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# SUDOSTROENIE 1 2019

## /SHIPBUILDING/

(842) November–December  
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### AT SHIPBUILDING YARDS

#### SHIP POWER PLANTS

***Polovinkin V. N., Baranovsky V. V., Kolodyazhny D. Yu.* Estimating feasibility and development methods of shipboard gas-turbine motor of 5th generation.**

This article analyses current development and production state of domestic gas-turbine motors and adoption of new generation gas-turbine motors by foreign power engineers. The authors adduce arguments regarding feasibility and available methods for development and production of advanced domestic shipboard gas-turbine motors of 5th generation.

**Keywords:** gas-turbine motors, power companies, working medium parameters, ships Russian Navy, main power plants, circuit design, shipboard machinery.

***Tokarev L. N.* Methods to increase electric capacity of ship propulsion system up to 10–12 mW.**

The author hereby reviews methods aimed to increase electric capacity of ship propulsion system up to 10–12 mW at 1000V maximum voltage by using dual-winding generators.

**Keywords:** electric propulsion system, ship power plant, dual-winding generator, electric propulsion motor.

#### SHIPBOARD EQUIPMENT

***Gerasimov N. I., Grachev I. V., Lisitsky A. M.* Loading heavy-weight assembly units of power equipment and shipboard equipment into ship compartments: technological features.**

The authors review influence of jigs and fixtures production and installation tolerances on handling of power plant sub-assemblies, alignment and operability of loading device elements, stability of assembly unit and pull force required to shift the item from the stand to ship compartment. This article contains estimated lifting capacity of load bearing jigs and fixtures and recommended installation procedure of their main elements.

**Keywords:** assembly unit, ship power plant, load, alignment, jigs and fixtures.

***Bayov A. S.* Plasma technologies used to recover and strengthen shipboard equipment components.**

This article reviews the essence of plasma coating procedure, list of items to be recovered and justification of the same, capabilities of plasma and plasma-ultrasonic technologies and modular approach to their construction, recovery methods and parameters for shaft type items.

**Keywords:** plasma torch, list of recoverable items, plasma and plasma-ultrasonic processes, modular synthesis of recovering technologies.

## SHIPBUILDING ORGANIZATION AND TECHNOLOGY

### ***Budnichenko M. A., Kuzmin V. V. Electronic technologies at shipbuilding yards: application experience.***

The author hereby describes advancement of interaction between ship projecting teams and companies and application of new electronic technologies.

**Keywords:** shipyard, information exchange, electronic technologies.

## ECONOMY AND FINANCE

### ***Gritsan A. B., Kuznetsov A. A., Plotnikov A. M. Advancement of ship pricing mechanism using computer-aided technologies.***

Modern practice of ship pricing proves necessity to establish pricing mechanism for ships constructed under state defense order considering ship specifications and production efficiency. The authors review essential elements, functioning and development trends of the above mechanism.

**Keywords:** market pricing mechanism, shipyard competitiveness, ship performance, simulation modeling, static modeling, computer technologies.

### ***Chepelenko O. A., Charupa V. M. Legal regulation of pricing for production supplied under state defense order. Pricing and finalization issues.***

The authors hereby analyze pricing issues for production supplied under state defense order. In order to increase price determination accuracy and justify the same, the authors propose to develop inter-departmental documents defining procedure of technical-and-economic departmental pricing expertise to be conducted.

**Keywords:** legal regulation, pricing, state defense order, technical-and-economic expertise.

## SHIP EXPLOITATION

### ***Klyakhin V. N., Chulkin S. G., Mineyev A. S., Fomichev A. B. Using system analysis methodology to design shipboard decision support systems.***

The author hereby represents methodology based on system analysis provisions and recommended as tool for design of decision support systems used to solve ship control issues by means of available shipboard equipment.

**Keywords:** decision support system, shipboard equipment, methodology.

## INFORMATION SECTION

**«Armatit» yard – 140-years anniversary! (65). Foreign software share must be reduced (67). Work for the profit of industry (68). Barbanel B. A. Russian RPO of shipbuilders in the name of academic A.N. Krylov: youth policy at current shipbuilding development stage (69). Foreign information (71). Exhibitions and conferences in 2019 (73)**

## HISTORY OF SHIPBUILDING AND FLEET

### ***Afonin N. N. First torpedo ships of Russian Navy – «Pylkiy» and «Poslushny».***

The author tracks construction history of torpedo boats «Pylkiy» and «Poslushny» – two most famous torpedo boats of «Sokol» class in the history of Russian Navy.

**Keywords:** shipbuilding history, naval history, torpedo boat, Russian Navy.

### ***Barbanel B. A., Koneyev A. N., Fedulov S. V. Design and production of submarine «Dekabrist»: usage of foreign experience.***

The author narrates about usage of foreign experience for design and construction of first Soviet submarine «Dekabrist».

**Keywords:** naval shipbuilding history, fleet history, submarine, design, foreign shipbuilding experience.

**Kuznetsov L. A. Defense of the Leningrad: destroyer «Opitny».**

The author tracks construction history of P.45 destroyer «Opitny» and narrates about its participation in lifting the siege of Leningrad in January, 1944.

**Keywords:** shipbuilding history, destroyer, siege of Leningrad.