ABS RULES AND GUIDES FOR NAVAL SHIPS

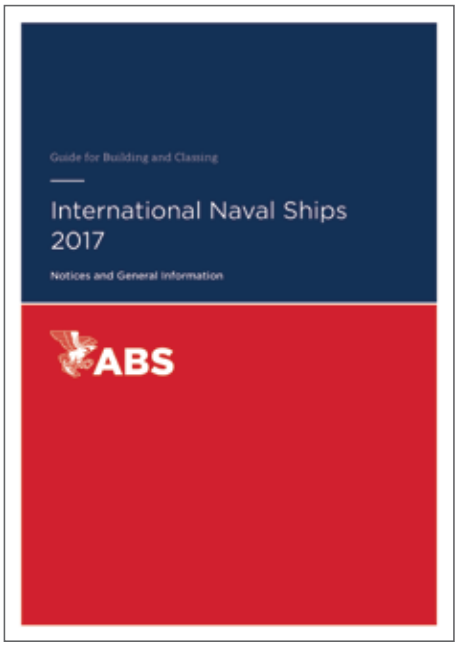
ABS has developed Rules and Guides specifically for naval ships, based on their unique design, structure and purpose. They are applicable to ships owned and operated by Governments for noncommercial purposes on missions related to safety, security and defense.

RULES AND GUIDES

ABS develops Rules and Guides, as well as incorporates new technologies in a continuous improvement cycle, serving the industry's needs. These Rules and Guides are used by ABS to provide a ship class design review and to also provide recommendations on selecting the most appropriate Rules, standards, notations and specifications. ABS Rules and Guides for Naval Ships are:

- International Naval Ship Guide
- High-Speed Naval Craft (HSNC)

While not unique to government application, ABS Rules for Building and Classing Steel Vessels (SVR) and Under 90 Meter Rules can be applied to some government support vessels.



INTERNATIONAL NAVAL SHIP GUIDE

The ABS *Guide for Building and Classing International Naval Ships* (INSG) is applicable to non-nuclear displacement type monohull surface ships. It addresses hull, mechanical and electrical systems specifically adapted to combatant and noncombatant vessel requirements in areas such as:

- Survivability
- Mission and system requirements and interfaces
- Interpretations of statutory requirements

The INSG allows flexibility in tailoring the requirements as needed, typically to become a part of a comprehensive certification matrix, for combination with portions of other Rules, to be used in conjunction with Naval Administration standards, or to accommodate project support as part of the acquisition process, which in many cases is very complex.

In addition, Statement of Compliance reviews/surveys are offered as third-party certification by ABS to criteria other than the Rules (e.g., builder's specifications).

HIGH-SPEED NAVAL CRAFT

HSNC recognizes military use and specific design features while maintaining a basis in commercial design standards. It was developed using ABS *Rules for Building and Classing High-Speed Craft* (HSC), SVR and IMO *International Code of Safety for High-Speed Craft* (HSC Code).

HSNC combines various requirements and standards into a single, better source reference and includes the following:

- Hull, mechanical and electrical systems
- Subdivision and stability requirements
- Mission system interface with vessel

HSNC was developed as a collaborative partnership between the U.S. Navy and ABS. In the interest of keeping design and construction rules for naval craft current, HSNC was last updated in February 2017. High-speed craft are defined as $V \geq 2.36\sqrt{L}$ where V is the vessel speed in knots and L is the vessel length in meters.

Requirements have been specifically developed for high-speed vessels (i.e. light structures), which are often constructed of steel, aluminum or composites. Typical high-speed vessels include:

- Offshore patrol boats
- High-speed transports
- Small coastal patrol crafts

Craft Type	Applicable Lengths
Mono-hull	<130 m(427 ft)
Multi-hull	<100 m(328 ft)
Surface Effects Ships (SES)	<90 m(295 ft)
Hydrofoil	<60 m(197 ft)

NOTATIONS AVAILABLE

✠ A1, NAVAL COMBATANT

- Primary mission involves own-vessel weapons in higher-threat environments
- Cruisers, destroyers, frigates, corvettes

✠ A1, NAVAL FORCE PROJECTION

- Primary mission involves conveyance of seagoing craft and aircraft in higher-threat environments
- Aircraft carriers, helicopter carriers, amphibious assault vessels

✠ A1, NAVAL SUPPORT

- Vessels intended to operate in lower-threat environments
- Fleet replenishment, landing, supply, mine hunters, mine sweepers

✠ A1, NAVAL CRAFT

- Vessels intended for higher-speed, shorter-range operations
- Patrol craft, fast attack craft

✠ A1, SUBMERSIBLES, DIVING SYSTEMS, ROV SYSTEMS

- Built to requirements of ABS *Rules for Underwater Vehicles, Systems and Hyperbaric Facilities*

DIVE SUPPORT VESSELS (DSV), ROV VESSELS, DSV CAPABLE AND ROV CAPABLE

- Vessels intended to support multiple diving systems

OPERATIONAL ENVELOPE (OE)

- Structure has been reviewed for particular operational envelope

SAFEHULL DYNAMIC LOAD APPROACH (SH-DLA)

- High-speed craft with enhanced structural analyses

THE ABS NETWORK

ABS consists of surveyors, engineers, researchers and regulatory specialists operating from more than 200 offices in 70 countries around the world. A dedicated Naval Engineering Office in Houston and vast experience with government ships makes ABS an ideal partner for providing classification and related services.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