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ПРОЕКТИРОВАНИЕ СУДОВ

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CONTENTS

This article offers method to define actual position of equipment mounting surface in relation to external mounting surfaces during installation in space-limited environment such as vessel compartment.

Keywords: dimensions, assembly, installation technology, mounting surfaces, local control network.

M.N. Zelenin, R.P. Zhivotovsky, V.V. Badogin. V.P. Kulikov. Development of production and installation procedure for foundations of special-purpose equipment of large surface ships

This article reviews fabrication and installation of foundations onboard the ship. Main stages of welding and assembly works have been highlighted. Expected welding deformations have been estimated for each stage using finite elements method. Calculation results were used as basis for development of production procedures aimed to decrease and to compensation foundation deformations after welding comprising the fabrication stage. This article aims to develop procedure of welding and assembly works to ensure retention of foundations shape and mutual position within preset tolerance limits.

Keywords: assembly, welding, installation, foundations, special systems, welding deformations.

E.E. Lyakhovsky. Flexible planning system for shipboard wiring works.

The author hereby generalizes practical experience of JSC «JPA Arktika» in application of flexible management for wiring works planning. Requirements to control system of ship project have been highlighted. This article describes approach to execution of works based on three-month planning gap and offers business-like procedure of planning by engineering and economic teams of electrical engineering company. This article also describes sequential decomposition procedure of inventory items comprising the production planning. The author offers to use the implementation experience of flexible control and planning methods at shipbuilding yards.

Keywords: wiring facilities, wiring works, flexible control methods, planning.

V.S. Kotov. Additive technologies in world shipbuilding industry: application experience

This article analyzes experience of additive technologies application in world shipbuilding industry. The author defines application features of 3D-printing procedure in production of: propulsive system components, hull structures, casting moulds, dummies and special tools. Separate category for application of additive technologies in shipbuilding and shiprepair industry has been substantively described. The author also reviews experience of practical application of new technologies in scope of repair and production which is equal and sometimes above conventional production methods of various parts in shipbuilding and engine building industry.

Keywords: shipbuilding, shiprepair, additive technologies, 3D-printing

SHIPBOARD EQUIPMENT

E.G. Berestovitsky, Yu.A. Gladilin, A.M. Yaschenko. Noises and vibrations of case and console electronic equipment onboard the ship.

Reduction of noise and vibration emitted by shipboard equipment is one of major design and production issues. At presence, functional performance of control systems keeps increasing together with heat emission of the equipment, thus requiring more efficient and therefore noisy forced cooling. One of solutions is development of technical designs simultaneously ensuring efficient protection against mechanical impacts, low noise and optimal thermal balance inside the device.

Keywords: shipboard case equipment, console electronic equipment, noise, vibration, forced cooling, thermal balance.

This article describes guard boats ordered and built in Finland for the Russian Navy during the First World War in 1914—1918.

Keywords: history of shipbuilding, naval shipbuilding, guard boats, acceptance trials.