope: Design, ISO's - arranged by client
- Test Pressure: 13290 kPa (132 Bar)
- Code: ASME B31.1

#### Materials:

- Pressure vessel shell & ends: ASTM A516-70 with impacts at 0°C
- Pipe, nozzles & flanges: A105 & A106B
- Valves & instruments: free issue

#### Manufacturing:

- 2 off separator vessel, NDE to AS4037, PWHT and hydro test
- Piping spools for both skids, NDE 100% butt joints and hydro testing
- 2 off Skid frames & grating, NDE 10% MT
- Mechanical assembly of vessel, spools, valves and instruments
- Electrical & instrument, FAT - By Client



# PROJECTS

## Natural Gas Infrastructure

2014

### Client : Downer

End User : Jemena

Duration : 3 months

#### Engineering

##### Piping & skid

- Scope: Supply, Fabricate, Weld, Test, Delivery
- Test Pressure: 15000 Kpa
- Code: AS4041

#### Materials:

- Pipe & Fittings: A333 Gr6, A420 WPL6, A350 LF2
- Valves & instruments: free issue

#### Manufacturing:

- Piping spools for skid, NDE 100% butt joints and hydro testing
- Skid frames NDE 10% MT
- Mechanical assembly of skid, spools, valves and instruments
- Electrical & instrumentation FAT - By Client

To support the expansion of the natural gas network, branches are taken off the main gas pipeline supplying the Sydney basin. Once connected the gas passes through a primary regulation station (PRS) to reduce the pressure and prepare the gas for consumers.



These projects have several critical phases one of which is the supply and installation of the PRS. LA Services has undertaken many RPS projects over the years. PRS scope typically involves the fabrication of heavy wall spools, skid base manufacture, trail assembly, hydrostatic testing and surface treatment. Finally assembly includes bolting in the large pressure regulating valves, fitting and connecting instruments, heat tracing and insulation. Factory acceptance testing is then undertaken followed by final drying before dispatch and installation in the PRS building where the mechanical works are integrated civil activities.



Veolia Water was contracted to provide an effluent treatment plant for Woodside's Pluto Project. LA Services was then subcontracted by Veolia to finalise the design, manufacture the complete package consisting of 11 off skids and deliver to Port Kembla NSW, FOB for the project handover to Veolia. The scope of services covered mechanical design of the skids, piping runs (isometrics) and pressure vessels. The manufacture and assembly scope consisted of stainless steel piping and vessels, trail assembly with free issue items such as pumps, valves & fiberglass tanks before surface treatment. Final assembly was then undertaken which included all Ex Rated electrical and instrument hook-ups. Due to the FOB terms the project had a hard delivery date, LA Services pivoted

## Effluent Treatment Plant

2008-2009

### Client : Veolia Water

End User : Woodside

Duration : 8 months

#### Engineering

##### Vessels

- Scope: 3 off design, draft, verify and register pressure vessel
- Pressure; 900kPa (9 Bar) / Temperature; 14 / 75°C
- Standard: AS1210 Class 1

##### Piping & skid

- Scope: 11 off Mech. design, pipe stress analysis, structure & ISO's dwgs
- Test Pressure 2385 kPa (23.8 Bar)
- Standard: AS4041

#### Materials

- Pressure vessel shell & ends: 316L
- Pipe, nozzles & flanges: 316L
- Valves & instruments: free issue

#### Manufacturing

- 3 off Pressure vessels, NDE 100% long & circumferential seams and hydro test
- Piping spools for the skid, NDE 10% butt joints and hydro testing
- 1 off Skid frame & grating, NDE 10% UT & MT
- Mechanical assembly of vessel, spools, valves and instruments
- Electrical & instrument and FAT - By LA

to a 24 hour 7 days operation during manufacture to ensure delivery to the booked transport ship was met. The oversized dimensions of some skills required them to be transported near the port party assembled, then stood up and completed before being loaded on truck for the shot but overheight movement to the port and loading.

*Creating a bright  
manufacturing future for Australia.*

Australia's Trusted **Welding & Fabrication** Specialist

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