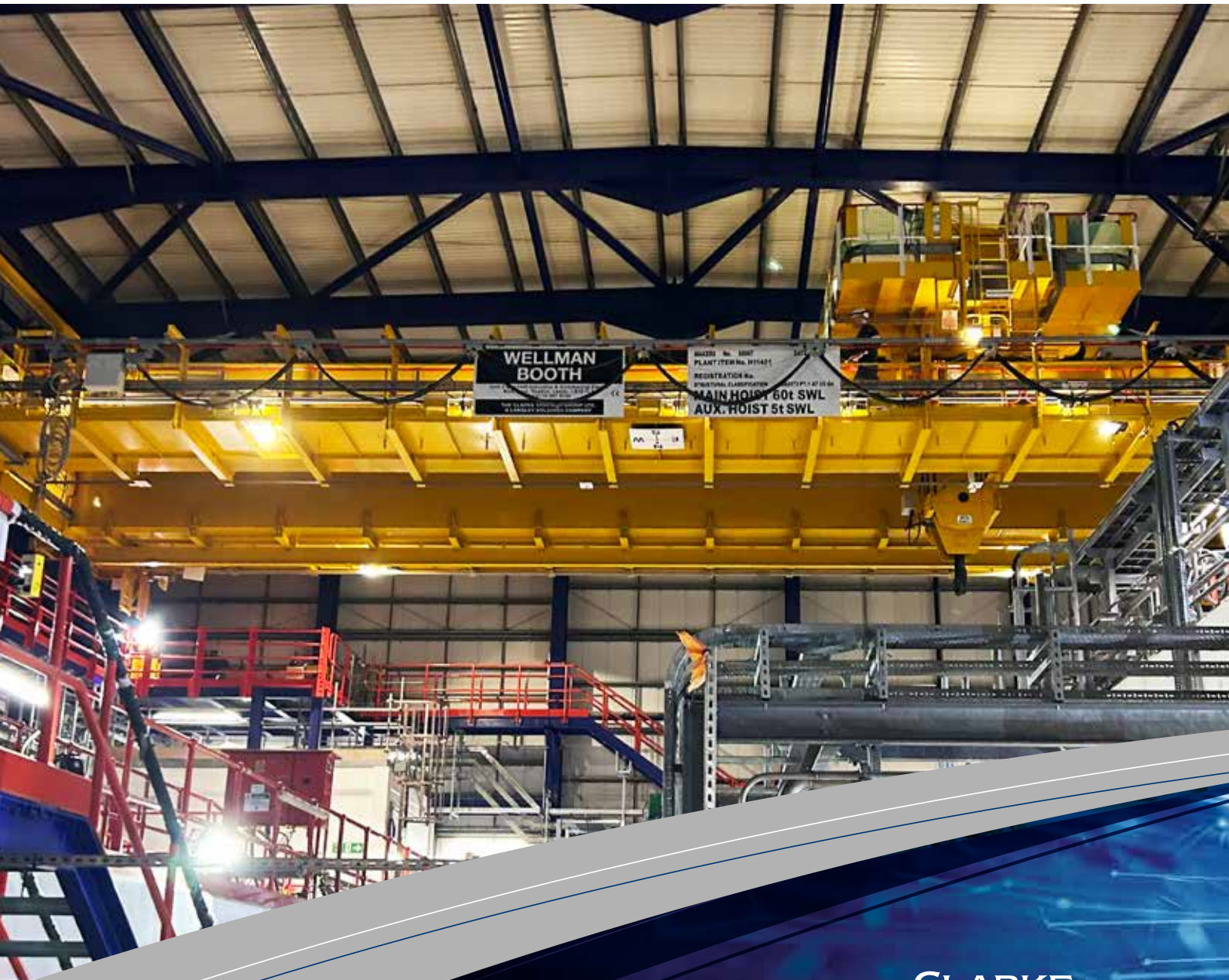




WELLMAN BOOTH

Specialists in the design and manufacture of bespoke nuclear mechanical handling equipment.



**CLARKE
CHAPMAN**

We can handle it.

www.clarkechapman.co.uk



Wellman Booth nuclear fuel and waste handling.

Wellman Booth, is part of Clarke Limited, a subsidiary of Langley Holdings plc. Wellman Booth brings over 170 years of experience in the crane industry worldwide, specialising in project management, design, manufacturing, installation and after-market services for electric overhead travelling and high integrity/severe process special purpose cranes, we also offer consultancy/design services for various material handling projects.

Since the inception of the UK nuclear industry, Wellman Booth has been a key designer and supplier of high integrity drum & flask handling cranes and ancillary lifting equipment, delivering over 70 cranes to this sector for over three decades. Our high integrity cranes, designed to customer specifications, undergo rigorous structural assessments for seismic and shock loadings, ensuring safety in critical installations.

Our cranes are currently deployed in power stations and fuel reprocessing plants worldwide, including Magnox, PWR, and AGR facilities. Engagements with British

Nuclear Fuels, British Nuclear Group, and recent projects with UKAEA Dounreay underscore our commitment to meeting stringent nuclear safety requirements.

Utilising the latest in computer-aided design and stress analysis technology, we ensure total design confidence and value-engineered products that meet the demands of today's discerning market. From conception to completion, Wellman Booth remains at the forefront of advanced crane technology design, emphasising quality and customer satisfaction through our ISO 9001:2000 certified quality management system.



Wellman Booth marine application.

Projects

BNFL Sellafield - Special Purpose Sludge Retrieval Machine

Originally supplied to British Nuclear Fuels - Sellafield in 1989, the specialised Sludge Retrieval machine by Wellman Booth was equipped with a De-Sludging Head for removing low-active sludge from water-filled tanks. It underwent testing at Winfrith before installation.

In 2000, British Nuclear Fuels plc contracted Wellman Booth for a partnership in design, manufacture, and site work. The project aimed to evaluate the

machine's suitability for refurbishment and reclassification as a crane for settling tank decommissioning. Modifications included adding a hydraulic power unit for fitting special tools and enabling crane functions, with a maximum lifting capacity of 2 tonnes distributed across four hoists, each rated at 1 tonne capacity. Due to contamination, the existing machine cannot be relocated, necessitating on-site refurbishment within a shielded enclosure to comply with radiation control protocols.



BNFL Sellafield - Gantry Refurbishment System Sellafield Legacy Ponds Project

Awarded to Wellman Booth by ACKtiv Nuclear, this contract involves designing and manufacturing a specialised Gantry Refurbishing System for BNFL Sellafield's Legacy Ponds Project. It includes structural design, Finite Element Analysis, mechanical engineering, and electrical integration with the existing Skip Handler.

BNFL and ACKtiv Nuclear have formed an alliance to execute the Legacy Ponds Project at Sellafield. ACKtiv Nuclear, a Joint Venture of Carillion Construction Limited, W S Atkins Consultants Limited, and Kvaerner Engineering & Construction UK Limited, collaborates on this endeavor.



Trawsfynydd ILW Store- 2 x 45 Tonne High Integrity EOT Cranes & Mechanical Handling



Following completion by Wellman Booth of a prestigious design contract for British Nuclear Group for:

- Two 45 tonne SWL High Integrity Electric Overhead Travelling cranes
- Two special Grapples Type 'A', and additional Grapples types 'B', 'C' and 'D'
- One 45Te Transfer Bogie
- One Special Inspection Cell Turntable
- One 5te SWL Maintenance Crane
- Special Overpack Inspection Rig
- Crane and Bogie rails
- Special Drum Stillage



A further contract was placed for the complete manufacture, supply, delivery and installation of the equipment at Trawsfynydd Power station in the Snowdonia National Park. The equipment will be used as part of the decommissioning exercise for handling packaged operational Intermediate Level Waste in the new ILW store.

The 45Te cranes which are designed for 100 years operational life, are remotely controlled via CCTV and incorporate special lifting grapples for the safe handling and stacking of drum stillages and overpacks. In-built features to aid recovery in the event of component failure are incorporated. It is anticipated that a full manufacturing contract will be placed following completion of the design phase



UKAEA Dounreay - 26/1.5 Tonne High Integrity Flask Crane

Wellman Booth provided a 26/1.5Te EOT High Integrity Crane, Class A3,Q2,U3 M5, with a 17.72m span and 10.2m lift capability for transporting shielded flasks to and from the loading bay of the DCP Import/Export facility and the posting port loading bay. This crane, featuring an 8-wheel double girder design, is controlled by an independent mobile pendant along the crane bridge, with control cabinets mounted remotely.

Under a contract from Amec Group Limited for the UKAEA Dounreay DCP Project, Wellman Booth supplied, delivered, installed, and commissioned three such cranes, each designed for a 50-year lifespan, with expected equipment replacements within this period.



UKAEA Dounreay - 75 Tonne Hydraulic Hoist

Wellman Booth delivered a 75Te Top Running Trolley, Class AS,Q2,U3 M8 crane, with a 3.925m span and a trunnion-mounted hydraulic hoist cylinder providing a hook stroke of 2.38m. The Hoist unit features a +/- 10deg slew capability and is mounted on skates, allowing for +/-150mm misalignment in any direction. Additionally, the hoist unit includes a fire protection barrier.

Under a contract from Amec Group Limited for the UKAEA Dounreay DCP Project, Wellman Booth supplied, delivered, installed, and commissioned three high integrity cranes. While designed for a 50-year lifespan, it's anticipated that mechanical and electrical equipment will undergo replacement within this period.



UKAEA Dounreay - 3 Tonne Electric Drum Hoist



Wellman Booth provided a 3Te Underslung Hoist, Class M8,L4,T6 suspended from a double beam track at 1.05m centres, with a 6.326m lift capacity. The Hoist unit features special High Integrity Dual Hoist Systems and is equipped with a Drum Grapple (designed by others but supplied by Wellman Booth) for handling overpack drums and 500l drums. It facilitates lifting, slewing, and transporting ILW drums between the transfer conveyor and SWTC flask on its export trolley. The unit includes a recovery system allowing the other hoist

to take over in the event of failure, enabling removal of the drum from the Shielded Operations Area (SOA). Redundant travel drives provide similar recovery capability.

Supplied under a contract from Amec Group Limited for the UKAEA Dounreay DCP Project, each crane is designed for a 50-year lifespan, with anticipated replacements of mechanical and electrical equipment within this period.



Recent Projects

Sellafield Ltd	Semi Goliath Flask Handling Crane 60T Package Handling Crane Waste Treatment Cell Handlers Box Operation Cell Handlers Crane Maintenance Shield Door Multiple Crane Condition and Life Extension Assessments
BAE Systems Ltd	Transfer Cars Dynamic Test Rig
UKAEA Dounreay	EOT Shielded Flask Handler
Babcock Nuclear	Goliath Decommissioning Crane
Ministry of Defence	EOT Crane Control & Safety System Upgrade and Life Extension 80T EOT Crane Concept Design, Submarine Decommissioning Project
Magnox	EOT ILW Handling Cranes Overpack & Drum Handling Grapples



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