Complex Structural Manufacturing Services
Design, repair, maintenance, and modifications

Oceaneering® Marine Services Division (MSD) Manufacturing specializes in full service design, repair, maintenance, modification, and installation of Hull, Mechanical, and Electrical (HM&E) systems on submarines, deep submergence vehicles, and surface ships worldwide. Located in Chesapeake, Virginia, MSD Manufacturing supports repair and alteration efforts on every class of U.S. Navy submarine platform, including Ship Alterations (SHIPALTS), Ordnance Alterations (ORDALTS), and Temporary Alterations (TEMPALTS). MSD Manufacturing also supports the U.S. Navy’s Landing Craft Air Cushion (LCAC) Service Life Extension Program (SLEP) and performs Craft Alterations (CRAFTALT).
Manufacturing Services
Design, repair, maintenance, and modifications

In addition to supporting submarine and surface ship modernization efforts, MSD Manufacturing has proven experience supporting a variety of complex design, manufacturing, and assembly efforts for the U.S. Navy, U.S. Marine Corps, and others. Successfully completed projects include communication systems, submarine battle management centers, payload trays, Special Operations Forces (SOF) stowage canisters, wet stowage modules, and special support equipment for the Virginia Class submarines. MSD is an ISO 9001:2008 registered company that also holds NAVSEA, Submarine Safety (SUBSAFE), and multiple additional Scope of Certifications.

Manufacturing capabilities:
- Specialized design, engineering, and fabrication for commercial or marine applications
- Structural and sheet metal fabrication
- Complex component machining using boring mills, lathes, and water jetting
- Disassembly/assembly, inspection, repair, machining, and testing of air, water, and hydraulic valves and components
- In-shop repair, overhaul, reinstallation, and testing of ships' weapons and ordnance system components (missile and torpedo handling and launcher systems)
- 10 ton overhead crane in machine shop and 20 ton overhead crane on the main fabrication floor

Manufacturing qualifications:
- NAVSEA Note 5000 SUBSAFE Activity
- NAVSEA Certified Deep Submergence Systems Activity
- NAVSEA Certified Welding Activity, including Level 1/SUBSAFE and high yield steel
- Non-Destructive Testing (NDT) Activity, providing shipboard Level 3 services (UT, MT, VT, and PT) in accordance with NAVSEA Technical Publication T9074-AS-GIB-010/271, Requirements for Nondestructive Testing Methods

Welding capabilities:
- Welding mediums including stainless steel, mild and high yield steel, alloy 625, nickel-copper/copper-nickel, aluminum, and other exotic metals
- Welding processes including Metal Inert Gas (MIG), Tungsten Inert Gas (TIG), shielded metal arc (Stick), flux cored MIG, mechanized twin arc MIG, and automatic pulse MIG
- Brazing and soldering operations

Inspection capabilities:
- Traditional optical alignment and measuring
- Laser alignments and measurements with the FARO® Model Xv2, reducing time by more than half compared to traditional optics while providing increased repeatability and accuracy of up to 0.001 in

In-Shop Manufacturing Equipment

Machining equipment:
- 5 lathes capable of machining objects up to 40 in in diameter and 29 ft in length
- Haas ST-30 CNC lathe capable of machining objects 16 in in diameter by 26 in in length
- 5 Bridgeport® style vertical mills
- Cincinnati vertical mill
- Super J horizontal mill
- Haas TM-3 CNC mill capable of machining objects 16 in x 20 in x 40 in
- Haas VF-5 CNC mill capable of machining objects 50 in x 26 in x 25 in
- Flow water jet capable of cutting complex components and up to a 6 ft x 12 ft x 6 in steel plate

Fabrication equipment:
- Standard Industrial press brake capable of 200 tons of pressure up to 12 ft in length
- Pearson sheet metal shear with a maximum cutting capability of ¾ in thick mild steel up to 12 ft in length
- Timesavers® metal plate/sheet sanding and prep machine
- Stationary and portable drills, saws, and bending/rolling/forming equipment
- 3 ft x 3 ft x 3 ft Industrial oven with cross air flow capable of maintaining temperatures up to 1,000° F / 538° C

For more information visit us at oceaneering.com/MSD