

عنوان مقاله:

Proposing New Criteria for Submarine Seakeeping Evaluation

محل انتشار:

پانزدهمین همایش صنایع دریایی (سال: 1392)

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خلاصه مقاله:

This paper proposes some selections for seakeeping performance criterion for analyzing the submarine seaworthiness behavior in surface draft and snorkel condition. In snorkel condition, only snorkel mast is above the water surface. In submerged condition, the submarine is far from the sea surface and ocean waves so that seakeeping is not important and is not discussed. Seakeeping criteria for several kinds of ships such as merchant and Naval ship, single hull and double hull with different operations, are separately defined but there is not any obvious criterion for submarines specially for Naval submarines. The scope of mission, systems and devices restrictions, hull shape, hydrostatics and stability properties are essentially different. For ships there are twelve criteria for seaway performance analysis. This paper, by a restatement and review on twelve criteria for ship, proposes some new criterion for submarine. These criteria are separately presented for surface condition and snorkel condition because the missions and operational systems, propulsion system, stability condition, draft and wave moments in two conditions are different. thus there is two separate criteria for two conditions. Methodology in this paper is based on the authors experiences in submarine design and test in the sea, a knowledge on submarine devices and systems and Seakeeping modeling in paramarine software

کلمات کلیدی:

seakeeping, seaway, submarine, ship, motion, surface, submerge, snorkel, RAO, SOE, criteria

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