XLERPLATE® steelintouch

News for XLERPLATE® steel customers

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SPECIAL FEATURE
Fabrication: industry perspective

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BLUESCOPE STEEL

As anticipated in the last edition of XLERPLATE® *Steel In Touch*, the steel industry continues to feel the impact of tough global conditions. Global steel makers cut back production by 20% in the last quarter of 2008, with similar cuts expected in the first half of 2009, while global steel demand is expected to fall between 10 and 15% in 2009.

In particular, we have seen activity in the resources sector begin to slow and previously speculated steel-intensive expansion plans cancelled or deferred. As market conditions deteriorate and exports to China dry up it is looking likely that our industry will face a challenging business environment for some time.

At the same time, competition from imported steel is increasing. However, BlueScope Steel remains strongly committed to providing high quality, competitive products that are delivered on time to help our customers compete throughout these tough conditions.

We are also undertaking a major upgrade of our Port Kembla Steelworks, with a $370 million reline of our No. 5 Blast Furnace. Blast furnaces typically have an operating campaign life of 15 to 20 years, so the reline is an essential maintenance project that will restore the furnace to peak operating condition. We are focused on being fully equipped and ready for when market conditions improve, as I am sure you are too.

In other news, our new XLERPLATE® steel website will be launched soon. It will include information on XLERPLATE® steel products, including new pressure vessel data sheets, downloadable product information and size schedules. XLERPLATE® *Steel In Touch* archives are available as well as case studies featuring examples of the service and support that come with XLERPLATE® steel.

We also want to announce that XLERPLATE® *Steel In Touch* will be changing format to three bumper editions per year. This will allow us to bring you even more case studies, features and industry news. We look forward to sharing the next edition with you in September.

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XLERPLATE® steel case study

WE Smith supplies pressure vessels for Woodside's Pluto LNG Project

Ready for hydro-testing, a propane vessel fabricated by WE Smith

The fabrication of two sets of butted kettle heat exchangers and a propane re-boiler for a new LNG train continues a WE Smith relationship with Woodside which dates back to 1980.

LNG trains are massive processing facilities which function as giant freezers to cool gas pumped from under the sea to temperatures around minus 160 degrees Celsius. They reduce the gas to a liquid for easy shipping at just one-six-hundredth of its original volume.

The heat exchangers are among the largest that the Coffs Harbour, NSW fabricator, WE Smith has made in its 85 year history. The assembled propane re-boiler is 5 metres in diameter and 17 metres in length, while the butted heat exchangers are 4.1 and 3.3 metres in diameter and 15.3 and 11 metres in length respectively.

The heat exchangers will be barged to Newcastle or Brisbane then taken by ship to the Burrup Peninsula in Western Australia where Woodside is constructing a $12 billion LNG processing facility. Gas will be transported onshore via a pipeline from the Pluto and Xena gas fields in the Carnarvon Basin 190km north-west of Karratha.

Woodside Pluto is set to become the world's fastest developed LNG project. From discovery of the gas field in 2005, production of first export shipments is expected in late 2010. Its output will make Woodside one of the world's biggest producers of LNG.

Nearly 400 tonnes of BlueScope's XLERPLATE® steel in modified pressure vessel grades has gone into construction of the process units, which were designed by WE Smith to meet throughput capacities required by Woodside.

Most of the steel was supplied by distributor OneSteel's Coffs Harbour branch on the NSW mid-north coast. However, in what proved to be a key decision, OneSteel with WE Smith also shipped some of the XLERPLATE® steel to a Japanese sub-contractor.

The Japanese company carried out specialised profiling and fabrication tasks then shipped the assemblies back to WE Smith's workshops where the fabrication process was completed.

"We have very close and continuing ties with BlueScope Steel," WE Smith Purchasing Manager Peter Higgins said. "Because of the special grades of pressure vessel steel and the tight deadlines specified by Woodside, we were speaking with BlueScope Steel's technical support specialists from the day we were first invited to tender for the project."

Since the capability to fabricate the five metre diameter semi-ellipsoidal dished ends for the heat exchanger kettles did not exist in Australia, WE Smith initially explored the possibility of having them fabricated in Japan from Japanese supplied steel.

Japanese fabrication shops had the capability to produce the dished ends to the required dimensions, but could not source the special grades of steel in the time required to meet WE Smith's deadline.

UNIQUE COLLABORATION

In a unique collaboration, the specified 70mm thick plates of Grade 7-490AL50 Modified XLERPLATE® steel were shipped to the Japanese fabrication shop direct from BlueScope Steel. In Japan, they were profiled and hot spun to form the massive semi-ellipsoidal dished ends, then shipped back to WE Smith's workshops.

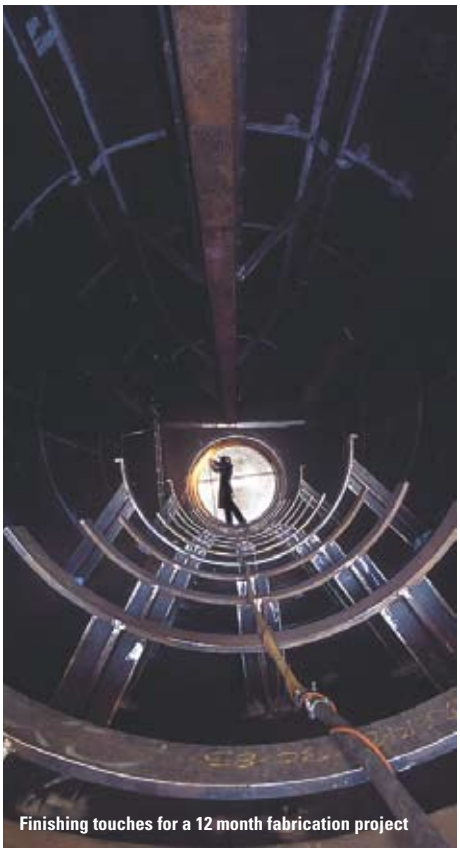
"Over the years we have been involved with most of Woodside's phased development on the Burrup Peninsula," WE Smith Project Manager for the Pluto train components, Stephen Gothard, said. "Woodside and our other customers know that if we have issues with fabrication we will resolve them and be totally transparent with the customer throughout that process."

The unique, year-long fabrication project for the heat exchangers and propane re-boiler has involved the entire WE Smith workforce at one stage or another. Project Manager Stephen Gothard and Project Engineer Lucas Boogaard have guided a process which required all of WE Smith's specialised skills.

Various sub-assemblies fabricated over two shifts per day by workshop teams were subjected to exceptional quality assurance measures including non-destructive testing and hydro-testing which kept WE Smith's NATA accredited laboratory constantly engaged. The fabrication work involved XLERPLATE® steel in thicknesses ranging from 12mm to 70mm and tolerances as tight as 0.2mm. Surveyors were used to confirm the accuracy of the work.

WE Smith pressed and formed some of the thicker barrels required for the units after recently expanding its capabilities. It did this by acquiring specialised vertical rolling machinery with a 150mm maximum thickness capability from Western Australian steel fabricator Wenco.

WE Smith has a record of designing and producing Australia's largest heat exchanger units and has previously fabricated vessels three times as long and twice as heavy as the current units.

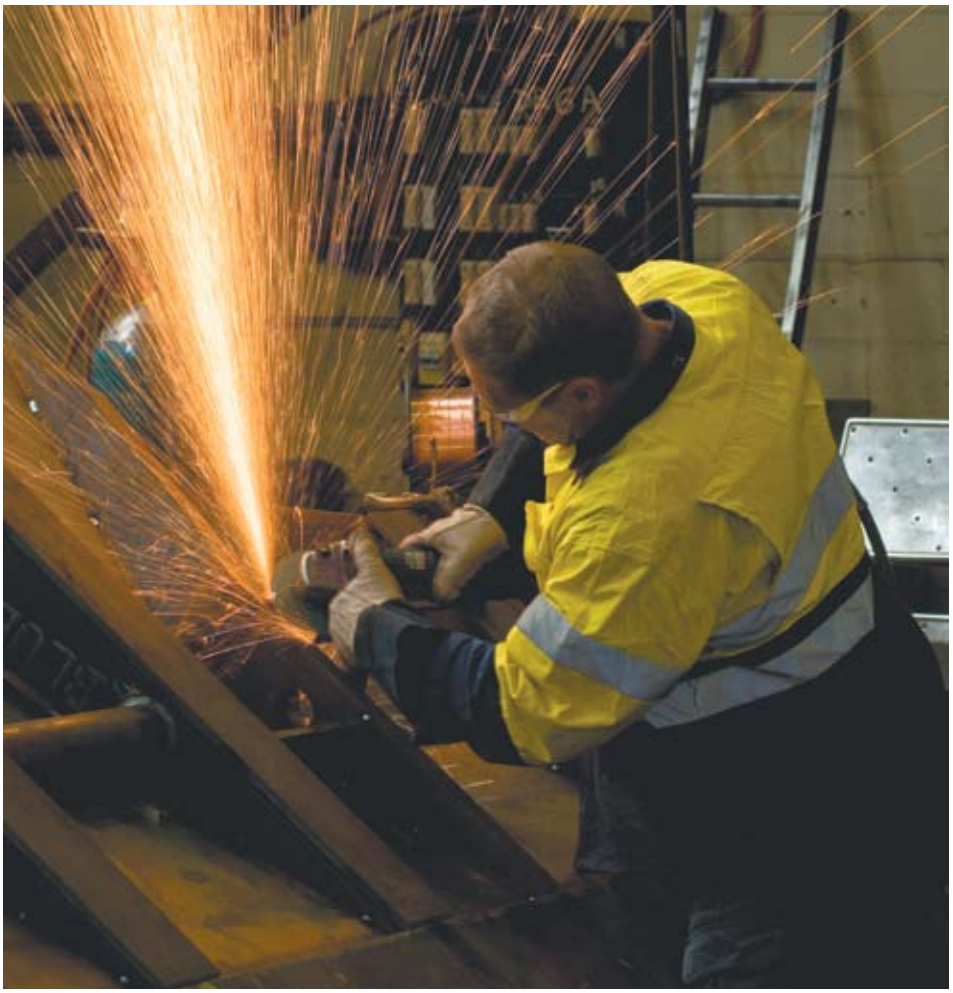


Finishing touches for a 12 month fabrication project

Fabrication under way at WE Smith's Coffs Harbour, NSW workshops

FRONT COVER

- The external structural grid of Sydney's new Macquarie Bank Centre was fabricated in XLERPLATE® steel then clad in aluminium. Advanced techniques allowed Lysaght Design and Construct to complete the erection of 3,500 tonnes of structural steel on site in just three and a half months.



Nepean Engineering Manager, Stephen Cantrill

A bucket load of XLERPLATE® steel

2008 was a record year for Nepean Engineering. The company fabricates buckets and log grapples for the earth moving and forestry industries.

The 33 year old company is the founding member of the Nepean Group, one of Australia's leading privately owned, diversified engineering and industrial manufacturing businesses.

The group produces a broad range of products from fabricated structural steelwork to earth moving equipment and fine detailed, specialist medical equipment.

Nepean Engineering's Narellan workforce used more than 35 tonnes of XLERPLATE® steel per week in 2008 to produce its highly regarded buckets.

"On average, buckets require approximately 100 hours each to manufacture," said Nepean Engineering Manager, Stephen Cantrill.

"We secured a contract to fabricate nine special order buckets for a major earth moving equipment supplier," continued Stephen. "That meant we increased our production output last year to nearly 60 buckets, which is a very significant achievement.

"We use Grade 350 XLERPLATE® steel manufactured by BlueScope Steel. It's a quality product and reflects Nepean Engineering's commitment to deliver high quality products to its customers through engineering excellence.

"Our buckets take a lot of punishment in the field and they need to be able to withstand aggressive operating conditions," Stephen said. "Nepean's long standing reputation hinges on providing customers with the highest quality products they know will perform and last."

Nepean Engineering's bucket designs are adaptable and tailored to the needs of individual customers. All use XLERPLATE® steel for linkages and pivot bodies as well as bucket bodies. The company's standard definition plasma and oxy profile cutter allows it to cut steel up to 200mm thick.

"We have the steel supplied in 9.6 x 2.4 metre plates which is ideal for maximising yield of the product we purchase," Stephen said. "This enables us to make eight cubic metre high-tip buckets, 10 cubic metre general purpose buckets with tailored widths, forms and special orders."

Nepean's tradespeople find XLERPLATE® steel an excellent product to work with. The company cuts, bends, rolls, fabricates, machines, line bores, sand-blasts and paints the high strength steel buckets.

"Using Grade 350 XLERPLATE® steel is a competitive advantage for us," concludes Stephen. "We distribute our buckets Australia wide and our customers continue to come back to us rather than our competition. XLERPLATE® steel quality has a lot to do with that."

Fabrication – state of the industry perspective

Sun Engineering looks to global markets

Imports of fabricated steel are a contentious issue, with many Australian fabrication shops feeling the pinch.

Sean McMonagle, Managing Director of Sun Engineering, whilst having overall positive expectations for the fabrication industry, has been noting this trend with interest. Having been in fabrication for 32 years, he is well positioned to provide perspective on the industry.

"Globalisation is the biggest issue currently facing the industry, with imports of fabricated steel starting to impact on businesses," said Sean. "Contractors can go to countries such as China and get fabrication work done for less than the Australian price. Therefore, we are seeing work being brought into the country which we are more than capable of doing ourselves."

Sean is of the opinion that, given the current economic climate, the worst of the impact is yet to come. "There has been a good volume of work available over recent years, meaning that we haven't suffered too much from imports," stated Sean. "However, with the credit crisis and Australian fabrication work drying up, I am concerned imported fabrications will have a more significant effect on local industry."

NEW BUSINESS OPPORTUNITIES

The challenge posed by imported fabrications has led to considerable changes in the Australian fabrication industry. "The upside is the way that local fabricators have been forced to review business processes, making revisions to deal with the impact," commented Sean. "For many years we were happy to deal only with our own backyard. However, imported fabrications have forced us to be more proactive in searching out new business opportunities."

For Sun Engineering one of these new opportunities was to look to the global market. "Given that we were missing out on a tremendous amount of work in Australia, we were forced to start playing in the global field and expand the business," said Sean. "We have new international clients based in countries like Egypt, the USA and UAE. We partner with China to service these clients, but we are focused on keeping our local fabrication shop working and busy."

Looking to global markets is a fairly unique approach in dealing with the threat from imported fabrications. However, Sean is optimistic about future options for Australia-focused fabrication shops and hopes that the pricing gap between local and imported fabrications will close.

"It used to cost less for fabrication work carried out in China," said Sean. "However this is changing with the fluctuating Australian dollar and prices are already starting to get a little more even."

EFFICIENCY DRIVE

The other opportunity for Australian fabricators comes from the efficiency drives due to imported fabrications. "Many fabricators are becoming technically efficient at what they do. Fabricators that reduce prices as a result of their efficiency drives will be well placed as global conditions shift," said Sean.

He sees a large part of this shift coming from countries such as China, where employees are beginning to demand improved working conditions. "China, as a nation, is becoming more socially responsible," comments Sean. "Employees are starting to change jobs in search of higher wages. They are also more focused on their working conditions and prefer to work for employers they consider safe. Any decent fabricator in China will need to have quality and safety systems in place. All these factors will push up their prices."

Sean hopes that eventually we will have a level playing field between fabricators in Australia and developing countries such as China. "I do believe this will eventually happen," said Sean.

In the hotseat with Vince D'Amato

Job title: Managing Director

Number of years with Fremantle Steel: 38 yrs

My role and responsibilities involve: All executive decisions, establishing policy, setting objectives, purchasing steel and monitoring steel stocks.

My greatest working challenge: Maintaining a high standard of excellence in the delivery of quality structural steelwork.

The most important thing I've learned in business is: To look forward and plan for the future

The secret to success is: Work hard and enjoy the moment.

I like steel because: There is an end result and a certain satisfaction in creating functioning structures from the base product.

I start my working day by: Overseeing the yard and workshop.

My favourite pastime: Riding my Harley

My favourite car: My Mercedes CL500

Last time I laughed out loud was: Can't remember cause I laugh all the time!!

My favourite movie of all time: Anything with Jerry Lewis

My favourite food is: Steak and eggs

If I had $1m to blow it would be on: A boat

If you could have one person over for dinner, it would be: Elizabeth Taylor

Favourite holiday destination ever: Japan

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Test your Australian auto knowledge!

1. The Holden Astra and Vectra are known as what brand in the UK?

a) Opel
b) Vauxhall
c) Lincoln
d) MG

2. HSV stands for what?

a) Holden Special Vehicles
b) Holden Secret Vehicles
c) Holden Specialised Vehicles
d) Holden Speed Vehicles

3. Which Japanese brand has production plants in Australia?

a) Honda
b) Toyota
c) Mazda
d) Suzuki

4. In the 1991 and 1992 Bathurst Touring Car Championships, which car did Jim Richards pilot to victory?

a) Holden Torana
b) Ford Falcon
c) Nissan Skyline
d) Toyota Supra

5. What race number was Peter Brock famous for?

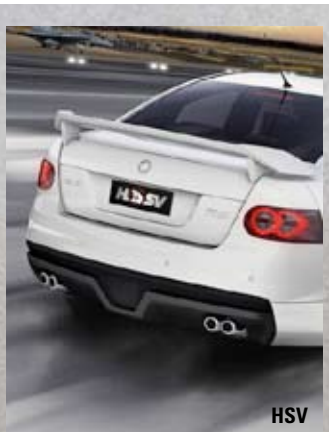
a) 08
b) 02
c) 00
d) 05

6. Which car company came up with the idea of the ute?

a) Holden
b) Buick
c) Ford
d) Chrysler

7. What vehicle was the famous Mad Max Interceptor converted from?

a) Ford Falcon
b) Holden Torana
c) Holden Monaro
d) Ford Mustang



HSV

Answers: **1.** b - Vauxhall **2.** a - Holden Special Vehicles **3.** b - Toyota **4.** c - Nissan Skyline **5.** d - 05 **6.** c - Ford **7.** a - Ford Falcon

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