

# Trusted to do the difficult things



## Capability Statement

# Our key differences



In order to meet the Mission Critical requirements of our customers, we ensure a responsive and fully integrated approach.

1. A vertically integrated manufacturing capability that provides support to the end-to-end product supply, providing a single point of contact for the supply of fully tested, high integrity castings and tight tolerance machining.
2. We are proud to have over 40 years of experience of supporting safety critical applications in Naval Defence programmes both within the UK and overseas, ensuring a full and detailed understanding of product specifications and associated documentation.
3. With our commitment to excellence, we take pride in completing extensive third party approvals to facilitate the supply of fully compliant and approved products; complemented by approved security and data protection procedures.
4. Our proprietary HPLT casting process ensures that we manufacture the highest integrity castings, exclusively used by the UK MoD in Level 1, Sub-Safe Mission Critical applications. Westley Group developed the no-weld Nickel Aluminium Bronze casting in partnership with the UK MoD. This was instrumental in preventing the need for weld upgrades on Class 1 and Class 2 safety critical castings; addressing the issue of selective phase corrosion of fully seawater-wetted components. Subsequent alloy and process developments led to Westley Group working in conjunction with the UK MoD and BAE Systems (VSEL) to develop a Copper Nickel alloy (Def Stan 01-824 Pt1) with enhanced corrosion resistance. Copper Nickel Chrome is now the alloy of choice for all Level 1 systems, where cavitation erosion is not an issue, and Westley Group are the only approved supplier.

# Our core capabilities

We offer customers a complete engineered solution based on our extensive, vertically integrated manufacturing capabilities.

## Manufacturing services

Full vertically integrated manufacturing capability to support material selection advice, design for manufacture services, reverse engineering capability, casting, forging, machining, assembly, test and documentation management. These capabilities are further supported using state-of-the-art risk reduction methods.

## Casting process

Proprietary manufacturing techniques and leading-edge front end technical capabilities, to ensure the supply of the highest integrity components.

## Pour capacity

Up to 14,000kg and 20 furnace bodies to support the manufacture of over 400 alloys, with a core competence in Cu based Alloys, Ni based Alloys, Cast Iron and Special Steels. Our own test facilities support chemical and mechanical testing and various NDE processes, including a radiographic testing facility.

## Product forms

Capability to manufacture sand cast components, centrifugally cast products and forgings, offering a single source of supply for all your material requirements. Supported by supply chain management expertise to manage multi-form, machined, assembled and tested material packages.

## Casting simulation

In-house, bespoke castings simulation function to enable casting method appraisal and manufacturing risk reduction. We can accept customer CAD files to undertake initial design for manufacture [DFM] assessment and associated design optimisation.

## Machining capability

Two in-house, fully equipped machine shops with Multi-Axis CNC capability. CNC capability includes milling, turning, boring and drilling. Typical maximum turning diameter of 50mm x 300mm long and boring capability of up to 100mm diameter. Supported by CMM, Faro and conventional measurement capability.

## Skilled workforce

Our manufacturing is underpinned by a well-trained and highly skilled workforce; supported by a very successful apprenticeship programme to aid our business continuity planning.

## Supporting processes

Fully certified in-house heat treatment and welding facilities (MIG, TIG & ARC). In-house NDE services, including LPT, RT, PT, UT and more.

## Our key customers



Westley Group and its divisions have an unrivalled history of supporting the supply of mission critical components to the Naval

Defence & Marine, Oil & Gas, Fire Equipment & Safety, Power Generation, Process Equipment and General Engineering markets.



### Babcock International



Westley Group have supplied us for many years with Def Stan components in copper based alloy grades. They have the ability to supply in various stages to suit our requirements, up to and including fully machined, pressure tested and certified ready for assembly.

### BAE Systems



The delivery of the equipment to schedule owes to the efforts of all involved at Westley Group, a true team effort. It was a pleasure to deal with Westley Group. Very impressed with the workmanship on show, great to see that there remain some great British manufacturers.

### Wartsila



Westley Group are a trusted partner and an important part of our worldwide naval supply chain. They supply our various facilities in the UK and worldwide, and are regularly trusted to send direct to our end clients, often on very short lead times.

## The UK manufacturer trusted the world over



Our precision machining and assembly infrastructure completes a vertically integrated manufacturing platform that delivers one of the world's most capable and competitive engineering solutions for heat, wear and corrosion resistant alloys.

Westley Group customers benefit from a fully integrated UK manufacture and supply partner, with four specialist divisions operating out of three in-house foundries and two in-house machine shops.

The unique, vertically integrated manufacturing capability of our static and centrifugal foundries and machine shops, gives full control and flexibility over all aspects of manufacture and supply – enabling us to deliver industry leading performance metrics.

We employ 300 people across three manufacturing centres of excellence, specialising in sand castings, centrifugal castings, finish machining, assembly and supply chain led solutions.

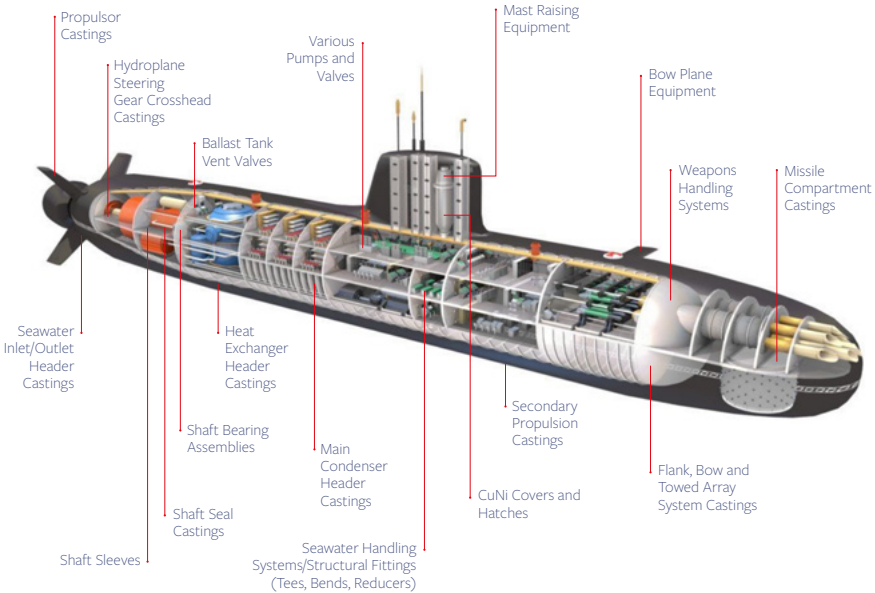




Unrivalled experience in the supply of high-integrity copper- and nickel-based castings and forgings for mission-critical naval defence applications.



Typical Applications  
[SSN/SSBN]



Westley Group:  
A Proud UK History



SSN Swiftsure 1973  
6 boats:  
• New build  
• Spares  
• Sustainment



SSN Trafalgar 1983  
7 boats:  
• New build  
• Spares  
• Sustainment



SSN Astute 2010  
7 boats:  
• New build  
• Spares  
• Sustainment



SSN (AUKUS)  
12 boats:  
• New build  
• Spares  
• Sustainment

\*SSBN Programs are not shown in the above

Westley Group:  
A Global History



SSK Collins Class  
6 boats:  
• New build (Kockums)  
• Spares  
• Sustainment



SSN-A Agreement – 8-12  
boats on shared platform:  
• New build



SSN Barracuda Class  
6 boats:  
• New build



SSK Upholder/Victorious  
Class (UK/Canada):  
• New build  
• Spares  
• Sustainment

\*SSBN Programs are not shown in the above

# Typical Applications: High-Integrity Submarine Castings

Typical Applications by  
Submarine Class and Value:

#	Equipment	Typical SSK	Typical SSN	Typical SSBN
1	Hydroplane steering gear	✗		
2	Propulsor	✗		
3	Shaft bearing assembly			
4	Ballast tank vent valves			
5	Mast raising equipment			
6	Pumps and valves (various fluid control applications)			
7	Seawater handling systems & structural fittings			
8	Weapons handling system			
9	Covers and hatches			
10	Missile compartment components	✗		
11	Flank, bow and towed array system castings			
12	Secondary propulsion castings	✗		
13	Main condenser header castings	✗		
14	Heat exchanger header castings	✗		
15	Shaft seal castings			
16	Shaft sleeves			
17	Seawater inlet/outlet header castings	✗		





# Our industry approval



## Contact details

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