



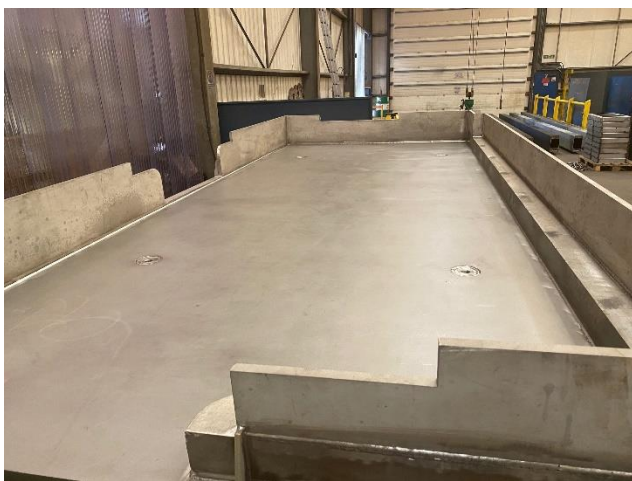
# The BEP Weekly

Issue 34 October 30th

## Engineering progress:

### Waste Handling Table Flows Closer to Manufacturing Completion

A key part of the BEP Waste Handling Process is moving closer to Manufacturing completion with the successful trials to demonstrate water flow on the Waste Handling Table. The table is located within the Waste Treatment Cell and provides an area for the Robots to sort and disrupt Legacy waste (solid Items) from MSSS waste skips and for draining liquors from Legacy waste pond skips into a settling liner.



The table is 4.5m long by 2m wide and made of 40mm thick High Grade Duplex (Stainless) Steel has a 30-year operation life and must provide a flat surface with a fall of 1:90 to drain liquors to one end of the table.

Photo 1 (left) shows the surface finish and flatness achieved over the top surface of the table.

The material selected needed to provide a very strong and corrosion resistant surface but was known to be extremely difficult to manufacture

with extensive LFE available from SL on the distortion that occurs when this material is worked or heat is added. This LFE provided a clear understanding that careful consideration was required to define realistic requirements for the table and select manufacturing techniques that would minimise the energy input to the table.

Photo 2 (right) demonstrates that minimal liquor retention has been achieved.

There has been extensive Collaboration throughout the Design and Manufacturing process. With the strong leadership and support of the Package Manager, Jason Carter this started with the design Lead Engineer, Alan Christopherson who established early engagement with Subject Matter Experts



(SMEs) from both the JV, Brendan McGarry and Dan Corby and SL Dave Campbell, Paul Whiteside & Kristian Stephens to develop appropriate manufacturing techniques and processes.



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A Vendor was selected (WEC Group) that had previous experience in working with this difficult material and under the leadership of their Manufacturing Manager, Adrian Ratcliffe an excellent working relation was established with the team at WEC that allowed for the further development of manufacturing techniques based on the advice from SMEs and the knowledge and expertise of the Vendor.

Manufacturing started with the production of a 1/3<sup>rd</sup> scale test piece to develop the proposed innovative manufacturing techniques and provide a better understanding of the expected level of distortion. This identified a couple of issues that needed to be addressed, but provided confidence that the best option had been selected and Manufacture of the equipment for Plant was allowed to commence.



Photo 3 (right) shows the extensive lattice welding on the underside of the table to provide the required strength.

The collaboration continued with JV & SL Welding Inspectors, Matty Peckford, Gareth Griffiths, Chris Hogan and Justin Cranston and with Quality Assurance/Control Engineers, Martin Banton, Trevor Joy and Paul Evans to ensure that the completed equipment achieved the necessary quality requirements that would be accepted for use on the Sellafield site.

This early engagement, collaboration and consultation looks to have proved to have been worthwhile as the table is now over 95% complete with all the high risk fabrication completed and with only the final peripheral low risk machining steps remaining. The table has achieved a surface flatness that has exceeded expectations of all involved and has allowed for the final high risk, expensive and time consuming machining process across the entire surface of the table to be removed. The water flow trials were the final demonstration to prove that the table encouraged the flow of liquids towards the lower end of the table and minimised pooling.

Well done to all the involved in this package in addition to those above included Bill Jones, Ian Pickup and Jack Cottam at different stages in the design and manufacturing process.

**Mike Silver Principal Mechanical Engineer Cavendish Nuclear (part of the SL Mechanical IC Team)**

## Security Update from Justin Gillies

There has been an increase in the instances of leavers not returning BEP IT equipment, BEP passes and P4/P1 passes when they are demobilised from the project. There has also been an increase in the number of Departure Notifications not being submitted to the Resourcing Team in a timely