



**John Tracey**  
Specialist Welding

part of **Malin** Group

# **CONTRACT RECORD MSO 243**

**HINKLEY SPECIALIST WELDING**

**Malin**  
Newbuild

# CONTRACT RECORD MSO 243

**PROJECT:** We were contracted by our sister business unit, Malin Newbuild, to deliver key weld procedures for their recently secured two multimillion-pound contract to build multiple huge-scale lifting frames for a new nuclear powerplant in Somerset, England. The procedures consisted of a variety of different grades of steels and needed to be welded in multiple positions.

**CHALLENGES:** One of the procedures had a base material thickness of 100mm and was made of S690 steel. The joining plate was 40mm thick and made of S355 steel. The joint set up was a full pen (K prep) and was welded in the vertical uphill position (PF). The thickness and high strength of the steel used was required to be covered by heating bands, which are used to keep materials at the required minimum temperature for welding. This process is an integral part of the procedure, as if the material cools too quickly, the change in grain structure of the material may cause cold cracking.

**SOLUTIONS:** Each of our procedures were monitored by a welding inspector and either DNV or Lloyd's Register approved, to ensure each step of the procedure was recorded accurately. This included ranges from Amps/Volts/Heat input/Weld times, as well as the amount of welds complete from root to cap. When welding was complete the heating bands could be dropped in temperature gradually to stop rapid cooling affecting the steel and weld; The heating bands were then removed and the procedure had to be left for 72 hours before the UT and MPI of the weld. The procedure was then sent to Doosan Babcocks for testing. The procedure passed full mechanicals, with the procedure then fully documented for the wider welding team.

- **Client:** Malin Newbuild
- **Locations:** Glasgow
- **Date:** November 2022

