

## Monthly scientific and practical journal

Published since 2000  
(former name Kvalifikatsiya I Kachestvo)  
Registration certificate  
PI No ФC-77-48934 from 12, March, 2012  
The journal is included in the list of publications,  
recommended by Higher Attestation Commission (VAK)

### Founder and publisher

#### Academy for Standardization, Metrology and Certification (ASMS)

109443, Moscow, Volgogradsky pros., 90, 1  
Phone: +7 (499) 172 4730  
Fax: +7 (499) 742 5241  
E-mail: info@asms.ru  
www.asms.ru

### Chief Editor

Vladimir V. Voronin, FSAEI FVT ASMS, RF, Moscow

### Editorial board

Svetlana A. Kalintseva, FSAEI FVT ASMS, RF, Moscow

Stanislav Bartusek, Technical University of Ostrava, Czech Republic, Ostrava

Viktor Ya. Belobragin, LLC Advertising Informational Agency Standards and Quality, RF, Moscow

Boris V. Boytsov, International Public Organization Academy of Quality Problems, and Moscow Aviation Institute (MAI), RF, Moscow

Fedor V. Bulygin, All-Russian Research Institute of Metrological Service (VNIIMS), RF, Moscow

Tatiana V. Guseva, D. Mendeleev University of Chemical Technology of Russia, RF, Moscow

Nina I. Dunchenko, Russian State Agrarian University — Moscow Timiryazev Agricultural Academy, RF, Moscow

Lev K. Isaev, All-Russian Research Institute of Metrological Service (VNIIMS), RF, Moscow  
Wilfried Kirmse, Technical University of Berlin (TU), Germany, Berlin

Leonid V. Kolomiets, Odessa State Academy of Technical Regulation and Quality, Ukraine, Odessa  
Vladimir Yu. Korchak, Presidium of RAS, RF, Moscow

Aleksey V. Leonov, FSBI 46 Central Research Institute, RF, Moscow

Vladimir A. Novikov, FSAEI FVT ASMS, RF, Moscow  
Yuriy A. Pal'chun, Novosibirsk Branch FSAEI FVT ASMS, RF, Novosibirsk

Vladimir V. Pomazanov, Self-Regulatory Organization Center Reahim, and SEI HE MO State Humanitarian and Technological University, RF, Moscow Region

Anatoliy I. Solyanik, Russia Voronezh Branch FSAEI FVT ASMS, RF, Voronezh

### Editorial staff

I.S. Gridin, L.A. Kas'yanova, E.V. Kirienko,  
E.G. Kolesnikova, I.B. Kuskova  
Phone: +7 (499) 172 7717, 172 5757

### Layout and logo design

A.B. Kostrikov

### Original layout

Individual Entrepreneur Shilenkova E.I.  
Phone: +7 (916) 324 0613

### Subscription

In the catalogue Newspapers, Journals of Rospechat agency: 83344

In the union catalog Russia Press: 87872

In the publishing department

Phone: +7 (499) 172 7717. E-mail: komp@asms.ru

Signed for printing 12.03.2019

Matte coated paper 84×108/16

Offset printing. Conv. pp. 7

2000 copies. Order number 112

### Printing

JSC Kaluzhskaya Tipografiya Standartov  
248021, Kaluga, Moskovskaya ul., 256

Authors' ideas may not always coincide with the editorial staff.

While using materials reference to the journal 'Kompetentnost'' is required

Articles' reprinting is allowed only with the editorial staff's permission

Editorial staff is not responsible for the content of the advertisements

Materials in the category Company are published on the rights of advertising

© Academy for Standardization, Metrology and Certification, 2019

# Content

## 2/2019

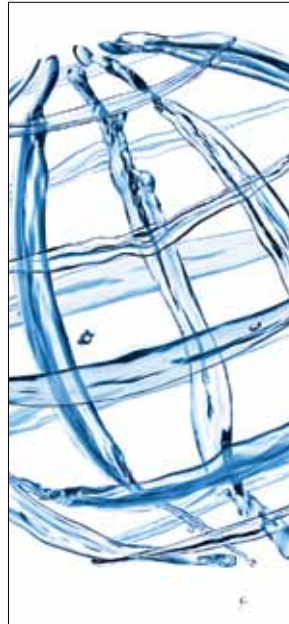
### TECHNICAL REGULATION

**4** **M.Yu. Kuprikov**  
**L.N. Rabinskiy**  
**N.M. Kuprikov**  
**A.A. Tishkov**  
Polar Execution as an Object of Regulation Competitiveness in the Arctic

**13** **M.Yu. Zabolotnyy**  
**E.G. Vinokurov**  
**Kh.A. Nevmyatullina**  
**T.F. Burukhina**  
Evaluation of Standards for the Hardness of Drinking Water

### MANAGEMENT

**18** **S.L. Aleksandrov**  
Audit of Accredited Organizations' Management Systems



**28** **V.V. Miroshnikov**  
**N.M. Borbats'**  
**T.V. Shkolina**  
Qualimetric-statistical Evaluation of Quality Management Processes

### NEWS

**41**

**36** **V.D. Mogilevets**  
**I.A. Savin**  
Kaizen-offers system is a Key Factor in Enterprise Development

**43** **D.A. Tomasova**  
Methodology of Innovative Manufacturing Systems Entropic Analysis

### METROLOGY

**48** **S.B. Danilevich**  
**V.V. Tret'yak**  
Automation of Testing Processes and Calibration of Electric Meters

### TRAINING

**54**

**Reviewers:** Prof. Dr. **G.V. Pankina**, ASMS; Prof. Dr. **T.V. Guseva**, D.I. Mendeleev University of Chemical Technology of Russia; Prof. Dr. **V.A. Vasil'ev**, Russian State University of Aviation Technology (MAI); Prof. Dr. **N.I. Dunchenko**, Russian State Agrarian University — Moscow Timiryazev Agricultural Academy; Prof. Dr. **A.I. Solyanik**, Voronezh ASMS Branch; Prof. Dr. **V.Ya. Belobragin**, Academy for Quality Problems; Prof. Dr. **I.A. Makeeva**, State Scientific Institution, Research Institute for Dairy Industry; Prof. Dr. **V.Yu. Korchak**, Section of Applied Problems, Russian Academy of Sciences

### Next issues

The Main Trends in the Development of Artificial Intelligence in EVENT

Integration of the ISO 37001:2016 Requirements in the QMS: Risk-based Approach

The Model of the Impact of Environmental Innovation in Investment Attractiveness