

# СУДОСТРОЕНИЕ

Издаётся с 1898 г.

НАУЧНО-ТЕХНИЧЕСКИЙ И ПРОИЗВОДСТВЕННЫЙ ЖУРНАЛ

ISSN 0039-4580

**ПРОЕКТИРОВАНИЕ СУДОВ**

**№ 1**  
**2016**

январь-февраль

**ВОЕННОЕ  
КОРАБЛЕСТРОЕНИЕ**

**СУДОВОЕ  
ОБОРУДОВАНИЕ**

**ТЕХНОЛОГИЯ  
СУДОСТРОЕНИЯ**

**ИСТОРИЯ**



# SUDOSTROENIE 1 2016

## /SHIPBUILDING/

(824) January–February

Published since September 1898 r.

### **Progress of construction works at shipbuilding complex «Zvezda»**

#### **AT SHIPBUILDING YARDS**

##### **NAVAL SHIPBUILDING**

###### **Rescue vessel «Igor Belousov»**

**«Rus» has been tested below 6000 meters depth**

#### **CIVIL SHIPBUILDING**

##### **Ministry of Industry and Trade tells about passenger fleet revival**

###### ***Lyubimov V. I., Khlutchin I. V. R. E. Alekseyev* — chief designer of domestic high-speed vessels**

This article describes justifications of design and structure of transport vessels, which can be used at concept design stage to analyze ship structure and to make up ship's virtual model of the same, thus providing its competitiveness and quality.

**Keywords:** ship design, ship designer, design and structural type, design analysis, ship's virtual mode, hydrofoil ships, aerofoil boat.

###### ***Dubrovsky V. A.* Outriggers revisited**

The author hereby reviews advantages and disadvantages of outriggers with puller propellers in pods.

**Keywords:** trimarans, outriggers, puller propellers.

###### ***Myasnikov Yu. N.* Diagnostic module of ship power plant**

Modernization of ship power plant control systems remains topical issue. It can be done by development and implementation of diagnostic programs, algorithms and diagnostic devices based on new physical principles to control operation of ships as per their current technical state. Diagnostic module developed by specialists of Krylov shipbuilding and research institute allows selecting optimal pattern for solving issues on diagnostics of various-purposed ships and vessels.

**Keywords:** ship power plant, diagnostics, safety.

###### ***Alferov V. I., Alexandrov A. V., Platonov V. V., Shaposhnikov V. M.* Estimating impact of technological factor on bearing capacity of ship hull structures**

Application of finite elements method together with thermoplastic solutions allows estimating impact of residual welding stresses and deformations on bearing capacity of reinforced panel and ribbed cylindrical cover. Application of proposed method enables to calculate strength and to develop load coefficients of ship hull structures considering technological factor.

**Keywords:** strength, tension, deformations, bearing capacity, hull structures.

**Smirnov A. G. Criterion for application of floating ship lifting facilities**

The author narrates about various technical solutions based on ship docking principles used in shipbuilding, shiprepair, navigation and related industry branches.

**Keywords:** floating dock, floating ship lifting facility, camels.

**Vauchsky A. N., Petrushina T. Yu., Yaremenko A. E. Automation of price forming for state defense orders**

The authors hereby analyze recent changes of regulatory and procedural basis on price formation for state defense order. The conclusion has been made, that shipbuilding and shiprepair companies need special price forming software to be developed. Given are proposals on structure of relevant automated systems.

**Keywords:** price formation, shipbuilding, automation, information system, material estimation and calculation, state defense order.

**Appolonov E. M. New activities of SMTU**

This article focuses on three main activities of SMTU — interaction with oil&gas industry, advancement of educational process and development of the university.

**Keywords:** SMTU, development strategy, educational process, competitiveness, Russian shipbuilding.

**Antonenko S. V. Training ship constructors during reforms**

Analyzed is higher education reform in Russian Federation. Highlighted are negative sides of so called «Bologna system» which increases gap between science and production.

**Keywords:** personnel training, shipbuilding, specialization, production practice.

**Vasyliiev A. M. Mystery of «Novorossiysk» battleship explosion has been revealed**

This article reviews various versions on «Novorossiysk» battleship explosion in October, 1955, which led to ship loss. Given are conclusions of Russian Navy Expert Council indicating that the explosion was caused by German mine on World War II period.

**Keywords:** battleship, history of fleet, navy.

**Rogachev G. M. Games of admirals**

The author narrates about collection of ship models stored in Central Naval Museum and manufactured as per proposal of Admiral G. I. Butakov for training tactical procedures of sea battles in 2nd half of 19th century.

**Keywords:** history of shipbuilding and navy, naval fleet, naval game, ship model, naval tactics.

**Fedechkin A. D. Design and construction of partially-armored frigate «Pamyat Azova»**

This article tells about design history, construction and trials of partially-armored frigate (later became 1st rank battle cruiser) «Pamyat Azova».

**Keywords:** naval shipbuilding, history of naval shipbuilding, battle cruiser, frigate.