

THE “C” CATEGORY RULES

CHAPTER 1

DEFINITION AND CLASSIFICATION

1.1. The C Category models are models of vessels constructed in a certain scale as well as accurate constructions (units), dioramas, technical appliances and ship parts.

1.2. These International Competition Rules apply to the following C Disciplines/Classes:

C-1	Models of rowboats and sailing ships
C-2	Models of ships with mechanical propulsion
C-3	Cross-section models, admiralty and hull models, waterline ship models, dockyards and scenarios, dioramas, models of ship parts, etc.
C-4	Miniature boats analogous to C1 – C3 Classes, constructed in scale 1:250 and under
C-5	Models in bottles
C-6	Models from injection plastic and resin kits
C-7	Models from industrial paper and cardboard kits
C-8	Models from wooden and combined kits

1.3. Model discipline/class allocation:

C-1 – models of rowboats and sailing ships;

C-2 – models of ships with mechanical propulsion;

C-3A/B/C – cross-section models, admiralty and hull models, models of port equipment, docks, flood gates, lighthouses and dockyards, dioramas (scale up to 1:250), development series (at least three models), models of parts, units and details of ships;

C-4A/B/C – miniature boats analogous to C1-C3 Classes, constructed in scale 1:250 and under, including dioramas. This class includes development series of ships, hydrotechnical and navigation facilities (at least three models), cross-sections, fragments, parts of ships;

C-5 – models in bottles;

C-6A/B/C – models from kits of plastic parts molded under pressure (injection molding) and resin kits;

C-7A/B/C – models from industrial paper and cardboard kits;

C-8A/B – models from wooden and combined kits.

The exact description of classes and groups of models is given in chapter 5.

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1.4. The competition aim is to obtain the highest static evaluation result according to the established criteria. The highest score of the model which is determined by the referee panel is 100 points. Competitors are awarded with gold, silver and bronze medals.

CHAPTER 2

INDIVIDUAL REQUIREMENTS FOR COMPETITORS

2.1. At the SMSIF competitions, the competitors are divided into two age categories: juniors and seniors.

The definition of a junior is available in SMSIF General Rules and is formulated as follows:

A junior is a person under the age of 18 in the year of the competition.

2.2. The number of models allowed to participate in one competition.

At world and continental competitions, each national federation may bring the following maximum number of models to participate:

C-1 15 models

C-2 15 models

C-3 15 models, divided into groups C-3 A, B, C

C-4 15 models, divided into groups C-4 A, B, C

C-5 15 models

C-6 15 models, divided into groups C-6 A, B, C

C-7 15 models, divided into groups C-7 A, B, C

C-8 15 models, divided into groups C-8 A, B

Total: 120 models from a national federation (juniors and seniors together).

One competitor may present no more than 3 models in each discipline/class.

2.3. Protests.

Protests against the model evaluation results in the C Disciplines/Classes are **not allowed**.

CHAPTER 3

MODEL EVALUATION

3.1. Technical and organizational construction evaluation requirements are valid for all classes.

The organizer provides the evaluation commission with the following:

- workspace located far enough from the competitors and spectators, protecting models from exposure to direct sunlight and weather or a well-lit room equipped with steady tables;

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- a closed room or a place for a closed-door discussion of the model construction evaluation commission;
- suitable measuring instruments to measure the models;
- a sufficient number of forms to write down measurement and evaluation results (see the appendix).

3.2. The competition organizer, the competition management and the evaluation commission should agree on the sufficient time for exact evaluation of the models taking into account the number of participating models.

3.3. The secretary must keep the official protocols with the results of the construction evaluation of the models, and the head of the model construction evaluation commission must check them and certify them with his/her own signature. For each model discipline/class, it is necessary to keep a separate evaluation protocol which must contain the following data:

- first name, last name and citizenship of the commission members, the secretary, the chief referee;
- first name, last name and citizenship of each competitor;
- the exact name of the model (name and type of its prototype vessel or equipment, scale of the model);
- final evaluation result (see the appendix).

3.4. Each member of the model construction evaluation commission must keep a list of model evaluation results, the evaluation being performed according to individual criteria.

3.5. The model construction evaluation commission consists of:

- senior referee as head of the model construction evaluation commission;
- 4 referees (minimum 2);
- secretary (with no right to vote).

3.6. Model construction evaluation.

Models are arranged separately according to their disciplines/classes and groups. They should be placed in such a way that they do not visually overlap each other.

Before the evaluation begins, the commission should make sure that the declared models are divided into disciplines/classes and groups correctly.

If in doubt of doubt as to which discipline/class or group a particular model belongs to, the issue of its assignment is solved by the chief referee.

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The model construction evaluation commission should hold a closed-door meeting presided by the chief referee. The aim of the meeting is to develop uniform approaches to the rules interpretation and to reach agreement on actions in a controversial or doubtful case. In case of disagreements within the commission, the chief referee has the right of a decisive vote.

It is necessary to pay attention to careful handling of the models while measuring them in order to avoid their damage.

After the meeting, the commission inspects all the models that will be evaluated in order to get an impression of them.

Each member of the commission evaluates the presented models on his/her own and independently of others, according to the specific criteria for this class.

A competitor or his/her representative must be present during the evaluation of his/her model. The commission members are entitled to ask the competitor or his/her representative questions concerning the presented model and its documentation.

3.7. Scale and technical documentation of a model.

The competitor chooses the model scale at his/her discretion.

At the **registration** and at the **construction evaluation**, the competitor must present **the build brief (passport) of the model** and **documentation** in accordance with which he/she has constructed the model.

To evaluate the construction of the model, the following documents must be presented:

3.7.1. A scaled drawing with a side projection, the top/front/rear views, drawings of frames, if possible, a drawing of a cross-section of the prototype vessel or a flat drawing of the ship side;

3.7.2. Information on the full length of the vessel, its width, waterline length, draught of the prototype vessel;

3.7.3. All documentation, data from museums, drawings from shipyards, books, magazines, catalogs, including other documents and photographs of the prototype vessel and its parts according to which the model has been constructed.

If a competitor constructed a model based on self-made drawings, then he/she must present complete data on the sources of information used. All the requirements of paragraph 3.7 must be observed in any case.

If the used sources of information, documents, photographs, shipyard drawings, technical data and separate parts of the prototype vessel contradict each other, then the competitor who has constructed the model is free to choose a possible variant or other possible sources of information. The choice of the variant

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used and the source of information should not cause a loss of points if they correspond to the construction logic.

If the construction and/or color of the prototype vessel were changed after it had been constructed and they no longer correspond to original shipyard drawings, but are nevertheless implemented on the model, then the competitor must confirm their presence and construction with accurate data from possible sources of information.

If the supporting documentation is **not presented**, then the evaluation is performed only according to the following criteria: “Quality of work”, “Amount of work”.

If the presented documentation is incomplete, then the score for the “Compliance” criterion will be decreased during the evaluation.

3.8. Model evaluation algorithm.

3.8.1. Each member of the model construction evaluation commission evaluates each model and enters the points which were given to it into the protocol. The evaluation is performed according to the evaluation criteria (only integers are allowed). The sum of points awarded to the model according to each evaluation criterion gives the result of the model evaluation.

3.8.2. When the commission members finalize the model evaluation, the secretary enters the results of all referees’ individual evaluations into the protocol according to the Appendix.

3.8.3. If the commission referees deviate from the maximum and minimum scores by more than 5 points (the total score of the model ranging from 70-100), then the commission must hold a closed-door meeting. At the meeting, the members of the commission must justify their points.

3.8.4. Based on the evaluation results of the corresponding model and taking into account the opinions expressed during the meeting, the head of the commission should propose the average value as the total score of the corresponding model. To make a decision on the evaluation based on the average value, all the commission referees should vote.

3.8.5. Those referees whose points deviate substantially must re-evaluate the model and they have the right to evaluate the model by a maximum of two points more or less than the declared average score. A public announcement of the evaluation results can be made only upon the completion of this evaluation.

3.8.6. In order to determine the final result of the model, it is necessary to calculate the average mean of its three evaluations by different referees. This number of points is the final result of the model. The models in the protocol are

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ranked according to their points. Places of competitors who have constructed the models are also entered into the protocol.

3.9. Other conditions.

Only complete models that demonstrate all the details of the ship both above and below the waterline are allowed to participate in C-1 and C-2 Classes.

Models and installations above the waterline are admitted in C-3, C-4, C-6 and C-7 Classes.

All visible parts of a model and visible internal equipment are evaluated.

The commission has the right to put comparable models next to each other for evaluation.

CHAPTER 4

MODEL CONSTRUCTION RULES

4.1. Only models constructed by a competitor **himself/herself** are allowed to participate in the competition.

4.2. Commercially constructed models are not allowed to compete. If this violation is detected, the model is disqualified.

4.3. Only models constructed from commercially available kits of plastic parts molded under pressure (injection molding) and kits of parts molded from polymers (resins) are allowed to compete in C-6 Class.

Only models constructed from commercially available paper and cardboard kits are allowed to compete in C-7 Class. Self-designed models are not allowed.

Models constructed from other commercially available kits of wood, metal, plastic (including stamped parts) and other materials are allowed to compete in C-8 Class.

4.4. A model or a modeled installation must not be over **2500 mm** long if the scale is 1:100 or under; a diorama must not exceed **2 m²**.

The choice of scale is not restricted, and it is allowed to use both a metric system of measures and an inch one.

No parts and groups of parts or units of the model that have been constructed professionally or by another person who is not indicated in the build brief of the model (passport) will be evaluated. They are considered absent and must be indicated in the model passport. The exceptions are semi-finished details: cables, chains, pipes, profiles, cordage, etc.

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4.5. The following deviations are allowed in C-1 – C-4 Classes:

model length up to:	500 mm, ±3 mm	1000 mm, ±5 mm	2000 mm, ±8 mm	2500 mm, ±10 mm	over ±12 mm
model width up to:	50 mm, ±2 mm	150 mm, ±2,5 mm	300 mm, ±4 mm	600 mm, ±5 mm	over ±6,5 mm

4.6. The models must be presented for the evaluation in a clean and attractive condition. The coloring must correspond to the original view of the original shipyard-new vessel. The following deviations from the original outlook are allowed: camouflage coloring, signs of aging and wear in accordance with the original.

In C-1 – C-5 and C-8 Classes, it is allowed to leave a part of the model in natural wood.

4.7. It is forbidden to construct models or their parts from bones or ivory.

4.8. Work organization of model construction evaluation commissions.

At the competitions, the model construction evaluation commissions evaluate a competitor's level of ship modeling skills. The evaluation runs according to the rules that are valid in this case.

Depending on the number of models being evaluated, **the following number** of the model construction evaluation commissions should be organized.

For the evaluation of more than 150 models, it is recommended to set up **three** commissions:

- one for C-1 and C-3 Classes;
- one for C-2, C-4 and C-5 Classes;
- one for C-6, C-7, C-8 Classes.

If it is necessary to evaluate fewer than 150 models, then **two** commissions are enough:

- one for C-1, C-3, C-4, C-5 Classes;
- one for C-2, C-6, C-7, C-8 Classes.

The commissions' workload (the number of models to be evaluated) should be divided as evenly as possible. It is possible to change the way classes are distributed among the commissions.

4.9. The evaluation points that are given by the commission are an indisputable result of the model evaluation. In the final protocol, the competitors

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are ranked according to the points gained, and their places are indicated. Awarding with gold, silver and bronze medals depends on the score of the model.

To receive the medals, it is necessary to gain the following number of points:

- Gold medal: 95 – 100 points;
- Silver medal: 90 – 94.67 points;
- Bronze medal: 85 – 89.67 points.

4.10. The competition results protocol must contain the following information:

- type, place and date of the competition;
- model class;
- place;
- first name, last name and country of each competitor;
- names of the models and their scale;
- score given to the models by each referee;
- total number of points for each model;
- rank of the received medals (gold, silver, bronze);
- last names, numbers and signatures of the referees, the chief secretary and the chief referee.

CHAPTER 5

REQUIREMENTS FOR DISCIPLINES/CLASSES AND CONSTRUCTION EVALUATION

5.1. Definition of a model

C Discipline/Class models are models of existing (now or previously) or of planned to be built marine, lake or river vessels constructed in a certain scale, fully corresponding to the prototypes both in visual design and in color or their parts, or port facilities and shipyards or their parts.

5.2. Model classes

5.2.1. C-1 Discipline/Class. Models of sailing and other vessels without a mechanical drive.

All types of sailing vessels belong to C-1 Class, even if they have an auxiliary mechanical drive, but wind force is the main source of the vessel propulsion. C1 Class also includes rowing vessels such as galleys, triremes, Viking ships and small vessels such as rowing boats, catamarans, gondolas, dugouts, etc. There are no restrictions on the presentation of a model with its sails furled or

unfurled. Models of vessels with natural wood sheathing also belong to this class. A model may only be constructed as a full-size one.

5.2.2. C-2 Discipline/Class. Models of vessels with a mechanical drive.

All types of mechanical drive vessels belong to C-2 Class, including towed and pushed barges as well as installations or equipment such as floating marine cranes and self-propelled drilling rigs. Fishing vessels with the so-called auxiliary sail also belong to this class. A model may only be constructed as a full-size one.

5.2.3. C-3 Discipline/Class. Models of vessel parts or systems.

C-3 Class includes waterline ship models, models of vessel parts or systems that are in unity with cross-sections of the vessel hull, deck cutout or parts of the vessel hull, and which may be considered complete model works. This class also includes vessel equipment such as winches, boats with davits, cranes, capstans, bollards, etc., admiralty and hull models, operating models, parts of port and shipyard equipment, model development series consisting of at least three models of ships or ship equipment, navigation marks, floating facilities without their own drive and dioramas.

C-3A Subclass:

This subclass includes port and shipyard facilities, docks, locks, lighthouses and other hydrotechnical and navigation facilities. It also includes dioramas in scale up to 1:250 and waterline ship models. Development series of sailing or motor vessels (similar to C-1 and C-2 Classes), hydrotechnical and navigation facilities in scale up to 1:250 and consisting of at least three items also belong to this subclass.

C-3B Subclass:

Longitudinal and transverse cross-sections, cutouts, admiralty (with partially removed hull and/or deck sheathing) and hull models of sailing vessels belong to this subclass.

Subclass C-3C:

Parts of ships, ship equipment, units and parts, rows of connected units and parts (at least three) constructed in the same scale.

5.2.4. C-4 Class. Miniature boats analogous to C1-C3 Classes, constructed in scale 1:250 and under.

A model may be constructed both full-size and above the waterline.

C-4A Subclass:

Sailing vessels (similar to C-1 Class) belong to this subclass.

C-4B Subclass:

Vessels with a mechanical drive (similar to C-2 Class) belong to this subclass.

C-4C Subclass:

This subclass includes dioramas (in scale of 1:250 or under); series of development, hydrotechnical and navigation facilities (at least three models); cross-sections, parts and fragments of vessels.

5.2.5. Model construction evaluation criteria for C-1 – C-4 Classes.

Quality of work (50 points maximum):

Technical construction and quality of the model, accuracy of shapes, quality of surface finishing, accuracy of color rendering and visual design of the model are evaluated.

Amount and complexity of work (30 points maximum):

Total amount of work required to construct the model is evaluated. It is necessary to take into account work that took a long time to complete, considering the degree of construction complexity. The degree of detail and elaboration is taken into account, bearing in mind the scale of the model. Reconstructions and additions should be evaluated positively.

Compliance with documentation (20 points maximum):

This criterion helps to check:

- Scale accuracy, taking into account the permissible deviations.
- Full presence and completeness of all details according to the technical documentation that was at the competitor's disposal. Additions to the drawing, notes and personal sketches, confirmed by additional information, are evaluated positively. Photographic documentation of the entire work process is evaluated positively.

- Correspondence of the material used for model parts and units to the original materials of the prototype vessel (except for painted surfaces).

Correctness of coloring tones is evaluated as well as impression made by uncoated materials: wood, metal, cordage, etc. "Maritime" and "technical" literacy are taken into account.

5.2.6. C-5 Discipline/Class. Models in bottles.

All models constructed in bottles, ampoules or glass receptacles belong to this class. These models must be constructed in compliance with the scale. These may be marine or coastal vessels, existing now or previously, or parts of vessels. Port and shipyard facilities or whole marine scenarios are also permissible. Vessels (facilities) must be constructed in a glass container. A bottle, an ampoule or any other whole one-piece receptacle made of transparent and colorless glass may be used as a model container. Before the model construction begins, container chosen for the model must not consist of several parts which would then be connected.

Models may be painted or constructed from natural materials. Decorations must comply with the model and its epoch.

5.2.7. Model construction evaluation criteria for C-5 Class.

The model construction evaluation commission evaluates the construction technique, quality of work and degree of complexity in mounting and assembling the model based on the following criteria.

Quality of work (50 points maximum):

Execution of models and dioramas, technical execution and quality of a model, accuracy of shapes, quality of surface finishing, painting and assembling are evaluated.

Amount and complexity of work (30 points maximum):

Complexity of the applied construction technique with regards to the shape of the container and the diameter of the opening, the number of ships and the amount of work on decorations is evaluated. Degree to which the model fills the container, complexity of mounting the model and/or its parts are also evaluated based on the submitted documentation, photo and video materials.

Compliance with reality (10 points maximum):

Optically correct impression made by the overall composition and decoration, choice of colors and various materials, utilization of available space are evaluated.

Compliance with documentation (10 points maximum):

Documentation presented by the author of the model (competitor) on the vessel(s), decorations and “installing into a bottle” technique, including notes and personal sketches are evaluated. Additions to the drawing, notes and personal sketches, confirmed by additional information, are evaluated positively. Photographic documentation of the entire work process is evaluated positively.

5.2.8. C-6 Discipline/Class. Plastic models.

Plastic models are models from industrial kits of plastic parts molded under pressure (injection molding) and parts molded from resin. These models must be constructed manually according to the assembly guide. It is allowed to introduce any changes using other materials to perfect and refine the model. But the main features of a plastic model (hull, superstructures and other large units) must be preserved. If additions are made to the model, they must be confirmed by original documents and photographs. A model may be constructed above the waterline if the manufacturer designed it this way.

C-6A Subclass:

Plastic models from industrial kits designed for manual construction and made from polystyrene and resin in scale up to 1:500 belong to this subclass.

C-6B Subclass:

Plastic models from industrial kits designed for manual construction and made from polystyrene and resin in scale 1:500 or under belong to this subclass.

C-6C Subclass:

Dioramas based on plastic and resin models (regardless of their scale), series of development (at least three models), cross-sections belong to this subclass.

5.2.9. Model construction evaluation criteria for C-6 Class.

Quality of work (50 points maximum):

Technical quality of the model construction, quality of material processing (assembling), decorativeness, cleanliness of surfaces and their coloring are evaluated. Absence of burrs, seams and joints on the hull, tiers of superstructures, complexity and tidiness of coloring are also evaluated.

Amount and complexity of work (30 points maximum):

Total amount of work required to construct the model is evaluated. It is necessary to take into account work that took a long time to complete, considering the degree of construction complexity. The degree of detail and elaboration is taken into account, bearing in mind the scale of the model. Reconstructions and additions should be evaluated positively.

Compliance with documentation (20 points maximum):

Presence of all parts in accordance with documentation (copies of assembly instructions, etc.) which was available to a competitor. Correspondence of the material used for model parts and units to the original materials of the prototype vessel (except for painted surfaces) is evaluated. Evaluation of coloring tones correctness and impression made by uncoated materials: wood, metal, cordage, etc. "Maritime" and "technical" literacy are taken into account.

Permissible non-compliance with the scale (length and width of a model) is not evaluated.

5.2.10. C-7 Discipline/Class. Models from industrial paper and cardboard kits.

Cardboard models are models constructed manually from industrial paper modeling kits (magazines, albums). Electronic versions are allowed. Scaling is permissible, but a copy of the original must be presented. A model may be constructed above the waterline if the manufacturer designed it this way.

Other materials, for example: wood (wooden deck, masts, etc.), metal (gun barrels, radars, guard rails, etc.), fabric (sails) may be used to refine the models. However, main elements of paper kits must be preserved.

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Cuts may be painted. Documentation is presented, if necessary. At the same time, features of a cardboard model must be preserved: visible parts of the hull and superstructures must be taken from a kit. If changes or improvements have been made, they must be confirmed by documentation or photographs.

It is not allowed in C-7 Class:

- To change the color of the model or its parts;
- To fill the interior space of the hull, superstructures and other units with foreign materials (plastic foam, balsa, etc.) to create a rigid model frame;
- To apply double sheathing;
- To coat the hull with another material for example, copper plates. A separate imitation of the copper sheathing of the hull underwater part is not allowed. An exception is the case when, according to the assembly manual, the hull or deck are sheathed with strips imitating sheathing with boards or wooden laths.

C-7A Subclass:

Cardboard models in scale up to 1:250 belong to this subclass.

C-7B Subclass:

Cardboard models in scale 1:250 or under belong to this subclass.

C-7C Subclass:

Dioramas based on cardboard models (in any scale), series of development, hydrotechnical and navigation facilities (at least three models) and cross-sections belong to this subclass.

5.2.11. Model construction evaluation criteria for C-7 Discipline/Class.

Quality of work (50 points maximum):

Quality of the model construction technique, tidiness of shapes and surfaces, processing of cut edges and use of extraneous materials are evaluated. Accuracy of shaped surfaces (fore and aft ends, rounded parts of the hull and superstructures, funnels, turrets, etc.) is evaluated.

Amount and complexity of work (30 points maximum):

Total amount of work required to construct the model is evaluated. Reconstructions and additions are evaluated positively. It is necessary to take into account work that took a long time to complete, which is confirmed by the complexity degree of the model construction and additions made according to supplementary documentation.

Compliance with documentation (20 points maximum):

Presence of all parts in accordance with the documents which were available to the competitor (assembly instructions and diagrams, drawings and photographs

of the prototype vessel, documents, etc.) is evaluated. Correctness of tones of the additionally applied coloring is evaluated as well as visual state of wood, metals, fabrics and cordage when using additional materials.

Acceptable deviations in model length and width are not evaluated.

5.2.12. C-8 Discipline/Class. Models from wooden and combined kits.

This class comprises models from commercially available kits of wood or plastic or other materials (but not molded under pressure, as in C-6 Class). A model may be constructed above the waterline if the manufacturer designed it this way.

A model must be constructed according to the assembly manual. Refinements using other materials are allowed but main features of the kit model (hull, superstructures, etc.) must be preserved. Documentation from the kit and, if available, additional documentation for the prototype vessel must be presented for the evaluation.

C-8A Subclass:

Models of sailing vessels (analogous to C-1 Class) belong to this subclass.

C-8B Subclass:

Models of vessels with a mechanical drive (analogous to C-2 Class) belong to this subclass.

5.2.13. Model construction evaluation criteria for C-8 Class.

Quality of work (50 points maximum):

Quality of the model construction technique, quality of material processing, tidiness of shapes and surfaces, processing of cut edges and joints, degree of elaboration of parts and units, surface and coloring cleanliness are evaluated.

Amount and complexity of work (30 points maximum):

Total amount of work required to construct the model is evaluated. It is necessary to take into account work that took a long time to complete, which is confirmed by the complexity degree of the model construction. The degree of detail and elaboration is taken into account, bearing in mind the scale of the model. Reconstructions and additions are evaluated positively.

Compliance with documentation (20 points maximum):

Presence of all parts in accordance with documentation (assembly instructions, documents, literature etc.) which was available to a competitor.

Correctness of coloring tones and use of materials in accordance with the prototype vessel are evaluated. Visual state of wood, metals, fabrics and cordage when using additional materials is evaluated.

Acceptable deviations in model length and width are not evaluated.