

Proclad International

The integrated solution to piping requirements

The Proclad International group of companies provides an excellent example of the integration of engineering knowledge and product expertise within a supply chain in order to provide customers with more efficient and cost effective solutions. As a result of a programme of strategic acquisition and investment carried out by BI Group Plc, the specialist engineering group based in Birmingham in the UK, Proclad International Limited has been joined by Induction Bending Services Limited, Hunting Park Engineering Limited and Pipelines International Projects Limited to create an integrated group of companies capable of handling every aspect of pipeline component design, manufacture and supply.

Stainless Steel World reports.

Hot expansion of 16'' long radius 90 degree Elbow

Proclad was established in 1985 as a division of a BI Group subsidiary company. Mr David Neill, who is now Managing Director of Proclad International Limited, developed protective weld cladding systems to surface treat pipeline components used in highly corrosive metal loss environments such as the oil and gas, petrochemical and energy sectors. The automated protective weld surfacing systems apply high integrity corrosion resistant alloys, including Alloy 825 and 625, Alloy C276 and C22, 300 and 400 series stainless steels, to a variety of substrates such as carbon manganese, low alloy, martensitic and ferric stainless steels.

Mr Neill: "Proclad developed unique welding processes for the cladding of valve component internals for the oil tool industry and the innovative techniques proved so successful that surface cladding became an industry standard in the North Sea. Ongoing research led to the cladding systems and processes being developed to clad pipe internals and all associated pipeline components. This became a major market for the company and pipeline equipment and systems clad using the Proclad technology are now installed in all of the major oil and gas producing regions of the world."

As a result of the substantial growth in Proclad's business, it was established as a separate company in January 2002 named Proclad International Limited and relocated to new custom built premises in Glenrothes in Scotland. The relocation is part of a major investment programme that will lead to a significant increase in capacity, with over forty automated weld cladding stations being installed in the new premises. In addition, the building of an extension to the new factory has just commenced which will incorporate specialised heat treatment, NDE, hydro-testing and shot-blasting facilities as well as providing increased floor space for pipe spool fabrication.

PROCLAD WEX

Proclad International's ongoing commitment to research and development has led to the company recently patenting a process for the manufacture of clad co-extruded pipe. This process, called Proclad WEX, involves

the extrusion of a clad billet in order to produce fully metallurgically bonded seamless pipe in 12 metre lengths in sizes ranging from 2" to 30". Proclad WEX pipe can be manufactured in most grades of clad and base materials producing a corrosion resistant alloy with a less expensive backing material. The use of a high strength backing material can allow the use of thinner wall sections and the cladding material can be specifically selected to meet the service requirements. Cladding thicknesses down to 1mm (.04") can be used without any loss of corrosion resistance at the fluid contact surface and, because of the metallurgical bond,

"Proclad technology is now used in all of the major oil and gas producing regions of the world."

any type of elbow or induction bend can be manufactured from standard extruded pipe. "WEX pipe offers superior weldability compared with other clad alternatives and is easily fabricated and can be used in manifold systems. Any instrument tap-ins that are required can be effected with no loss of corrosion resistance and WEX pipe can be easily threaded for use in downhole tubulars. The WEX process is another example of Proclad providing a cost effective engineering solution to meet customer requirements to the highest specification," Mr Neill explains.

INDUCTION BENDING SERVICES

In November 2001 BI Group Plc took the first step in adding to the scope and capability of Proclad International by acquiring Induction Bending Services Limited, which is based in Sunderland in the North-East of England. Proclad and Induction Bending Services had previously worked closely together for several years and had carried out a number of joint development projects, including the introduction of clad induction bends to the marketplace.

Induction Bending Services Limited has the only specialist induction bending facility in the UK and are one of the leading companies in Europe offering this service. The company was formed in 1985 and

Mr David Arbon, one of the co-founders, remains as Managing Director. The company moved to its current premises in 1998 and currently has four induction bending machines covering pipe sizes from 2" up to 30".

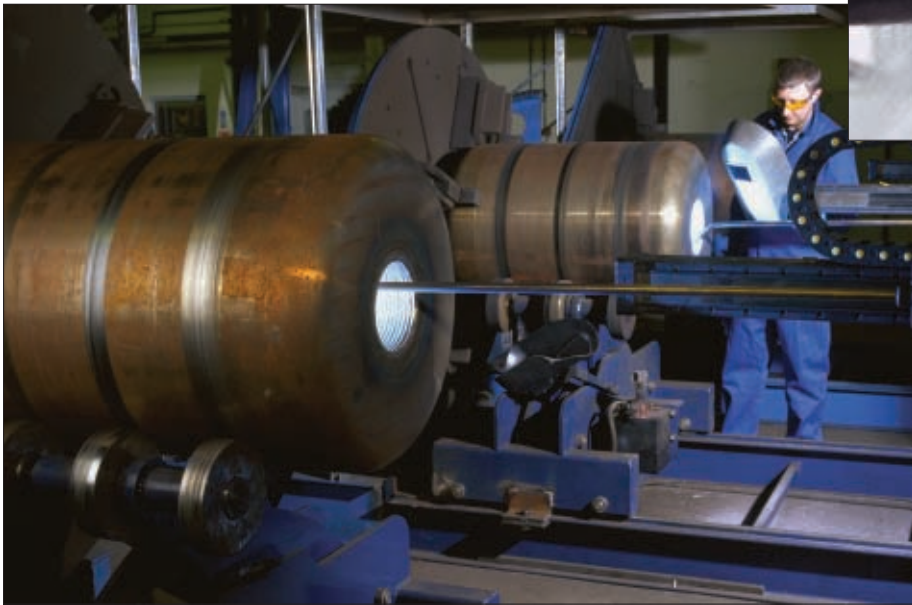
The induction bending process has a number of advantages compared with traditional bending processes. Induction bending does not require any sand fillings or internal mandrels and the induction coil is not in contact with the pipe. The bend radius can be infinitely variable from 3D centre line up to a maximum of 14 metres. Wall thicknesses of schedule 10 up to 2.5" thick can be processed with no machine tool alterations. The quality of surface finish produced by the induction bending process is better than cold bending and fire bending and there is also controlled ovality and reduced thinning. In some cases multiple

formed in 1986 and again one of the co-founders, Mr Allan Whittle, remains with the company as Managing Director. The company is the only independent specialist fitting manufacturer in the European market and is the principal supplier to operating companies in the North Sea.

As with Induction Bending Services, Proclad and Hunting Park Engineering had previously worked closely together for a number of years, aided by the fact that their Glenrothes and Livingston sites are located less than 30 miles from each other. Many joint development programmes had been carried out, including the develop-



Induction Bending of 14" weld overlay clad pipe.



Proclad WEX billets being clad. These billets will be extruded to produce 8" clad pipe.

and compound bends can be produced from a single length of straight tube without the need for butt welding. The elimination of welded or mechanical joints greatly increases the integrity of the finished pipework.

HUNTING PARK ENGINEERING

The next step in the creation of the Proclad International group of companies was the BI Group's investment in Hunting Park Engineering Limited in December 2001. Hunting Park Engineering Limited, which is based in Livingston in Scotland, was

ment of clad elbows, tees and reducers specifically designed to complement Proclad's clad pipe.

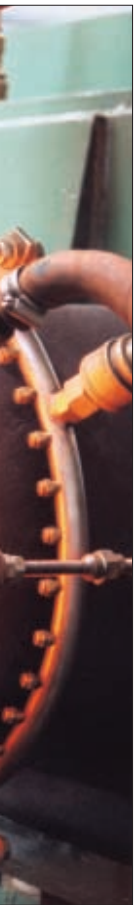
Hunting Park manufacture a standard range of forged elbows, tees, reducers and caps as well as special fittings such as lateral tees, extruded manifolds, guide bar and sphere tees, high pressure manifold fittings, mandrel forged bends, forged seamless pipe and forged high pressure assemblies. The materials used include high yield steels X52-X70, alloy steels, austenitic stainless steels, duplex steels, super duplex steels, clad steels, Alloy 625 and Alloy 825.

PIPELINES INTERNATIONAL PROJECTS

The final link in the supply chain integration was put in place with the acquisition of Pipelines International Projects Limited by the BI Group in January 2002. Pipelines International, which is based in Stone in Staffordshire in England, was established by Mr Jared Ayres in 1989 and he also remains with the company as Managing Director. Pipelines are a specialist purchaser and stockist of pipe, fittings, flanges and other pipeline supplies and have a high level of technical and market knowledge in their area of trading. Over the years the company has grown from simply being a trading operation to become a major European stockist of high yield materials, chrome moly and stainless steels. Pipelines had previously worked very closely with Proclad as the principal material supplier on a number of major projects.

PROCLAD INTERNATIONAL GROUP OF COMPANIES

The formation of the Proclad group



of companies brings together core manufacturing capabilities of weld cladding, forging and induction bending supported by the strength of a major stockist and purchasing operation to provide customers with an integrated, cost effective, engineering solution for all piping components for both clad and non-clad projects. The integration of engineering knowledge and product expertise will allow Proclad to handle every aspect of pipeline component design, manufacture and supply.

In order to emphasize the Proclad identity the companies who have joined the group were renamed in June 2002 as follows:

- Induction Bending Services Ltd – **Proclad Induction Bending Limited**
- Hunting Park Engineering Ltd – **Proclad International Forging Limited**
- Pipelines International Projects Ltd – **Proclad International Pipelines Limited**

In addition to the substantial investment taking place at Proclad International Limited as detailed above, the BI Group have also embarked on ambitious investment pro-

grammes at each of the new companies that have joined the group. Proclad International Bending Limited will shortly start a second shift in order to respond to increased demand for capacity. Proclad International Forging Limited has upgraded all of its major forge presses and has installed five new CNC machining centres. Proclad International Pipelines Limited has moved to larger premises and is substantially increasing the comprehensive range of materials that it holds in stock to meet customer requirements.

Proclad International has also significantly increased its sales presence worldwide in order to provide customers with on the ground technical and sales support in whichever region of the world they are based or working in. Experienced technical sales managers have been appointed in Europe, the Middle East and North Africa, South-East Asia, South Africa and China and an appointment will be made shortly covering North and South America. Customers in any part of the world can place a single order covering all of their piping requirements through their local regional sales manager, secure in the knowledge that it will then be comprehensively project managed within the Proclad International group of companies to ensure on time delivery meeting all specifications.

The Proclad International companies have more than sixty years of combined experience in the pipeline component sector and all of the Managing Directors have been with the companies since they were first established. As an integrated group the companies have common sales, project management, purchasing, quality, accounting, health and safety, shipping and training functions and a consolidated management structure. All of the companies have ISO 9002 accreditation and Proclad International are one of only three companies in the world to be licensed under API specification 5LD for the processing of clad steel pipe.

Mr Neill: "Proclad International has truly achieved supply chain integration. Four manufacturing companies who had worked closely with each other on major projects for a number of years have come together under a single management and ownership structure to create a major specialist engineering business in the pipeline component sector which will provide substantial benefits to customers. Integrating manufacturing and engineering knowledge and product expertise will allow Proclad International to handle every aspect of pipeline component design, manufacture and supply and to offer full piping supply chain project management".

FACTS & FIGURES

Proclad International Limited



Managing Director:
David Neill
Sales Director:
Steven Beveridge

Proclad International Forging Limited



Managing Director:
Allan Whittle
Sales Director:
Roger Nightingale
Production Director:
William Boslem

Proclad Induction Bending Limited



Managing Director:
David Arbon
Sales Director:
Dave Lowder

Proclad International Pipelines Limited



Managing Director:
Jared Ayres

Proclad International Sales Managers

Europe:
Cees Breur
Middle East & North Africa:
Simon Howell
South-East Asia:
Paul Harlick
South Africa:
Eric Brown
China:
Jimmy Tan