

ABSTRACT

COMPOSITE MATERIAL-BASED LIGHTWEIGHT STRUCTURAL MEMBER HAVING INTEGRATED PLATE REINFORCEMENT, SHIP DECK STRUCTURE MANUFACTURED USING SAME, AND METHOD FOR MANUFACTURING COMPOSITE MATERIAL-BASED LIGHTWEIGHT STRUCTURAL MEMBER HAVING INTEGRATED PLATE REINFORCEMENT

Disclosed are a composite material-based lightweight structural member having integrated plate reinforcement, and a ship deck structure manufactured using the same. The composite material-based lightweight structural member having integrated plate reinforcement, according to the present disclosure, performs the basic function of plate reinforcement by having a plurality of protrusions formed at regular intervals on the lower surface of a flat plate part, wherein the protrusions are produced so as to be integrated into the structure without a separate joining process such as welding or bolting, offering the advantages of being ultra-light and thin while exhibiting excellent structural performance and enabling the manufacture of a long-span structure, and thus can be used universally not only as a thin plate structure for a ship but also as a construction material.

Fig. 2