NAVIGA World Organisation for Modelshipbuilding and Modelshipsport

### **Rules**

### **Section C**



Validity: at 01.01.2025							
for the following model classes							
C - 1	Models of sailing and rowing ships						
C - 2	Models of ships with own propulsion						
•	Models of installations, parts of ships, harbour						
C - 3	facilities, shipyards and scenarios, dioramas						
C - 4	Miniature models of the classes C-1 to C-3 in a						
C - 4	scale 1:250 and smaller.						
C - 5	Models of ships in bottles						
C - 6	Plastic models						
C - 7	Cardboard and paper models						
C - 8	Kit models						

Section leader C Maciej Poznański

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#### **CATEGORY C**

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- 7.2 Table of subjective grades class C-5.
- 7.3 Evaluation/final result, classes C-1 to C-8.
- 7.4 Model certificate.

#### **CATEGORY C**

#### 1. Categorization / overview

Scale models, accurate constructions, technical installations and parts of ships.

#### Classes. Class definition. Competition goal

- C-1 Models of sailing and rowing ships.
- C-2 Models of ships with their own propulsion.
- C-3 A-D Models of installations, parts of ships, harbour facilities, shipyards and dioramas (without scale limitation).
- C-4 A-D Miniature models of the classes C1 to C-3 in a scale 1:250 and smaller. Dioramas are assigned to the group of C-3 A.

Models of ships in bottles.

C-6 Plastic models.

C-5

- C-7 Cardboard and paper models.
- C-8 Kits models and 3D printed models.

The exact definition of the individual classes and groups is evident in chapter 6.

Maximum 100 points can be reached, which are distributed by a jury. Gold, silver and bronze medals are given. Master titles will not be given.

### A. Regulations, valid for all classes

#### 2. Personal regulations

#### 2.1 Age groups

During NAVIGA competitions the competitors are divided in 2 age groups - juniors and seniors.

The definition of juniors stands in the match rules (general regulations) and reads as follows:

A junior is someone, who in the year of the competition is not older than 18.

#### 2.2 Certified number of models at a competition

During world- and continental competitions for each national federation the following maximum number of models is certified:

- C-1 20 models
- C-2 20 models
- C-3 20 models, (Divided into C3-A,B,C,D)
- C-4 20 models, (Divided into C4-A,B,C,D)
- C-5 20 models
- C-6 20 models
- C-7 20 models
- C-8 20 models

TOTALLY 160 models per national federation ( junior + senior)

Maximum 3 models per competitor are allowed in each class.

#### 2.3 Protests

In C category protests against the results of the building evaluation are not possible.

## 3. Technical and organizational regulations of the building evaluation valid for all classes.

- 1. The organizer is supposed to put the following to all evaluation commissions:
- A sufficient place far away from the participants and spectators, protected from the sun and other weather conditions or a well-lit up area with sturdy tables for setting up the models.
- Suitable measuring instruments for measuring the models.
- Sufficient valuation and result lists according to appendix.
- 2. The organizer and/or jury should provide, in arrangement with the evaluation commissions, sufficient time for an exact examination of the models taking into consideration the number of models which must be evaluated.

- 3. The official evaluation lists are done by the secretary and are examined, approved and signed members of the judge commissions and by main judge. For each class, and/or group its own evaluation list is to be done, it must contain the following data:
- Name, first name and nationality of the three members of the judges commission, the secretary and the main judge.
- Name, first name and nationality of each competitor.
- Exact marking of the model (name and type of the original ship or device).
- The final result of the evaluation. (see attachment 7.3)
- 4. Each member of the judge commission has an evaluation sheet, where the results of the individual value criteria are registered. (attachment 7.1 & 7.2).

#### 4. Execution of the building examination

#### 4.1 The judge commission

The judge commission consists of:

- The leader of commission
- 2 judges
- The secretary of commission (without right to vote)

#### 4.2 Building examination

- 1. The models are divided and examined separately according to classes and/or groups. They are to be set up in such a way that they do not cover each other.
- 2. Before the beginning of all evaluations, the class and/or group affiliation of all announced models is to be checked by the judge commissions.
- 3. If there are any doubts in the class and/or group allocation, the main judge decides on the allocation. In the case of dioramas, the competitor can declare whether his model is a diorama or not. If he declares the model as a diorama, all elements are judged, both the model and its surroundings. If the model is not declared as a diorama, the surroundings (water, shore, etc.) are treated as a base and are not subject to judgement.
- 4. The judge commission lead a private meeting, guided by the main judge. The goal of this meeting is to find a common interpretation of the rules as well as the common approach in a case of doubt. In case of a discrepancy the main judge makes the decision.
- 5. Judges should pay attention not to damage the models during the measuring.
- 6. After this consultation the commission examines the models in every single class with a view of overall comparison of all the models in the same class.
- 7. Every judge evaluates models separately and independently of the other members, in accordance with the class specific criteria.

8. During the examination of the model the model constructor (competitor) or his deputy must be present. The members of the judge commission are entitled to ask questions about the model construction and the construction documents used during the building process.

#### 4.3 Scale and design documents

- The choice of scale is left to the model constructor.
- 2. During the registration, the model constructor must present the Model Certificate and all documents which were used to build the model. (Attachment 7.4)
- 3. In order to be able to examine the model, the following documents must be submitted:
  - a) A plan on a scale with: side view, plan view, lines and frames drawings, as well as cross section of the original ship.
  - b) Data of the length of the model, width, waterline and draft of the original ship.
  - c) All documents, museum documents, shipyard plans, books, magazines, catalogues, including different documents and photos of the original ship.

#### Drawings and images may also be showed in digital form.

- 4. If the model constructor (competitor) made the plans themselves, the used sources of information are to be described. The articles 3a and 3b are in each case mandatory, likewise documents of the original ship according to 3c.
- 5. If sources, literature, photos, shipyard plans, the technical data and details contradict themselves over the original ship, then it is released to the model constructor (competitor) to use any variants or use other possible sources. The choice of the applied variants and source data cannot result in a lower points, if it corresponds to a logical execution.
- 6. If at the original ship any later changes were made, which shipyard plans do not correspond to, then the competitor has to prove them with accurate source data.
- 7. If no documents are submitted, only the following criteria are taken into consideration: "Execution", "Impression" and "Extent of work".
- 8. If incomplete documents are submitted, a points are lowered according to the level of the incompleteness.

#### 4.4 Evaluation of the models

- 1. Each member of the judge commission examines each model and notes the points on the evaluation sheet, according to the valuation criteria, (in integers). The sum of the points for the individual valuation criteria results in the result per model.
- 2. When all members of the judge commission finished their evaluations, the results of the individual value of all judges are registered by the secretary in the evaluation list (attachments 7.1 to 7.2)
- 3. If there is a situation that within the range of 70 to 100 points, there is a difference between the lowest and the highest evaluation of more than 5 points, than a private meeting of the judges commission is organized.

- 4. During this consultation the members of the judges commission who gave the different points must justify their evaluation.
- 5. After consultation the leader of the judge commission has to suggest an average value for the total score for the appropriate model with consideration of the points of view in the discussion. For the resolution of the final version, a vote is necessary.
- 6. The judges who gave the outermost valuations have to do a new evaluation which may vary at the most by 2 points from the fixed average value upward or downward.
- 7. In order to determine the final result for the model, the average value from the three valuations is to be determined. This score results is the final result.
- 8. After agreement of the main judge and the representative of the NAVIGA publication of the results is possible for the Organizers.

#### 4.5 Other regulations

- 1. In classes C-1 and C-2 only complete models which have all the parts of the ship under and over the waterline can be represented.
- 2. In classes C-3 and C-4 also models which represent only the part of the ship or the devices visible over water can be represented.
- 3. In principle all visible parts of the models are evaluated, in addition also interior arrangements.
- 4. The judge commission can put comparable models before the evaluation next to each other.

#### 4.6 Construction specifications

- 1. For competitions of the category C1 to C-8 only models built by the model constructor (competitor) can take part.
  - 1.1 Commercial manufactured models are not certified. Those models will be disqualified.
  - 1.2 In the class C-6 only injections moulded models and/or casted from resin from commercial kits are certified. Additions and modifications are permitted.
  - 1.3 In the class C-7 only models made from printed paper or cardboard commercial kits are certified. Additions and modifications are permitted.
  - 1.4 In the class C-8 only models from commercial kits made from wood, plastic, fiberglass or other materials and all models produced using 3D technology (3D printers) excluding C-6 class plastic/injection molded and/or resin casted models are certified. Additions and modifications are permitted.
- 2. The model and/or the device may not exceed in the length over 2500 mm, if the scale is 1:100 or smaller. With model devices the space occupied on 2.0 square meters is limited.
- 3. The scale is not specified. Metric or inch can be used.
- 4. All the parts which were manufactured commercially or by others than in the Model Certificate specified, are not rated. They are not considered as existing and should be in

the model certificate specified. Exceptions are semi-finished materials such as: ropes, chains, pipes, profiles, yarns etc.

- 5. The model should be presented in a clean and fully equipped condition for building evaluation. It should look like a shipyard-new original ship. Deviations (camouflage finishes, ageing and customs traces according to the original) are permitted.
- 6. Models without any coat of paint are assigned to the group of C-3.
- 7. Ships or parts of them made from bones or ivory are forbidden.
- 8. Nazi German markings (swastikas, SS runes, etc.) found on original ships are permitted on models of all classes, unless the competition is held in a country where their application is prohibited by local law. These markings should be considered historical, especially if supported by photographs or other model documentation.

#### 4.7 Valuation

- 1. During the competition the model construction / technical achievement of the competitors is evaluated by judge commissions. This happens according to the rules valid for the building examination. (4.5 to 4.6)
- 2. If it is possible, three commissions of judges are appointed.
  - One for classes C-1, C-3 and C-7
  - One for classes C-2, C-5 and C-8
  - One for classes C-4 and C-6

If less than 140 models are to be evaluated, then two judge commissions are sufficient.

- One for classes C-1, C-3, C-4 and C-7
- One for classes C-2, C-5, C-6 and C-8

The loadwork for the judges commissions should be as evenly as possible. The allocation of the classes to the individual commissions can be changed.

- 3. The scores given by the judge commission are final, indisputable results of the evaluation. The scores determine the dispatching of gold, silver or bronze medals.
- 4. The medals are given after reaching the following points:
  - from 95.00 to 100,00 points gold medal
  - from 90.00 to 94,67 points silver medal
  - from 85.00 to 89,67 points bronze medal
- 5. A placement and/or ranking of places does not take place. In the classes C no champion titles will be given.

#### 4.8 Result list

In the result list of a competition the following is to be specified:

- Kind and place of the competition as well as the date.
- Class

- Name, first name and country of the participant
- Name of the model and its scale
- · Valuation of each individual judge
- Final result
- Sequence of medal ranks (gold, silver, bronze)
- Names and signatures of the judges and the main judge.

### B. Class-specific regulations and building evaluation

#### 5. Competition regulations of the individual classes

#### 5.1 Definition of the models

Static models are: built in a certain scale and in the shape and color models of yet existing, formerly existing or planned sea and inland ships or parts of the ships or models representing port and shipyards or parts of them.

#### 6. Model Classes

#### 6.1 Class C-1 Models of sailing and rowing ships without machine main drive.

All kinds of sailing boats, even if they possess an additional machine drive as an auxiliary drive, if the primary drive of the ship takes place via wind force. Rowing boats such as: galleys, trieren, Viking ships, small vehicles such as rowing boats, outrigger canoes, dugouts etc. The builder decides whether the rigging with or without sails is implemented.

#### 6.2 Class C-2 Models of ships with their own propulsion.

Models of ships and boats driven only by machine engines including dragged or pushed boats. Fishing vessels, with so called a supporting sail are also counted into this class.

#### 6.3 Class C-3 Models of ship devices or ship parts.

Models of ship devices or ship parts, if they are as such in connection with a ships. A cross sections or parts of a hull and as such can be an individual model work. As such, also marine equipment parts such as hoists, pile, boats with davits, crane, winches etc. of ship's models, scenes representations, port and shipyards can be taken into consideration. Also development series, consisting of at least three models or model parts, navigation mark, swimming plants without own drive etc. as well as diorama.

#### 6.3.1 Group C-3A

Ports and shipyards, dock, locks etc. Dioramas (without scale limitation).

#### 6.3.2 Group C-3B

Natural wood colour ships.

#### 6.3.3 Group C-3C

Models of ships above the water line.

#### 6.3.4 Group C-3D

Development series of sail and motor boats (C1/C2) if these consist of at least three models, ships parts, marine equipments, cross sections and profiles, cutouts on a scale to 1:250.

#### 6.4 Class C-4 Miniature models.

Models of the classes C1 to C-3 on a scale 1:250 and smaller.

#### 6.4.1 Group C-4A

Sailing boats (similar to class C1)

#### 6.4.2 Group C-4B

Motor boats (similar to class C-2)

#### 6.4.3 Group C-4C

Models of ships above the water line (similar to group C-3C)

#### 6.4.4 Group C-4-D

Ships parts, marine equipment's, cross sections and profiles, cutouts, development series of sail and motor boats if these consist of at least three models. (Similar to Class C-3A to C-3D without dioramas).

#### 6.4.5 Building examination of the classes C-1 to C-4

#### **Execution: (maximum 50 points)**

Evaluation of the technical execution and quality of the model, accuracy of the forms, appearance of the surfaces and the color.

#### **Impression:** (maximum 10 points)

Evaluation of the general impression and the appearance of the model.

#### Extent of work: (maximum 20 points)

Evaluation of the entire work on the model. Reconstructions and additions are considered positive. Consideration of the time required for the work and the level of difficulty.

#### Compatibility with the construction documents: (maximum 20 points)

Scale accuracy is examined with consideration of the permissible tolerances. Completeness of all details, according to the documents, which were at the disposal to the model builder. Examination of the correct choice of the colors and likewise the natural impression of the not painted materials such as wood, metal, cordages, etc.

The following tolerances are certified in the classes C1 to C-4

Model - length to:	_	1000 mm +-5 mm	2000 mm +-8 mm	2500 mm +-10 mm	over it +-12 mm
Model - width to:	50 mm	150 mm	300 mm	600 mm	over it
	+-2 mm	+-2,5 mm	+-4 mm	+-5 mm	+-6,5 mm

#### 6.5 Class C-5 Models of ships in bottles

All ship's models built in a bottle, an ampoule or a other container from glass.

Models build as complete ship. They can be sea or river boats, still exist today or existing as parts of ships. Likewise are certified port and shipyards, or whole maritime scenarios.

The ships and devices must be built in a glass container. The container can be a bottle, an ampoule or another one-piece object from transparent, colorless glass. The container may not later be joined also before the installation of the models and devices.

The models can consist of painted or natural materials. The decorations must correspond with the model and the epoch.

#### 6.5.1 Building examination of the class C-5

The construction technology, which consists of the quality of the work and the degree of difficulty is evaluated by the judges commission with application of the following criteria:

#### **Execution: (maximum 50 points)**

Execution of the models and devices, quality of the construction and the colouring.

#### Level of difficulty: (maximum 20 points)

Difficulty of the applied construction technology regarding the form of the container and the diameter of the opening, likewise the number of the ships and the range of the decoration. Level of difficulty is evaluated due to the available documentations.

#### Reality: (maximum 20 points)

Optically correct impression of the overall display and the artistic organization. Choice of the colors and the different materials. Usage of the existing area.

#### **Documentation: (maximum 10 points)**

Evaluation of the documentation of the ships, the decoration and the work engineering with the installation of the models into the container together with the notes and personal studies (sketches), submitted by the model construction builder (participant).

Photographs showing the moment of placing the model in the bottle have to be included in the documentation.

#### 6.6 Class C-6 Plastic models

Plastic models are models made from commercial kits produced in technology of injection moulded from plastic or casted in resin and built by modeler according to the instruction of assembly. For the refinement of the model any changes using other materials or additional upgrade kits can be made. The characteristics of a main material of kit (plastic, resin) must remain preserved in model (hull, superstructures). If additions are made, these are to be documented by original documents and/or photos.

Instruction of assembly of kit can be presented as a copy to avoid of damage original one.

#### 6.6.1 Building examination of the class C-6

#### **Execution: (maximum 50 points)**

Evaluation of the model construction - technical quality. Quality of the processing of the material (splices), decoration, cleanliness of the surfaces and the coloring.

#### Impression: (maximum 10 points)

Evaluation of the outside cleanliness of the model and its effect. Evaluation of the splices and seams, representation of the details and rigging as well as effect of the color.

#### Extent of work: (maximum 20 points)

Evaluation of the entire work on the model. Reconstructions and additions are considered positive. Consideration of the time required for the work and the level of difficulty, as well as additions made in accordance with additional documents.

#### **Compatibility: (maximum 20 points)**

Compatibility of all the details with the documents (copies of the building guidance's, literature, documents etc.) which the model builder had. Examination of the correct choice of the colors with additionally applied colors. Appearance of woods, metals, fabrics and cordage with additionally used materials. Tolerances with the model length and model width are not rated.

#### 6.7 Class C-7 Cardboard and paper models

Models made from cardboard (grammage more than 80g/m²) or paper from commercial printed kits can be used. For the refinement of the model any changes may be made using other materials. If necessary the construction documents should be attached. The characteristics of a cardboard model (visible individual parts of the hull and superstructures according to the building sheet) must remain. Covering of the hull with other materials, such as for example copper plates or strips of paper is not permitted. Likewise a new lacquer finish of the model is not permitted. A change of scale is allowed, but a copy of the original sheets should be shown.

#### 6.7.1 Building examination Class C-7

#### **Execution: (maximum 50 points)**

Evaluation of the model construction - technical quality, exactness of the forms and surfaces as well as finishing of cut edges and usage of additional materials.

#### Impression: (maximum 10 points)

Evaluation of the outside cleanliness of the model and its effect. Finishing of cut edges and the look of the rigging.

#### Extent of work: (maximum 20 points)

Evaluation of the entire work on the model. Reconstructions and additions are considered positive. Consideration of the time required for the work and the level of difficulty, as well as additions made in accordance with additional documents.

#### Compatibility: (maximum 20 points)

Completeness of all details according to the documents (copies of the building sheets, building guidance, literature, documents etc.) used by the model builder. Examination of the correct colors of additionally applied colors. Appearance of woods, metals, fabrics

and cordage as additionally used materials. Tolerances with the model length and model width are not rated.

#### 6.8 Class C-8 Kit models

In this class models made from commercial kits from wood, fiberglass or plastic (with the exception of plastic injection and casted resin models from the class C-6) and other materials are taken into consideration. This class includes all models produced in 3-D technology (printed on 3-D printers) too.

The model must be built according to the instructions. Refinements with other materials are allowed. The characteristics of kit must be retained. During the evaluation the kit instruction of assembly must be showed, possibly supplemented by documentation of the original ship. Instruction of assembly of kit can be presented as a copy to avoid of damage original one.

In case 3D printed models designed and made by modeler, instruction of assembly is not required but modeler have to prove his own work in design.

#### 6.8.1 Building examination of the class C-8

#### **Execution: (maximum 50 points)**

Evaluation of model building quality. Quality of processing of the material, decoration, cleanliness of surfaces and the application of paint.

#### Impression: (maximum 10 points)

Evaluation of the external cleanness of the model and its effect. Showing the details and rigging and effect of colour.

#### Extent of work: (maximum 20 points)

Evaluation of the entire work on the model. Reconstructions and additions are considered positive. Consideration of the time required for the work and the level of difficulty, as well as additions made in accordance with additional documents.

#### **Compatibility: (maximum 20 points)**

Completeness of all details according to the documents (plans, literature, documents, etc.) which were available to the modeler. Check on the correct choice of colours for additionally applied colours. Appearance of wood, metals, fabrics and cordage with additionally used materials. Tolerances in the model length and width are not counted.

Leader of the NAVIGA Section C

Maciej Poznański

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### **Table of subjective grades**

Judge		Class	C -	Data		Page	1
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Start No.	Name and surname	Country	Model name	Scale	Exe- cution max 50 pts	Impres- sion: max 10 pts	Extent: max 20 pts	Compa- tibility max 20 pts	Total points

### **Table of subjective grades**

Judge		Class	C - 5	Data		Page	/
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Start No.	Name and surname	Country	Model name	Scale	Execution max 50 pts	Diffi- culty max 10 pts	Reality max 20 pts	Documen- tation max 20 pts	Total points

FINAL RESULTS OF EVALUATION	Class	C -	Data		Page	/
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Name and surname	Country	Model name	Scale	Judge 1	Judge 2	Judge 3	Total	Ave- rage	Medal
	Name and surname	Name and surname Country	Name and surname  Country  Model name	Name and surname  Country  Model name  Scale	Name and surname  Country  Model name  Scale  Judge 1	Name and surname  Country  Model name  Scale  Judge 2	Name and surname  Country  Model name  Scale  Judge 2  Judge 3	Name and surname  Country  Model name  Scale  Judge 1  Judge 2  Judge 3  Total	Name and surname  Country  Model name Scale Judge 1 Judge 2 Judge 3 Total Averrage  Av

Main judge	Judge 1	Judge 2
NAVIGA representative	Judge 1	Secretary

### Medals won on World Championships, European Championships and international competitions.

Competition, country, place,date	Points and medal	Confirmation by Main Judge

# MODEL CERTIFICATE for models in category C



Owner:					
Name:					
Surname:					
Date of birth:					
Address:					
Country:					
Confirmation of correctness of the informations:					
Owner sign	-	Federation representative sign			
		-			
	Endoration				

Federation stamp

Photo of model or original ship (stick in here)	Elements and parts of model not made by owner:		
	Used plans: Shipyard plan		
	Model plan		
	Own design		
	Other		
Name of model  Type			
Туре			
INFORMATIONS ABOUT THE MODEL			
Built by owner? YES NO	<u>Technical data of m</u>	<u>odel in catego</u>	ry C
Build from kit? YES NO	SCALE 1:		
3D printed? YES NO	Technical data	Original	Model
	Length	m	mm
Material: Hull	Width	m	mm
Deck	Draft	m	mm
Superstructure	Height (from keel to mast top)	m	mm
Parts and accessories			
Self made Prefabricated Kit Manufactured			
Other used materials:	According to the NAVIGA competition rules this model is approved for the class		