Defence Manufacturing Facility & Equipment Design

Overview

PDL provided engineering consultancy and design assurance services to support the development of a major defence manufacturing facility and its associated process equipment. Working within a gated design process, PDL helped ensure that facility layouts, equipment designs and supporting systems were developed in accordance with project requirements, safety expectations and operational needs.

Sector: Defence

The Challenge

The client required support in managing complex facility and equipment interfaces whilst maintaining compliance with stringent technical, operational and safety requirements. This included coordinating multiple stakeholders, integrating vendor-supplied equipment into the facility design, and ensuring that manufacturing processes, mechanical handling activities and supporting services could be delivered safely and efficiently.

Our Solution

PDL provided multi-disciplinary engineering support across the design lifecycle, including:

- Requirements capture, development and management.
- Facility layout development and mechanical handling assessments.
- Service interface management across HVAC, process and EC&I systems.
- Technical specification development for vendor-supplied equipment.
- Equipment compliance assessments against project requirements.
- Support to HAZOPs, machinery risk assessments and safety case activities.
- Leadership and participation in design reviews.
- Technical concession management and design assurance activities.

Outcome

PDL acted as a trusted engineering partner throughout the project, providing independent technical oversight and design assurance to support the successful development of the facility and equipment designs. Our involvement helped ensure that design solutions remained aligned with operational requirements, stakeholder expectations and project governance arrangements, reducing technical risk and supporting informed decision-making throughout the design process.

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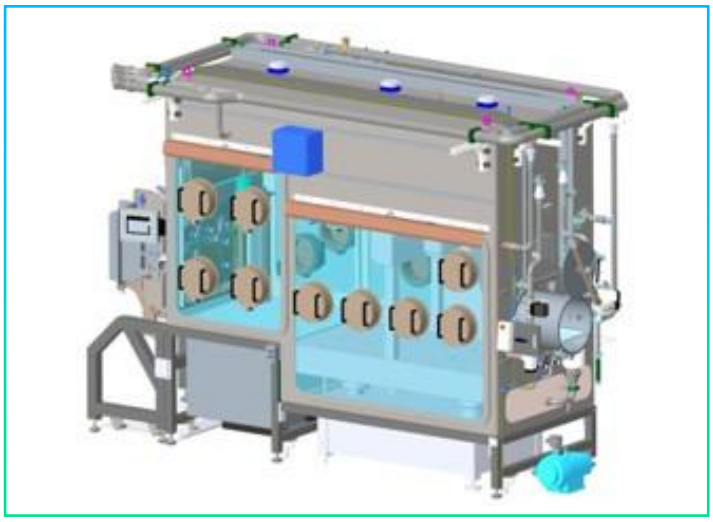

Fig 1: Glovebox

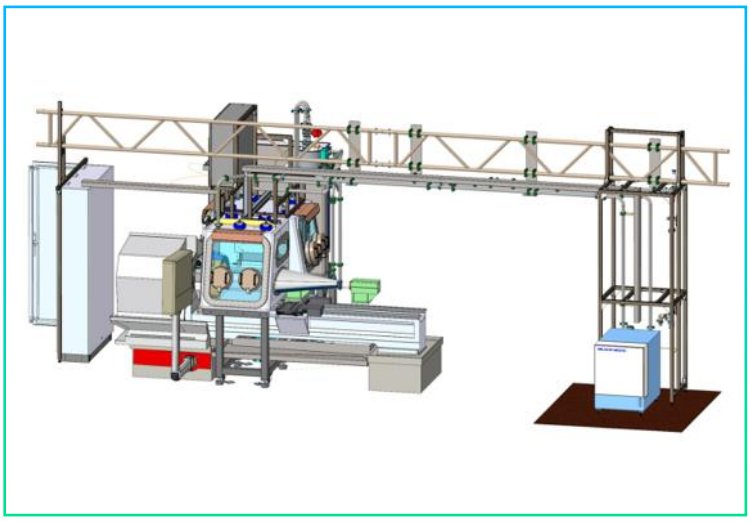

Fig 2: Colchester Lathe

Fig 3: VIM Furnace

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