The Marathon Oil Company awarded Technip Offshore UK Ltd. a contract to weld 15.5 miles (25Km) of 8 inch (203 mm) x 1/2 inch (12.7mm) grade X52 pipe for the Seven Heads contract (led by operator Ramco Oil & Gas Limited). Following completion of the project, Technip will provide gas processing and transportation services for the estimated natural gas reserves of approximately 300 billion cubic feet which is located 21.75 miles (35 Km) to the southwest of Marathon's Kinsale Head field in the Celtic Sea off the southern coast of Ireland.

After months of testing, Technip Offshore UK Ltd contacted UMAX Welding contractors at their Evanton location, where the Lincoln Power Wave® 455M/STT® was selected as the power source for this project. This was the first use of this STT-capable (Surface Tension Transfer®) power source in Europe for root pass MIG welding of the reeled pipe.

A Senior Welding Engineer for Technip Offshore UK Ltd, commented that “in conjunction with gas-shielded flux-cored wire fill and cap, production was up 10-15% together with a 50% reduction in manpower - this resulted in a substantial savings on the project costs”.

Lincoln’s Outershield® flux-cored wire in the .045” (1.2 mm) diameter was used for all hot, fill and cap passes. Shielding gas was a 80% Ar / 20% CO₂ mix. The Power Wave 455M/STT was used for the complete welding cycle on the all pipe butts welded. That was 2,778 welds with a repair rate of less than one percent.

At the peak of production, 111 butt welds were being produced per day, with one pipe butt joint being welded every 5.5 minutes. This is particularly impressive, as specifications for mechanical testing and the welder qualification tests were especially restrictive for this project. The pipe will be reeled onto the CSO Apache reel lay vessel. The pipe is then unreeled from the boat to the sea floor, before spool tie-ins between the wellheads and the manifolds take place to complete the construction project.
10 inch / 6 inch (254 mm / 152 mm) pipe in pipeline for the North Sea utilizing the STT process together with Outershield gas-shielded flux-cored wire. Tie-in welds on the Williams Devils Tower project and BP King West project in the Gulf of Mexico will also be using Outershield wire.

UMAX has also ordered a dozen Lincoln European market LF30 wire feed units, which they will pair up to their existing Lincoln DC-400 power sources. These units are currently being used for all their flux-cored welding requirements.

**WHAT IS NEXTWELD?**

The challenges facing industrial fabricators today are increasingly difficult. Rising labor, material, and energy costs, intense domestic and global competition, a dwindling pool of skilled workers, more stringent and specific quality demands.

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NEXTWELD brings you a series of Process, Technology, Application and Success Story documents like this one. NEXTWELD explains how technologies, products, processes and applications are linked together to answer the important questions that all businesses face:

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