



COGITIC >

# TECHNICAL SERVICES

Manufacturing LEVEL I nuclear submarine components for the US Navy means adhering to the most rigorous quality system on the planet.

**Fortunately for you, we've already done the hard part—and now we're sharing our secrets for success of the mission.**

**It's imperative to global security and stability that the United States ramp up production of Navy nuclear submarines as quickly as possible.** Cogitic has the technical expertise from over a decade of manufacturing critical components like main shaft seals to support America's partners in this endeavor. Having successfully completed hundreds of engineering-driven projects in the Navy Nuclear field, our services will be invaluable to any manufacturer looking to take on this demanding work.

**By heavily investing in our people, systems and procedures over the last decade,** we've been able to condense extremely complicated machining, welding, and testing requirements into something we can train your team to execute efficiently. Specializing in machining of HRSA (heat resistant super alloys) and assembly of critical systems, our manufacturing, inspection, and testing procedures have been designed and calibrated to perfection.

**Our in-house engineering team can support you with everything** from new product design, optimizing designs for manufacturing, submitting technical justification of waiver requests and other highly complex engineering functions.

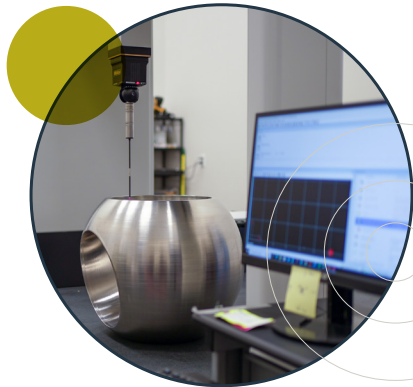
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Cogitic.net

# Get direct access to the technical expertise you need to start manufacturing components and assemblies for the biggest shipbuilders in the world.

As a longtime partner to Northrop Grumman Marine Systems, General Dynamics Electric Boat, Newport News, and other top players, Cogitic's technical services team will save you thousands of hours of work and worry.

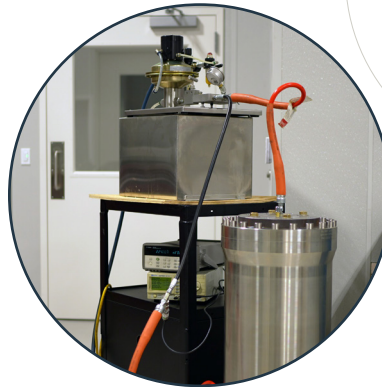
## Manufacturing Capabilities

- 5 axis mill-turn (up to  $\phi 60'' \times 72''$ )
- Heavy turning ( $\phi 32'' \times 200''$ )
- Wire and sinker EDM
- Deep hole drilling
- Cylindrical, jig and surface grinding
- Lapping, honing and automated polishing
- Pallet systems allowing for unattended operation
- On-machine probing and in-process dimensional validation
- Automatic tool setting (on-machine and off-machine via pre-setting)
- Complex assembly of small to medium size systems (mechanical, electrical and opto-mechanical)
- Characterization of in-service components and assemblies
- Repair, rebuild and validation of assemblies (seal rings, ball valves, strainers, valve components, etc.)



## In-House Inspection

- Dimensional metrology expertise for all features
- Large format CMMs
- System 21/22/23 thread gauging
- Long Form 3rd party calibration



## Material and Product Testing

- Positive material identification
- Hydrostatic
- Flow and acoustic
- Gas leakage
- Chemical and mechanicals
- Thermal shock
- Temperature and humidity



## Quality Management Systems

- EB2678
- MIL-I-45208
- MIL-STD-45662
- ISR-1
- STR9000
- AS9100
- ISO 9001