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**ПРОЕКТИРОВАНИЕ СУДОВ**

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**СУДОВОЕ  
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**ИСТОРИЯ**



# SUDOSTROENIE 4 2016

## /SHIPBUILDING/

(827) July–August

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### **Amendments to fishing law were taken**

#### **AT SHIPBUILDING YARDS**

**Jubilee of Academician I. D. Spassky**

#### **CIVIL SHIPBUILDING**

***Khaustov A.N.* New Russian ice-breakers**

***Amosov A.G.* Chief designer V.M. Vorobiev and his projects**

***Yu. N. Myasnikov, V.G. Horoshev.* Advancing central control system of power plant at offshore nuclear power plant**

Worldwide operation experience of nuclear power plants (NPP) indicates that methods and means of technical diagnostics play an important role in improvement of their safety and provide transition from scheduled maintenance and repair to operation as per current technical state. Upon that, diagnostics means must not only maintain reliability and environmental safety of NPP-related equipment but also minimize «human factor».

**Keywords:** offshore nuclear power plant, technical diagnostics, environmental safety, «human factor» .

#### **NAVAL SHIPBUILDING**

***D.L. Zverev, O.B. Samoilov, V.I. Alexeev, V.Yu. Galitskyh, O.A. Morozov, A.I. Romanov.* Prospects for establishing the active zone for full ship's life cycle.**

The authors hereby review prospects for establishing the permanent active zone for the full life cycle of nuclear powered submarine. This task can be solved by applying close-packed cassette structure similar to the same used in pressurized water reactors.

**Keywords:** nuclear power submarine, active zone, life cycle operation.

***F.R. Sagaidakov, S.K. Guryanov, A.A. Zaytsev, K.S. Sariev.* New technologies: guided missile destroyers of «Zumwalt» type in US Navy.**

This article contains data on design and construction of guided missile destroyers of «Zumwalt» type used as test platforms for developing innovative technologies and for consequent building of surface ships capable to effectively operate both in open sea and littoral areas.

**Keywords:** guided missile destroyer, innovative technologies, electronic equipment, unified electric power plant, armament, architectural features

## SHIP POWER PLANTS

**V.T. Matveenko, V.A. Ocheretyaniy. Energy efficiency of fully-variable gas-turbine motor in ship propulsion system.**

This article represents survey results for fully-variable gas-turbine motor with intermediate gas heating and overexpansion turbine. Due to gas temperature control beyond combustion chambers, the motor has persistently high performance factor in variable operation mode.

**Keywords:** gas turbine motor, overexpansion turbine, intermediate gas heating, variable mode.

**V.N. Timofeev. Application of microprocessor controller in operating systems of marine diesels.**

The author narrates about development of temperature control device for working media using microprocessor controller.

**Keywords:** marine diesel, microprocessor controller, cooling system.

**P.G. Plavnik, E.Yu. Lerman. Construction of diesel and ships - two sides of the same problem.**

The author hereby analyzes an issue related to construction of domestic diesel engineering and shipbuilding.

**Keywords:** production, diesel technology, trials.

## MARINE EQUIPMENT

**A.V. Mironov, E.V. Naidenov. Remote ship damage control.**

Using computers, video, global radio network and equipment for transmission of large data packs to demonstrate possibility to develop visual-aided remote control systems against ship damage at sea, operated by onshore specialists.

**Keywords:** ship video systems, satellite and mobile communication, visual monitoring, remote control systems.

## SHIPBUILDING ORGANIZATION AND TECHNOLOGY

**V.B. Solomatov, E.V. Osokin, I.N. Labutin. Experience in development and implementation of automated welding lines for shipbuilding industry.**

The author narrates about developments made by JSC SSTC for automation of Russian shipbuilding and shiprepair industry. Presented are samples of modern automated equipment of Russian origin developed by JSC SSTC as part of import-replacing program together with Saint Petersburg Polytechnical University, MSTU named after N.E. Bauman, and CJSC RPC ITS.

**Keywords:** automation, shipbuilding, shiprepair

**P.A. Kuzmenko, O.V. Khinskaya, V.I. Kuzmenko V.E. Utkin, S.V. Tkachenko. Russian equipment for automated dozation, mixing and feed of two-component high-dense polyurethane compounds.**

This article reviews Russian equipment for automated dozation, mixing and feed of two-component high-dense polyurethane compounds and advancements of the same.

**Keywords:** polyurethane articles, casting machines, automated batching.

**V.N. Kravchishin, D.B. Kabanov, V.N. Shevyakhov, D. Yu. Fedorov. Labor quota rating system in shipbuilding industry. Current state and future prospective.**

JSC SSTC made proposals on creation and implementation of labor quota rating system for shipbuilding industry together with development of regulatory and procedural guidelines.

### **SHIPREPAIR AND DISPOSAL**

**S.V. Dobrovenko, V. Yu. Grabelnikov, S.G. Gabrielyan.** Theoretical and practical surveys to define most effective methods and means for extinguishing of titanium used for construction of nuclear powered submarines.

The authors hereby review results of surveys on behavior of titanium in various gas media within 30-1500 degrees temperature range, influence of heating speed on kinetic parameters of titanium oxidization. Given is solution of math task on inflammation of infinite titanium plate. Proposed are most effective fire extinguishing means for titanium.

**Keywords:** NPS repair, fire extinguishing, means and methods for fire extinguishing, titanium, surveys, calculation.

### **INFORMATION SECTION**

**Representative office of JSC SSTC opened in Vietnam. Development of fishing vessels construction. RMRS competition results. Foreign information. «Azipod» in LK-25**

### **HISTORY OF SHIPBUILDING AND FLEET**

**G.A. Grebenshikova.** Some structural features of 66-cannon ships of Baltic fleet.

The author narrates about features of 66-cannon ships in XVIII century.

**Keywords:** design, construction, building, Russian fleet in XVIII century.

**B.D. Klevakin. I.F. Alexandrovsky and R. Whitehead.**

The author recurs to history of torpedo weapons creation by the example of I.F. Alexandrovsky, R. Whitehead.

**Keywords:** SP mines, torpedo production, innovation competition.

**I.Ya. Baskakov. Pilot torpedo boat Г-6.**

This article tells about design, construction, trials of G-6 torpedo boat, including participation in the Great Patriotic War.

**Keywords:** Soviet Navy, design, construction, torpedo boat.

**O.V. Filatov. Russian emperor's yachts at diplomatic service.**

The author narrates about construction of court yachts in Russia from XVIII century and their diplomatic functions within the existence of the Russian Empire.

**Keywords:** Russian Empire, emperor's yachts, diplomatic functions.