



## Manufacturing Pipes to Hard Conditions - a Pemamek solution

Pemamek Ltd delivered highly advanced Column & Booms to Technip in Norway the leading subsea engineering contractor on the Norwegian Continental Shelf.

Technip is specialised in producing oil and gas pipelines onshore, then for later to reel these lines on a reeling vessel. All pipes are delivered in 12 m lengths from the steel mills, and in Technip's production shop the PEMA Column & Booms are used in supporting the submerged arc welding equipment for "double jointing" two and two pipes into 24m lengths. The "double joints" are then coated and finally welded into 1200 meter long stalks before they are reeled onto the reeling vessel.

"Technip is always challenging new technology within welding, since there is a great competition to win jobs within the oil and gas business. We need to have a smooth and efficient welding to meet our clients' time frames for the various projects. SAW is very reliable as well as it is very efficient," explains Mr. Tore Håbrekke, Welding and Site Operations Manager of Technip Norway.

Technip's requirements for welding equipment were tough: "The equipment had to be robust since it is used all day long, some times in the weekends too. And the size was very important to us. Therefore, PEMA met our requirements and the equipment is purpose-built for our plant," Mr. Håbrekke continues.

### Hard and special conditions demand high durability

The oil and gas industry has an extremely high focus on safety and reliability. Commonly these demands are difficult to gain, as the exploration of oil and gas goes further and further to the North, prospecting in deeper waters and working in very hard conditions. The consequences of failures could be radical.

Since Technip is in the reeling business, the pipes are bent over the plastic deformation limits, and there is a high focus on possible defects after having treated the pipelines in this special way. Strict acceptance criteria for weld defects are therefore a part of Technip's routine work day.

### New achievements in production

A smooth and predictable production is needed to meet strict time frames also in offshore business. "If we can maintain a high number of 'defect free' welds per shift, we can keep to our production plans," emphasizes Technip's Mr. Håbrekke. "If we do not meet these, we will face problems with other projects which again would affect to our productivity. These were the main reasons for us to choose Pema products."

"We were very pleased with the service offered to us from Pema. Good follow-up on the project and Finnish people work very well together with us Norwegians. We have long traditions for this. There were no need for numerous meetings: most of the questions were sorted out in the kick-off meeting and during our visit to Pema's production site in Finland."

Mr. Håbrekke was pleased that the project was delivered on time, and they felt that Pema took their concerns seriously and resolved them satisfactorily. "It was important for us to know that Pema had a good tradition in working together with Lincoln. They are one of our main suppliers for welding equipment and consumables, and the interface with them was very much welcomed by Technip."

*Through its offices in Sandvika, Stavanger and Haugesund and spoolbase in Orkanger, Technip employs about 500 people in Norway with annual revenues of 375 - 500 million €. Focusing on pipeline systems and marine operations, Technip in Norway has over the last 20 years become a leading offshore engineering contractor in the development of subsea fields on the Norwegian Continental Shelf. Technip in Norway is involved as EPCI contractor in several significant field development projects in the Norwegian sector of the North Sea.*

[PEMA welding automation](#) is designed by the world's leading specialist in designing and manufacturing welding automation systems, and work-piece handling equipment – PEMAMEK LTD. PEMA product solutions are designed to improve customer competitiveness and productivity for better profits. Pemamek uses and produces hi-tech: utilising the best available robot and automation technology. Established in 1970, an AAA-company Pemamek has constantly strived to supply the best welding automation solutions in the world.

*PEMA systems and comprehensive customer support services are specifically engineered for the heavy engineering, mobile machinery, civil construction, shipbuilding and offshore, industrial boiler, wind energy, and process and nuclear industries. PEMA products and services are used in more than 50 countries around the world.*

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