

"Nuclear Ships" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Rules for the Classification and Construction of Nuclear Ships and Nuclear Support Vessels;
 - Guidelines on Technical Supervision during Construction of Nuclear Ships and Floating Facilities, Nuclear Support Vessels, Manufacture of Materials and Products;
 - Guidelines on Technical Supervision of Nuclear Ships, Nuclear Floating Facilities and Nuclear Support Vessels in Service;
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to the design, construction and operation of ships with nuclear power plants and nuclear support vessels under the RS technical supervision;
- 4) review of typical and the most significant accidents and damage to ships with nuclear power plants and nuclear support vessels;
- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;
- 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Materials and Welding" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Parts XIII "Materials" and XIV "Welding" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Part III "Technical Supervision during Manufacture of Materials" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
 - Part IX "Materials and Welding" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk;
 - Part IX "Materials and Welding" of the Rules for the Classification and Construction of Ships Carrying Compressed Natural Gas.
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to:
 - materials (including coating) used on items of the RS technical supervision (mechanical properties, chemical composition, structure, non-destructive testing, marking, thickness, tolerances, forms, surface quality, condition and terms of supply);
 - welding (methods and procedures, certification of welders, chemical composition, mechanical properties of welding consumables and non-destructive testing of welded joints);
- 4) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO and other international organizations;
- 5) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Machinery Installations, Shafting and Propellers" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Parts VII "Machinery Installations" and IX "Machinery", and Chapters 1.3, 7.6, 8.2, 8.3, 8.5 – 8.8, 10.4 and 10.7, Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Parts VI "Machinery Installations" and VIII "Machinery" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Part VII "Machinery Installations and Machinery" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Chapters 3 and 4, Part II "Structure of Chemical Tanker" of the Rules for the Classification and Construction of Chemical Tankers;
 - Part II "Life-Saving Appliances" (only related to the requirements for engines of lifeboats and rescue boats, as well as for structure of launching appliance winches) of the Rules for the Equipment of Sea-Going Ships;
 - Section 2, Part VI "Machinery Installations, Mechanical Equipment and Systems" of the Rules for the Classification and Construction of Manned Submersibles and Ship's Diving Systems;
 - para 2.2.3, Chapters 4.5, 5.4 and 7.9 of the Rules for the Cargo Handling Gear of Sea-Going Ships;
 - Part VII "Machinery Installations" and IX "Machinery" of the Rules for the Classification and Construction of High-Speed Craft;
 - Part VII "Machinery Installations" and IX "Machinery" of the Rules for the Classification and Construction of Type A Wig Craft;
 - Sections 1 – 3, Part V "Machinery Installations. Machinery. Systems and Piping" of the Rules for the Classification and Construction of Pleasure Craft;
 - Parts VII "Machinery Installations" and IX "Machinery" of the Rules for the Classification and Construction of Small Sea Fishing Vessels;
 - Sections 5 – 7, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
 - Sections 5 "Machinery", 6 "Shafting" and 7 "Propellers" of the Guidelines on Technical Supervision of Ships under Construction;
 - Parts VII "Machinery Installations" and IX "Machinery" of the Rules for the Classification and Construction of Floating Offshore Oil-and-Gas Production Units;
 - Section 1, Part VI "Machinery Installations. Machinery. Systems and Piping" of the Rules for the Design, Construction, Repair and Operation of Sailing Racing Yachts, Manufacture of Materials and Products for Installation on Board Sailing Racing Yachts;
 - Section 6, Part II "Technical Requirements" of the Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code);
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to the design, manufacture, installation and operation of ship's propulsion complex under the RS technical supervision;
- 4) review of typical and the most significant accidents, damages and failures of machinery installations and machinery;

- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;
- 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Seaworthiness" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Parts IV "Stability" and V "Subdivision" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Section 2, para 4.2.2, Chapters 7.5 and 10.3, paras 13.1.4, 13.1.5, 13.2.6, 13.2.7, 13.3.5, 13.3.6, Chapter 15.4 and Section 17, Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Load Line Rules for Sea-Going Ships;
 - Guidelines on Application of Provisions of the International Convention on Load Lines (ICLL 66/88/2003);
 - Part IV "Stability, Subdivision and Freeboard" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Parts IV "Stability" and V "Subdivision" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Part IV "Stability", Part V "Reserve of Buoyancy and Subdivision" and Sections 5 and 6, Part XXI "Craft for Personnel Transportation" of the Rules for the Classification and Construction of High-Speed Craft;
 - Parts IV "Stability" and V "Reserve of Buoyancy and Subdivision" of the Rules for the Classification and Construction of Type A Wig Craft;
 - Part IV "Stability, Subdivision and Freeboard" of the Rules for the Classification and Construction of Chemical Tankers;
 - Part III "Stability. Subdivision. Freeboard" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk;
 - Part III "Stability. Subdivision. Freeboard" of the Rules for the Classification and Construction of Ships Carrying Compressed Natural Gas;
 - Parts IV "Stability" and V "Subdivision" of the Rules for the Classification and Construction of Floating Offshore Oil-and-Gas Production Units;
 - Part IV "Stability, Reserve of Buoyancy and Freeboard" of the Rules for the Classification and Construction of Pleasure Craft;
 - Part IV "Stability and Freeboard" of the Rules for the Classification and Construction of Small Sea Fishing Vessels;
 - Part V "Stability, Reserve of Buoyancy and Freeboard" of the Rules for the Design, Construction, Repair and Operation of Sailing Racing Yachts, Manufacture of Materials and Products for Installation on Board Sailing Racing Yachts;
 - Rules for the Carriage of Grain;
 - Sections 4 and 5, Part II "Technical Requirements" of the Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code).
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions in the field of intact stability, damage stability, seaworthiness, reserve of buoyancy and freeboard related to the design, construction and operation of ships and floating facilities under the RS technical supervision;
- 4) review of typical and the most significant accidents and damage to ships and floating facilities resulted in the substantial deterioration and/or loss of stability and/or buoyancy;
- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO and other international organizations;

- 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Offshore Oil-and-Gas Installations" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Rules for the Classification and Construction of Subsea Pipelines;
 - Guidelines on Technical Supervision during Construction and Operation of Subsea Pipelines;
 - Recommendations for Design, Construction and Operation of Subsea Pipelines;
 - Rules for Planning and Execution of Marine Operations;
 - Rules for the Oil-and-Gas Equipment of Floating Offshore Oil-and-Gas Production Units, Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Rules for the Classification and Construction of Subsea Production Systems;
- 2) future-oriented topics, monitoring of R&D execution and results related to the development and improvement of the above RS normative documents;
- 3) proposed scientific and technical and technological decisions related to the design, construction (including marine operations) and operation of offshore oil-and-gas facilities under the RS technical supervision;
- 4) review of typical damages and the most significant accidents and incidents during operation of offshore oil-and-gas facilities including their structure, machinery and systems;
- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;
- 6) program of specialized seminars for RS surveyors by areas of activity of the Offshore Oil-and-Gas Facilities Technical Supervision Division and selection of lecturers;
- 7) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Environment Protection" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Rules for the Prevention of Pollution from Ships Intended for Operation in Sea Areas and Inland Waterways of the Russian Federation;
 - Guidelines on the Application of Provisions of the International Convention MARPOL 73/78;
 - Guidelines on the Application of Provisions of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines;
 - Chapter 17, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
 - Section 17 "Arrangements for the Prevention of Pollution from Ships" of the Guidelines on Technical Supervision of Ships under Construction;
 - Chapters 2.2 and 2.5, Part III "Survey of Ships in Compliance with International Conventions, Codes, Resolutions and Rules for the Equipment of Sea-Going Ships" of the Guidelines on Technical Supervision of Ships in Service;
 - Part XX "Equipment for Prevention of Pollution" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Part V "Equipment and Arrangements for Prevention of Pollution of the Environment" of the Rules for the Equipment of Floating Offshore Oil-and-Gas Production Units;
 - Part XIII "Means for the Prevention of Pollution from Ships" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Section 6, Part III "Survey of Navigation Safety and Environmental Protection Means" of the Rules for the Surveys of Inland Navigation Ships in Service (for European Inland Waterways);
 - Part XII "Means for the Prevention of Pollution from Craft" of the Rules for the Classification and Construction of Pleasure Craft;
 - Section 3 and Chapter 7.3 (only regarding the requirements for pollution prevention), Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Section 11, Part II "Technical Requirements" of the Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code);
 - Guidelines on Application of the Requirements of International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004;
 - Part XX "Equipment for Pollution Prevention" of the Rules for the Classification and Construction of High-Speed Craft;
 - Section 5, Part II "General Requirements" of the Rules for Planning and Execution of Marine Operations.
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to new directions in the field of environment protection including application of state-of-the-art technologies and equipment;

- 4) review of typical and the most significant accidents, damage to structures of ships and offshore installations, operational characteristics of power plants, machinery and equipment resulted in the negative impact on the environment;
- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;
- 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Problems of Human Factor" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) methods for risk identification and management aimed to ensure security related to human factor (hereinafter referred to as risks) or manufacturing conditions hazardous for personnel or impeding fulfillment of manufacturing processes (hereinafter referred to as hazards) in the field of maritime transport;
- 2) future-oriented topics and R&D results related to the risks and hazards;
- 3) international and national normative documents (or their drafts) related to risks and hazards;
- 4) proposed scientific and technical decision related to the methods aimed to reduce influence of the human factor on manufacturing processes in the field of maritime transport as well as features and prospects of design, construction and operation of marine technologies considering human factor;
- 5) training of the personnel taking account of human factor and medical examinations of the personnel considering hazardous manufacturing factors;
- 6) review of typical and the most significant accidents, damages and failures in the field of maritime transport related to the human factor;
- 7) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;
- 8) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Fire Protection of Ships" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Part VI "Fire Protection" and Chapters 5.10, 6.4, 9.7, 11.5, 23.6, 24.9 – 24.11 of Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Part VI "Fire and Explosion Protection" of the Rules for the Classification, Construction and Equipment of Floating Offshore Oil-and-Gas Production Units;
 - Part VI "Fire Protection" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Part VI "Fire Protection" of the Rules for the Classification and Construction of High-Speed Craft;
 - Part V "Fire Protection" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk;
 - Part V "Fire Protection" of the Rules for the Classification and Construction of Ships Carrying Compressed Natural Gas;
 - Part VI "Fire Protection" of the Rules for the Classification and Construction of Small Sea Fishing Vessels;
 - Part V "Fire Protection" of the Rules for the Classification and Construction of Chemical Tankers;
 - Part X "Fire Protection" of the Rules for the Classification and Construction of Pleasure Craft;
 - Part VI "Fire Protection" of the Rules for the Classification and Construction of Type A Wig Craft;
 - Part V "Fire Protection" of the Rules for the Classification and Construction of Manned Submersibles and Ship's Diving Systems;
 - Section 2, Part VI "Machinery Installations. Machinery. Systems and Piping" of the Rules for the Design, Construction, Repair and Operation of Sailing Racing Yachts, Manufacture of Materials and Products for Installation on Board Sailing Racing Yachts;
 - Part V "Fire Protection" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Section 4 "Fire Protection" of the Guidelines on Technical Supervision of Ships under Construction;
 - Section 7, Part II "Technical Requirements" of the Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code);
 - Section 4, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to the design, manufacture, installation and operation of ship's fire extinguishing systems under the RS technical supervision as well as to structural fire protection of ships and offshore installations including those manufactured of composites;
- 4) review of typical and the most significant accidents and damage to structures of ships and offshore installations;

- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;
- 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping;
- 7) performing an analysis of the current RS requirements in the above normative documents, for the expediency of their clarification / cancellation.

"Hull-Structural Strength of Sea-Going Ships and Floating Structures" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Part II "Hull" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Part XVI "Structure and Strength of Fiber-Reinforced Plastic Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Part XVIII "Additional Requirements for Structures of Container Ships and Ships, Dedicated Primarily to Carry Their Load in Containers" of the Rules for the Classification and Construction of Sea-Going Ships (within discussion of matters related to the requirements left to "the discretion of the Classification Society");
 - Chapters 1.2 and 10.5, Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships (within discussion of matters related to the requirements left to "the discretion of the Classification Society");
 - Chapters 6.2, 11.4, paras 13.1.2, 13.2.2 and 13.3.3, Chapter 15.2 and Section 19, Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Chapter 6.1, Part XIX "Additional Requirements for Cargo Ships of less than 500 Gross Tonnage" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Part II "Hull" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Part II "Hull" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Part II "Hull Structure and Strength" and Section 3, Part XXI "Craft for Personnel Transportation" of the Rules for the Classification and Construction of High-Speed Craft;
 - Parts II "Hull" and XIV "Hull Formation" of the Rules for the Classification and Construction of Type A Wig Craft;
 - Sections 1 and 2, Parts II "Structure of Chemical Tanker" and III "Cargo Containment" of the Rules for the Classification and Construction of Chemical Tankers;
 - paras 1.3, 1.9, 1.25 and Section 3, Part II "Ship Arrangement" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk;
 - Part II "Gas Carrier Design" of the Rules for the Classification and Construction of Ships Carrying Compressed Natural Gas;
 - Part II "Hull" of the Rules for the Classification and Construction of Floating Offshore Oil-and-Gas Production Units;
 - Part II "Hull" of the Rules for the Classification and Construction of Pleasure Craft;
 - Parts II "Hull" and XVI "Hull Structure and Strength of Glass-Reinforced Plastic Ships" of the Rules for the Classification and Construction of Small Sea Fishing Vessels;
 - Part II "Hull" (except for Chapter 2.1) of the Rules for the Design, Construction, Repair and Operation of Sailing Racing Yachts, Manufacture of Materials and Products for Installation on Board Sailing Racing Yachts;
 - Rules for the Construction of Hulls of Sea-Going Ships and Floating Facilities Using Reinforced Concrete;
 - Part II "Hull" of the Rules for the Classification and Construction of Wooden Ships;
 - Section 3, Part II "Technical Requirements" of the Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code);
 - Guidelines on Fatigue Assessment of Ships;
 - Guidance on Calculation of Permissible Ship Motions when Navigating in Ice;
 - Guidelines on Stress-Strain State Assessment of Hull Structures by Finite Element Analysis;

- Recommendations on the Condition Assessment Program (CAP);
 - Common Structural Rules for Bulk Carriers and Oil Tankers (within discussion of matters related to the requirements left to "the discretion of the Classification Society").
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
 - 3) proposed scientific and technical decision regarding design and construction of hull structures of ships and offshore installations (determination of required dimensions, allowable loadings, boundary conditions, and strength, stability and fatigue assessment criteria) under the RS technical supervision;
 - 4) review of typical and the most significant accidents and damage to structures of ships and offshore installations;
 - 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO and other international organizations;
 - 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Shipboard Radio and Navigational Equipment" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Parts IV "Radio Equipment" and V "Navigational Equipment" of the Rules for the Equipment of Sea-Going Ships;
 - para 4.2.5, Chapters 5.12, 6.7, 7.10 and 11.12 of Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Parts XI "Radio Equipment" and XII "Navigational Equipment" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Parts XVIII "Radio Equipment" and XIX "Navigational Equipment" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Parts XVII "Radio Equipment" and XVIII "Navigational Equipment" and Sections 14 and 15, Part XXI "Craft for Personnel Transportation" of the Rules for the Classification and Construction of High-Speed Craft;
 - Parts III "Radio Equipment" and IV "Navigational Equipment" of the Rules for the Equipment of Floating Offshore Oil-and-Gas Production Units;
 - Part VIII "Radio and Navigational Equipment" of the Rules for the Classification and Construction of Pleasure Craft;
 - Parts XVII "Radio Equipment" and XVIII "Navigational Equipment" of the Rules for the Classification and Construction of Small Sea Fishing Vessels;
 - Part IX "Radio and Navigational Equipment" of the Rules for the Design, Construction, Repair and Operation of Sailing Racing Yachts, Manufacture of Materials and Products for Installation on Board Sailing Racing Yachts;
 - Sections 15, 16 and 18, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
 - Sections 9 "Safety of Navigation" and 10 "Communication" of the Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code);
 - Guidelines on Cyber Safety;
 - Regulations for Classification on Maritime Autonomous and Remotely Controlled Surface Ships (MASS).
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to the design, manufacture, installation and operation of radio and navigational equipment under the RS technical supervision;
- 4) review of typical and the most significant failures of radio and navigational equipment;
- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;
- 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Boilers, Systems, Refrigerating Plants" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Parts VIII "Systems and Piping", X "Boilers, Heat Exchangers and Pressure Vessels" and XII "Refrigerating Plants" and para 4.2.4, Chapters 5.3, 5.8, 6.5, 7.7, 8.4, 9.1 – 9.9, 9.12, 11.1 – 11.3, 11.5, 11.6, 11.13, 14.1 – 14.9 and 16 of Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Part VII "Systems and Piping" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Parts VIII "Systems and Piping", IX "Boilers, Heat Exchangers and Pressure Vessels" and XI "Refrigerating Plants" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Parts IV "Cargo Containment", VI "Systems and Piping" and Sections 3, 5, 6, 7 (only related to the requirements for piping systems, boilers and refrigerating plants), Part X "Special Requirements" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk;
 - Parts IV "Cargo Tanks" and VI "Systems and Piping" of the Rules for the Classification and Construction of Ships Carrying Compressed Natural Gas;
 - Part VI "Systems and Piping", VIII "Instrumentation" and XII "Special Requirements" (only related to the requirements for piping systems, boilers and refrigerating plants) of the Rules for the Classification and Construction of Chemical Tankers;
 - Part VI "Machinery Installations, Mechanical Equipment and Systems" (except for Chapters 2.2 and 2.4) of the Rules for the Classification and Construction of Manned Submersibles and Ship's Diving Systems;
 - Parts VIII "Systems and Piping", X "Heat Exchangers and Pressure Vessels" and XII "Refrigerating Plants" of the Rules for the Classification and Construction of Type A Wig Craft;
 - Sections 8, 9 and 11, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
 - Parts VIII "Systems and Piping", X "Boilers, Heat Exchangers and Pressure Vessels" and XII "Refrigerating Plants" of the Rules for the Classification and Construction of Small Sea Fishing Vessels;
 - Parts VIII "Systems and Piping", X "Boilers, Heat Exchangers and Pressure Vessels" and XII "Refrigerating Plants" of the Rules for the Classification, Construction and Equipment of Floating Offshore Oil-and-Gas Production Units;
 - Sections 8 "Systems and Piping", 9 "Boilers, Heat Exchangers and Pressure Vessels" and 11 "Refrigerating Plants" of the Guidelines on Technical Supervision of Ships under Construction;
 - paras 6.1.1, 6.1.3 and 6.2.1, Part II "Technical Requirements" of the Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code);
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to the design, manufacture, installation and operation of ship's systems, piping, boilers, heat exchangers, pressure vessels and refrigerating plants under the RS technical supervision;

- 4) review of typical and the most significant accidents, damages and failures of ship's systems, piping, boilers, heat exchangers, pressure vessels and refrigerating plants;
- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, ISO and other international organizations;
- 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping;
- 7) performing an analysis of the current RS requirements in the above normative documents, for the expediency of their simplification / cancellation.

"Ship's Arrangements and Equipment, Life-Saving Appliances and Signal Means, Cargo Handling Gear" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Part III "Equipment, Arrangements and Outfit" and paras 2.2.1, 4.2.3, 13.1.3, 13.2.3, 13.2.4, 13.3.4, 13.4.3, 13.4.4, 13.4.5, Chapters 5.1, 5.2, 5.4 – 5.7, 5.13, 5.14, 6.3, 7.4, 7.9, 7.10, 10.6 and 15.3, paras 20.3.1.3.1 and 20.3.1.3.2 of Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships", paras 6.2, 6.13, 6.16, Part XIX "Additional Requirements for Cargo Ships of less than 500 Gross Tonnage" and Chapters 5.2, 5.13, 5.16 and 5.17, Part XX "Additional Requirements for Yachts" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Part II "Life-Saving Appliances" and III "Signal Means" of the Rules for the Equipment of Sea-Going Ships;
 - Rules for the Cargo Handling Gear of Sea-Going Ships;
 - Sections 3, 13 and 14, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
 - Parts III "Equipment, Arrangements and Outfit of MODU/FOP", XVI "Signal Means" and XVII "Life-Saving Appliances" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Part III "Equipment, Arrangements and Outfit" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Parts III "Equipment, Arrangements and Outfit" and X "Shipboard Handling Systems of Manned Submersibles and Ship's Diving Systems" of the Rules for the Classification and Construction of Manned Submersibles and Ship's Diving Systems;
 - Part III "Equipment, Arrangements and Outfit", paras 2.2.1, 4.2.3, 13.1.3, 13.2.3, 13.2.4, Chapters 5.1, 5.2, 5.4 – 5.7, 5.12, 5.14, 6.3, 7.4, 7.9, 7.10, 10.6, 15.3, Sections 8 and 20 of Part XVI "Life-Saving Appliances", Part XIX "Signal Means", Sections 4 and 13 of Part XXI "Craft for Personnel Transportation" of the Rules for the Classification and Construction of High-Speed Craft;
 - Part III "Arrangements, Equipment and Outfit", Chapters 8.5, 8.10 – 8.13, Sections 2 and 3, Part XVI "Life-Saving Appliances, Signal Means, Radio Equipment and Navigational Equipment" of the Rules for the Classification and Construction of Type A Wig Craft;
 - paras 1.1, 1.2, 1.4 – 1.7, 1.8, 1.10 – 1.23, Part II "Ship Arrangement" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk;
 - Part III "Equipment, Arrangements and Outfit" of the Rules for the Classification and Construction of Floating Offshore Oil-and-Gas Production Units;
 - Parts I "Life-Saving Appliances" and II "Signal Means" of the Rules for the Equipment of Floating Offshore Oil-and-Gas Production Units;
 - Parts III "Equipment, Arrangements and Outfit" and IX "Life-Saving Appliances" of the Rules for the Classification and Construction of Pleasure Craft;
 - Part III "Equipment, Arrangements and Outfit" of the Rules for the Classification and Construction of Small Sea Fishing Vessels;
 - Parts III "Equipment, Arrangements and Outfit" and VIII "Life-Saving Appliances and Signal Means", Sections 2 – 5 of Part X "Requirements for Sailing Racing Yachts of Navigation Category 5" of the Rules for the Design, Construction, Repair and Operation of Sailing Racing Yachts, Manufacture of Materials and Products for Installation on Board Sailing Racing Yachts;
 - Technical Requirements for the Arrangement and Securing of the International Standard Containers on Board the Ships Intended for Container Transportation;

- Section 7 of Part II "General Requirements" and Section 3, Part III "Special Requirements" of the Rules for Planning and Execution of Marine Operations;
 - Part VI "Cargo-Handling Gear" of the Rules for the Oil-and-Gas Equipment of Floating Offshore Oil-and-Gas Production Units, Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Annexes 4, 7 – 9, 12 (only Section 8), 18, 28 (only Section 12), 30, 32 and 49 to the Guidelines on Technical Supervision of Ships in Service;
 - Sections 5 "Equipment, Arrangements and Outfit" and 10 "Handling System" of the Guidelines on Survey of Manned Submersibles and Ship's Diving Systems under Construction and in Service;
 - Section 8 "Life-Saving Appliances" of the Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code);
 - Sections 3 "Equipment, Arrangements and Outfit", 13 "Life-Saving Appliances" and 14 "Signal Means" of the Guidelines on Technical Supervision of Ships under Construction;
 - Guidelines for the Preparation of the Cargo Securing Manual;
 - Guidelines on Technical Supervision of Ships for Assessment of Cargo Securing Equipment Compliance with "Cargo Securing Manual";
 - Guidelines on Survey of Shipboard Equipment for General Cargo Securing;
 - Guidelines on Evaluation of Manoeuvring Characteristics of Inland Navigation Ships (for European Inland Waterways);
 - Guidelines on Evaluation of Manoeuvring Characteristics of Ships.
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
 - 3) proposed scientific and technical decisions related to the design, manufacture, installation and operation of ship's equipment and arrangements, life-saving appliances and signal means as well as cargo handling gear under the RS technical supervision;
 - 4) review of typical and the most significant accidents, damages and failures of ship's equipment and arrangements, life-saving appliances and signal means as well as cargo handling gear;
 - 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO and other international organizations;
 - 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Technical Operation of Fleet" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Rules for the Classification Surveys of Ships in Service with Annexes;
 - Rules for the Surveys of Inland Navigation Ships in Service (for European Inland Waterways);
 - Rules for the Classification and Survey of Small Craft;
 - Guidelines on Technical Supervision of Ships in Service with Annexes;
 - Guidelines on the Classification and Survey of Yachts;
 - Guidance on Technical Supervision During Repair of Sea-Going Ships with Annexes;
- 2) future-oriented topics and R&D results related to the development and improvement of the above RS normative documents;
- 3) particularly important scientific and technical and technological decisions related to the technical supervision of ships and marine refrigerating plants in service, major conversion and repair of ships, class assignment and reassignment, reactivation of ships after conservation, passages and towing of ships under the RS technical supervision;
- 4) review of typical damages and the most significant accidents and incidents during operation of sea-going ships including their structures, machinery and systems;
- 5) application of advanced methods for technical diagnostics of ship's systems, arrangements and machinery;
- 6) RS position for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;
- 7) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"Electrical Equipment and Automation of Ships" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Parts XI "Electrical Equipment" and XV "Automation" and para 4.2.5, Chapters 5.9, 5.11, 6.6, 7.10, 9.10, 9.11, 11.8 – 11.11 as well as paras 13.2.10 and 13.3.8 of Part XVII "Distinguishing Marks and Descriptive notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules for the Classification and Construction of Sea-Going Ships;
 - Parts IX "Electrical Equipment" and X "Automation" of the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways);
 - Parts X "Electrical Equipment" and XIV "Automation" of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms;
 - Parts XI "Electrical Equipment" and XV "Automation" and Sections 10 and 11, Part XXI "Craft for Personnel Transportation" of the Rules for the Classification and Construction of High-Speed Craft;
 - Part VII "Electrical Equipment" and Section 6 "Alarm Systems" of Part VIII "Instrumentation" of the Rules for the Classification and Construction of Chemical Tankers;
 - Parts VII "Electrical Equipment" and VIII "Instrumentation and Automation Systems" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk;
 - Parts VII "Electrical Equipment", VIII "Instrumentation" of the Rules for the Classification and Construction of Ships Carrying Compressed Natural Gas;
 - Parts XI "Electrical Equipment" and XV "Automation" of the Rules for the Classification and Construction of Floating Offshore Oil-and-Gas Production Units;
 - Parts VI "Automation" and VII "Electrical Equipment" of the Rules for the Classification and Construction of Pleasure Craft;
 - Parts XI "Electrical Equipment" and XV "Automation" of the Rules for the Classification and Construction of Small Sea Fishing Vessels
 - Part VII "Electrical Equipment" of the Rules for the Design, Construction, Repair and Operation of Sailing Racing Yachts, Manufacture of Materials and Products for Installation on Board Sailing Racing Yachts;
 - Sections 10, 12 and 18, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
 - Guidelines on Cyber Safety;
 - Regulations for Classification of Maritime Autonomous and Remotely Controlled Surface Ships (MASS).
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to the design, manufacture, installation and operation of ship's electrical equipment and automation means under the RS technical supervision;
- 4) review of typical and the most significant accidents, damages and failures of electrical equipment and automation means;
- 5) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, IACS, ISO and other international organizations;

- 6) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.

"High-Speed Craft, Pleasure Craft, Yachts, Small Craft and Sailing Racing Yachts" Section

Terms of reference comprise review, preparation of expert judgement and development of recommendations regarding:

- 1) draft supplements and amendments brought for discussion within the Section, to the following RS normative documents:
 - Rules for the Classification and Construction of High-Speed Craft;
 - Rules for the Classification and Construction of Pleasure Craft;
 - Rules for Safety of Dynamically Supported Craft;
 - Rules for the Classification and Construction of Sea-Going Ships, Part XX "Additional Requirements for Yachts";
 - Rules for the Classification and Construction of Sea-Going Ships, Part XVI "Structure and Strength of Fiber-Reinforced Plastic Ships";
 - Guidelines on the Classification and Survey of Yachts;
 - Rules for the Classification and Survey of Small Craft;
 - Rules for the Design, Construction, Repair and Operation of Sailing Racing Yachts, Manufacture of Materials and Products for Installation on Board Sailing Racing Yachts;
- 2) future-oriented topics and R&D results related to the development of the above RS normative documents;
- 3) proposed scientific and technical decisions related to the design, manufacture and operation of structural members and details of hull structures as well as the complete composite ships being under the RS technical supervision by the areas:
 - strength and structure of ship's hull, materials (determination of required scantlings, allowable loadings, boundary conditions, and strength, stability and fatigue assessment criteria, assessment methods of applied materials for manufacture of composite structures, manufacturing method of composite structures as well as quality assessment method of manufactured composite structures);
 - ship's equipment, arrangements and outfit;
 - fire protection;
 - ship's systems and piping;
 - sailing rigging;etc.
- 4) proposed scientific and technical decisions related to the design, manufacture and operation of structural members and details of hull structures made of steel or aluminium for high-speed craft, pleasure craft and yachts under the RS technical supervision by the areas:
 - strength and structure of ship's hull, materials and welding (determination of required scantlings);
 - seaworthiness (particulars applicable to high-speed craft, pleasure craft and yachts);
 - machinery installations, propellers, ship's service systems, arrangements and outfit of high-speed craft, pleasure craft and yachts;
 - electrical equipment and automation of high-speed craft, pleasure craft and yachts;etc.
- 5) review of typical damages during operation and the most significant damages of composite hulls after accident as well as in cases resulted in substantial deterioration and/or loss of stability and/or buoyancy, in case of deterioration of such hull structures caused by fire, etc.;
- 6) draft RS position brought for discussion within the Section, for participation in meetings of the working bodies in IMO, ISO and other international organizations;

- 7) themes and content of articles for the Research Bulletin by Russian Maritime Register of Shipping.