

# Судостроение

Издается с 1898 г.

НАУЧНО-ТЕХНИЧЕСКИЙ И ПРОИЗВОДСТВЕННЫЙ ЖУРНАЛ

ISSN 0039-4580

**ПРОЕКТИРОВАНИЕ СУДОВ**

**ВОЕННОЕ  
КОРАБЛЕСТРОЕНИЕ**

**№ 2  
2017**

март-апрель

**СУДОВОЕ  
ОБОРУДОВАНИЕ**

**ТЕХНОЛОГИЯ  
СУДОСТРОЕНИЯ**

**ИСТОРИЯ**



# SUDOSTROENIE 2 2017

## /SHIPBUILDING/

(831) March–April

Published since September 1898 r.

### **JSC USC: 10 years anniversary!**

#### **AT SHIPBUILDING YARDS**

#### **CIVIL SHIPBUILDING**

#### **Development of civil marine equipment: conclusions and prospects**

**Feoreyev G. A., Znatkov A. S., Shaub P. A. Ground-effect crafts and high-speed transporting systems for development of Primorye and arctic regions of Yakutia.**

This article analyzes options for effective application of high-speed transport hovercrafts such as ground-effect crafts both in Primorye and Arctic regions. Operational requirements to ground-effect crafts in Arctic region have been specified. Projects of transportation lines and systems along main rivers of the Sakha Republic (Yakutia) have been represented. The article gives proposals on managing the design and production of domestic ground-effect crafts.

**Keywords:** ground-effect crafts, fuel-energy efficiency, ice conditions, navigation, high-speed transporting systems, passenger flow, logistics, ecology.

#### **Luskin B. A., Aksenova E. V. Developing unmanned submersibles to perform inspection and R&D activities on the shelf.**

The authors narrate on prospective trends for developing offshore technical equipment by CDB ME «Rubin».

**Keywords:** ocean shelf, remote-control unmanned submersibles.

#### **Zinevich A. N. Project «Pioneer-M» indicates new approach to ship design and specialist training.**

This article briefly informs about competitive selection of collectives, management of design works and student leisure. General features and specifications of the designed ship have been listed.

**Keywords:** competition, design, ship, specifications.

#### **NAVAL SHIPBUILDING**

#### **Chief designer V. N. Pyalov**

#### **Schegolikhin V. P. Certification algorithm for vibro-acoustic state of shipboard machinery.**

The authors hereby describe certification algorithm for vibro-acoustic state of shipboard machinery by means of dedicated shipboard information systems.

It has been stated, that incorporation of the algorithm in the software for existing and prospective shipboard information systems should significantly increase efficiency of vibro-acoustic check of shipboard machinery.

**Keywords:** shipboard machinery, vibro-acoustic state, onboard information and measuring system, certified spectrum component rate, normal distribution law.

### **Submarine «Orel» repair completed**

#### **RESCUE GEAR**

##### ***Kazin D. I. Management and technical background for use of search and rescue vessels to secure activities of the Russian Navy in Arctic waters.***

The author hereby analyzes basics of management for providing the transfer of rescue teams to far areas of Arctic Ocean in order to help and evacuate the crew of disabled single ships and vessels.

**Keywords:** Arctic Ocean, search and rescue aids, disabled ship (vessel), emergency area accessibility, rescue aircrafts and hovercrafts.

##### **SRV «Priz» has been modernized**

##### **«Marlin-350» for Russian Navy**

##### **Diver's rescue gear**

##### **Rescue vessel «Voevoda» is under construction**

#### **SHIPBOARD EQUIPMENT**

##### ***Emelyanov A. P., Tzariashvili A. A., Basin G. K. Lateral thruster control system.***

This article reviews lateral thruster control system КРПУ-1011 developed by LLC «RDC Morsvyazavtomatika». User interface and system composition have been analyzed in detail. Special attention has been given to advantages of this system before the analogs.

**Keywords:** shipboard control systems, lateral thruster, steering and propulsion systems, active steering gear.

#### **CORROSION PROTECTION**

##### ***Atrushkevich E. B., Sominskaya E. V., Khitov E. S. Efficiency of ship's corrosion protection in Arctic region.***

Hereby one of most complex and important tasks has been described: protection against corrosion/abrasive wear of underwater part of ice-breakers and ice-class ships operating in Arctic region.

**Keywords:** ice-breakers, corrosion, operation.

#### **ECONOMY AND FINANCE**

##### ***Strelnikov G. N., Kravchishin V. N. Quota meeting ratio as indicating or regulating mechanism of labor efficiency.***

This article describes development and acceptance of technically justified timing standards used to define labor factor required to perform certain scope of works in given organization and technical conditions.

**Keywords:** advanced technologies, labor norming, scientific-methodological and regulatory provisions.

#### **SHIPBUILDING ORGANIZATION AND TECHNOLOGY**

##### ***Mogilko K. D., Pavlov K. P., Solomatov V. B., Osokin E. V., Isakov P. I., Labutin I. N. Automation of T-beams production for thick-walled hull***

## **structures with full weld penetration and designed incomplete penetration.**

This article reviews solutions developed by JSC SSTC as part of automation of Russian shipbuilding and shiprepair industry. The authors have described pilot samples of modern automated import-replacing equipment of domestic origin for T-beams assembly, welding and straightening.

**Keywords:** automation, T-beams, shipbuilding, shiprepair.

## **TECHNICAL RETOOLING OF SHIPYARDS**

### ***Klyakhin V. N., Fomichev A. B.* Risk control model for optional modernization of shipbuilding enterprise.**

About model for optional modernization of shipbuilding enterprise.

**Keywords:** risk control model, optional modernization, shipbuilding.

## **LABOR SAFETY**

### ***Dorozhkin A. S., Vagin A. V., Goncharov S. M., Smirnov S. V.* Providing fire safety when developing design documentation.**

The authors hereby analyze provision of fire safety when developing design documentation, typical errors in development of fire safety part of the project, issues pertaining to calculation of fire risk and development of special technical conditions at construction stage.

**Keywords:** fire safety, fire risks calculation, special technical conditions.

## **PERSONNEL TRAINING**

### ***Pilikina E. A.* Labor capacity development at Sevmash**

### ***Garanina I. V.* Shipbuilders of the future**

## **INFORMATION SECTION**

**Unique icebreaking LNG-carrier. Russian state naval shipbuilding 350 years. Yury Fedorovich Yarov – 75 years anniversary! JSC USC at «LIMA-2017». *Ejiofor A. P.* Exhibition «Jeweler for the emperor's fleet». *Alexandrov V. L.* Alexandr Andreevich Yurchak – 80 years anniversary! Foreign information. Blits-news**

## **HISTORY OF SHIPBUILDING AND FLEET**

### ***Afonin N. N.* Destroyers of «Sokol» type for the Black Sea.**

This is the story about «Sokol» type destroyers built on the eve of XIX and XX century and used for guarding the Black Sea coast during World War I.

**Keywords:** Russian destroyers fleet, trials, Black Sea fleet.

### ***Baskakov I. Ya.* KM type boats. History of development.**

This article refutes the version on reworking the drawings of Germany-made boat for subsequent production of KM boats in 1930s.

**Keywords:** boat design, technical features.