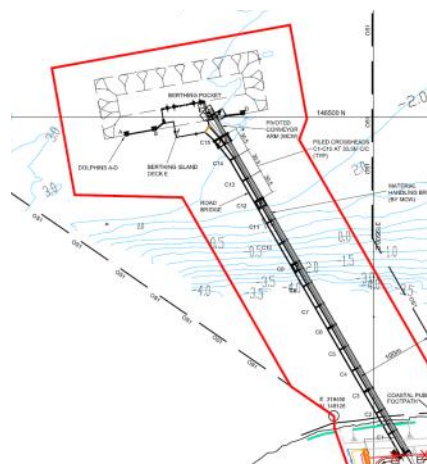


HINKLEY POINT C – AGGREGATE JETTY PROJECT

AGGREGATE JETTY PROJECT

Project Name	HPC – Hinkley Point C – Aggregate Jetty Project
Client	NNB GenCo
Main Subcontractor	Costain Group PLC
Location	Somerset, England
Product	LSAW / SSAW Pipe
Total Tonnage	3,990 MT
Delivery Date	Oct 2016

INTRODUCTION

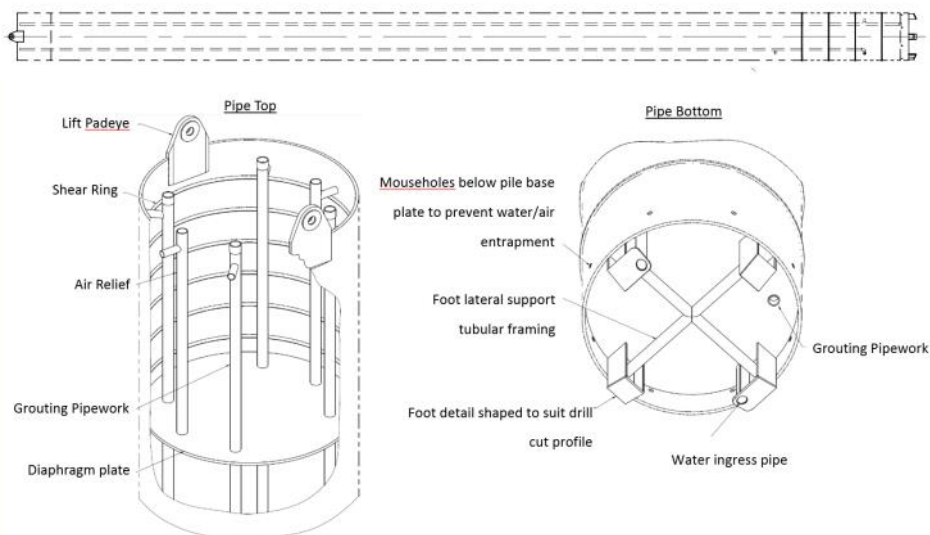


UK EPR is located at Hinkley Point, on the bank of Bristol Channel in Somerset. Two nuclear power stations are currently located on the site: Hinkley Point A (currently decommissioning) and Hinkley Point B (Operating). The new planned power station is Hinkley Point C (HPC).

ESC SCOPE OF SUPPLY

LSAW PIPE

ESC has been awarded with the contract to supply 3,990MT of pipe pile for the HPC temporary aggregate jetty (Berthing Island, Dolphins, and Jetty Bridge). The pipe piles outside diameter varies from 914mm to 3,600mm and various steel grades (S460M, S420MH, and S355J2).



INCOMING RAW MATERIAL

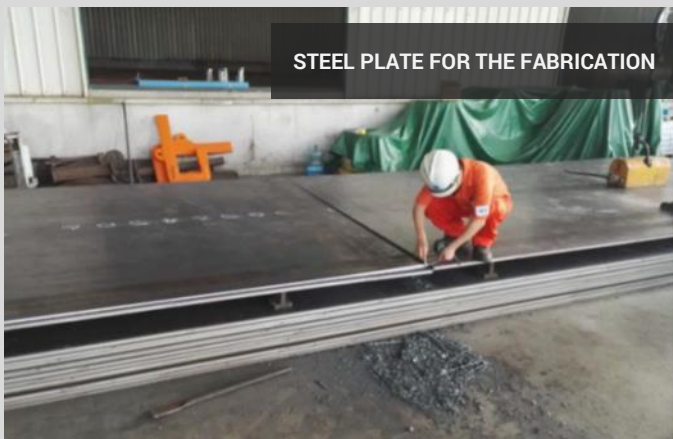
Berthing Island – Consists of SSAW pipe pile with LSAW pile head.

Dolphin – Consists of LSAW pipe pile.

Jetty Bridge – Consists of a mix of SSAW pipe pile with LSAW pipe pile.



STEEL COIL FOR THE FABRICATION OF SSAW PIPE



STEEL PLATE FOR THE FABRICATION



HARD STAMPING ON THE EDGE OF STEEL



SEAMLESS PIPE FOR THE FABRICATION OF GROUT PIPE



ELBOW



HEX HEAD PLUG



FITTINGS FOR GROUT PIPE OUTLET

PIPE FORMING

PIPE FORMING

Sample test plates are taken from each heat number for mechanical properties and



SSAW PIPE FORMING

Production for the SSAW pipe forming process includes coil feeding, beveling, welding, and



LSAW PIPE FORMING



FORMING & WELDING ACCESSORIES

FABRICATION OF ACCESSORIES



WELDING OF SHEAR RINGS

There are two types of shear ring applicable to this project: Shear ring formed by using surface weld of height 15mm x width 30mm. Shear ring formed by fillet weld at a height 20mm x width 25mm square bar.



WELDING OF GROUT PIPE, LIFT PADEYE, FOOT AND DIAPHRAGM PLATE



WELDING INSPECTION, TRACEABILITY AND OTHER TESTING

The production and inspection process is carried out in accordance with EN 1090-2 class EXC3. Generally, 100% of ultrasonic test and 20% of magnetic particle inspection performed on full penetration butt weld; 10% of magnetic particle inspection performed on fillet weld of ancillaries.



Hydrostatic test performed on each grout pipe and grout hose. The test was carried out with the water pressure of 1.5MPa with a holding time of 15 seconds.



During the production process the welding and inspection information are stenciled on the pipe body. A final product stencil marking will be made at the end of the internal surface for each pipe.

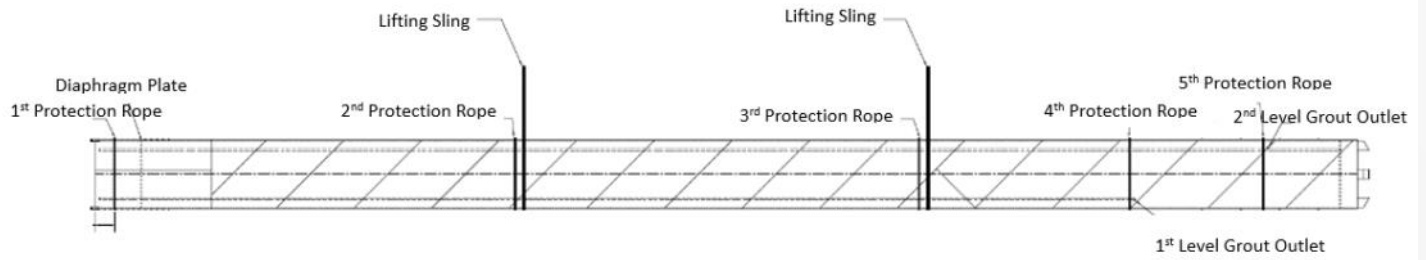


FINISHED PRODUCT

ESC assigned a fulltime qualified inspection QA/QC staff member (AWS CWI) to monitor, witness, and perform inspection in the factory throughout the production process (from incoming raw material to ship loading process) to ensure all products were delivered as per project requirements.



PACKING & STACKING



Careful consideration was made when designing the packing method to prevent damage to the pipe and welded components. Each pipe is protected with protection ropes and two lifting slings are provided.



SHIPPING, STACKING & LOADING

There are a total of two shipments, both shipments carried out in Taicang wharf of Jiangsu at 14th September 2016 (1st shipment) and 15th ~ 17th October 2016 (2nd shipment).

The entire loading and stacking process is fully witnessed by ESC representatives and a third party inspector to ensure products are properly loaded, stacked, and secured to prevent damage during the shipping process.

All products stacked in the wharf yard are padded and stoppers used to prevent damage and sliding. Two different loading processes used: 1) Directly from barge to ship, 2) From wharf yard to ship.



SHIPPING OF LOADED PIPES

