



NOBLES ENGINEERING

NOBLES

YOUR TRUSTED LIFTING
& RIGGING SPECIALISTS



Customised solutions for your heaviest and most complex
lifting & rigging requirements

INHOUSE CAPABILITIES & EXPERTISE

Nobles has been involved in some of the most advanced lifting projects in Australia requiring exceptional engineering design, manufacture and supply. The Engineering team at Nobles, with many decades of combined specialist lifting experience, offers complete and innovative engineering lifting solutions, utilising advanced 3D modelling and Finite Elemental Analysis (FEA) simulation.

Nobles supports the work of Australian Standards technical committees by offering its expertise and resources to industry representative bodies including the Australian Industry Group. Our professionally qualified team of engineers, provide a comprehensive range of specialised lifting and rigging engineering services nationwide, including:

- Nobles engineered standard products (catalogue)
- Engineering design & manufacture (customised)
- Failure analysis/incident investigation reporting
- Assessments & design verification
- Proof load/destruction testing – test bed capacity: 1,000 tonnes (32m length)
- Custom lifting plans/procedures
- Customer goods strip-down inspections
- Refurbishment (lifting equipment & electronic load measuring equipment)
- Crane assessments (DWP)
- Incident investigations
- Site lifting audits.



INDUSTRY EXPERIENCE

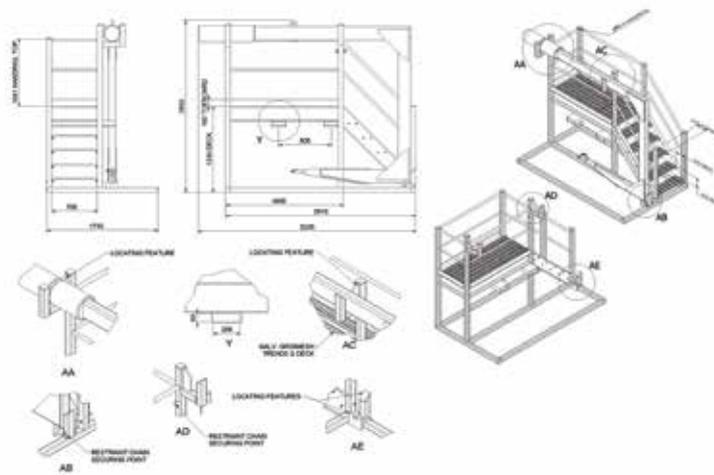
Nobles Engineering team's broad experience across all industry sectors enables responsive solutions to customer breakdowns and emergencies, by creating innovative economical outcomes and reducing plant and equipment downtime.



1. BRIEF

Customer engaged Nobles Engineering to design a C Hook for their particular application, which also called for a stand for storing the lifting device vertically when not in use. Additionally, the design brief required stair access to enable the operator to attach an overhead crane safely.

2. DESIGN



3. MANUFACTURE



PRODUCT & DESIGN EVALUATION

Nobles Engineering are regularly engaged by customers to undertake a complete assessment and design review (reverse engineer) of lifting and material handling equipment to relevant Australian Standards.

Our team conduct product testing, including proof and destructive load testing. Nobles Engineering are able to design load test configurations (and machines) no matter how large or complex and are equipped with a load test bed of 1,000 tonne capacity.



Nobles can engineer and supply customised configurable test weights that are load tested to applicable Australian Standards. This customised test weight was designed and supplied to our customer who required stackable concrete test weights for multi-functional testing purposes.



The Nobles First Aid Box is design registered with Worksafe and complies with AS1418.17-1996 as a workbox. Additionally, it also complies with the requirements of the Qld Tower Crane Code Of Practice 2017 (PN12040), which has some important differences including:

- Greater minimum length, width and height dimensions than a standard workbox,
- Roof mesh plus top to bottom side mesh (excluding an allowable gap size at mid-section),
- Specific first aid signage.

However the Nobles First Aid Box includes important additional features:

- An emergency escape hatch at the rear in case of blocked door,
- The self-closing door opens outwards for ease of stretcher use,
- The door also self-latches in 2 places for operator piece of mind.

Nobles offers options of standard or premium paint spec with Materials Data Record (MDR Pack).



Nobles Engineering design and supply goods-lifting devices for offshore platform applications, such as "shuttle bins". These units can be customised to suit particular customer requirements, including internal compartment configurations for stowage of equipment, as well as customised surface finish. The above unit was supplied complete with a comprehensive Manufacture Data Report reflecting inspection points throughout the design and manufacturing process, including NATA proof load testing to EN12079.1-2010.

AUSTRALIAN DEFENCE FORCE CASE STUDY

Nobles Engineering was sub-contracted to design and manufacture a series of lifting and recovery blocks for heavy to medium vehicle recovery and a 10-tonne spreader beam for the Australian Defence Force. Each of the blocks had stringent design specifications that included target weight, break force, size, applications and extreme durability. The original specification blocks were unable to meet the demands and standards of the ADF or Australian Standard (AS 2089-2008). Nobles Engineering was able to offer an alternative which met these demands.

Nobles applied our experience, knowledge and innovative manufacturing techniques to meet the design brief. After a rigorous process of generating drawings, creating prototypes and passing field trials, our engineering team built the final products.



It was a key requirement that the blocks undergo destructive testing which was done inhouse by Nobles on their 1,000 tonne test bed to prove the blocks suitability. Each one convincingly exceeding their rating requirements and further testing took place to see how far the blocks could be pushed. When each block component was finally destroyed, they each exceeded their designed breaking load by an incredible 50%, proving that these blocks would never let anyone down in the field.

Nobles beat global competition, using Australian world-class manufacturing, our expertise in metallurgy, mechanical engineering design and extensive knowledge of local standards was able to fulfil the customer's strict brief within a tight time frame and budget.

For the full case study head to Nobles website or see our Land Defence Case Study brochure.

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REFURBISHMENT & REPAIR

Nobles Engineering has significant experience and capabilities for the maintenance and refurbishment of customer's equipment. We offer a complete service for refurbishing lifting equipment, including: blocks, beams, mining rope attachments, and more - with all industry sectors covered. By performing initial strip-downs and inspection of customer goods, we assess and report findings and recommendations with our customer in mind.

RECEIVED CUSTOMER GOODS



STRIP-DOWN, ASSESSED AND REFURBISHED FOR DELIVERY



CERTIFICATION & TESTING

Nobles electronics is NATA accredited (Metrology Laboratory) for the calibration of electronic load monitoring equipment and complies with the requirements of AS2193 & ISO17025 for force measuring devices and testing machines.

Our accreditations with NATA, DNV, LEEA, and others, demonstrates Nobles commitment to provide the safest possible choices with a focus on engineering excellence. Our quality processes ensure that lifting equipment tested by Nobles is in accordance with the relevant Australian Standard and on successful completion of the proof testing, will be in a safe and serviceable condition.



ELECTRONIC LOAD MEASURING & MONITORING SYSTEMS

Nobles electronics division has been designing and manufacturing load cells and load monitoring equipment for over 30 years, providing complete solutions as an industry leader. Products offered range from off-the-shelf ready to use products, to bespoke designs & engineered load cell/load pin solutions to meet specific customer requirements.



Nobles broad product range also includes:

- Overhead and mobile crane safety systems
- Weighing/load measuring systems and monitoring/displays
- ECAM underground mine shaft safety systems
- Scotload Smartload® product range
- Static/dynamic wire rope measurement systems
- Hire systems including:
 - Pad-eye testers
 - 4x50t compression (200t)
 - 6x150t compression (900t)





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