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## Arc augmented laser technology for complex hull structures production in various spatial positions

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The shipbuilding industry requires high-performance production technologies for the heavy gauges. One of the key tasks in advancing of hull production technology is a minimization of welding deformations and simultaneous provision of high production performance. Anarc augmented laser-arc welding technology which provides higher productivity, improvement of production effectiveness and reliable quality of welded joints is the most promising technology for this task. Results of welding process simulation and experimental researches fulfilled on the preproduction models of technological complexes developed by JSC SSTC (based on fiber lasers up to 25 kW power) are presented. The welding technological processes for shipbuilding steels 7-40 mm thickness in various spatial positions were designed (including approved by qualification agency Russian Maritime Register of Shipping (RMRS)). Implementation of arc augmented laser technology for complex hull structures production allows to achieve a new level of productivity and manufacturing of structures in modern shipbuilding.

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