

JCH11 PRESENTATION

The Classic Handicap (or Jauge Classique in French) has been designed fifteen years ago to be used for classic yacht races and in particular for those of the Challenge Classique Atlantique. Year after year, it has been evolving under the control of a handicap committee to take into account the preceding year race results while staying compliant to its first specification :

- ☐ based on self-declaration by the yacht owner
- ☐ transparent, i.e. the formula if not secret
- ☐ free certificate
- ☐ free of use
- ☐ designed to allow an overall and unified scoring even in case of highly heterogeneous fleets,
- ☐ encouraging yacht owners and crews to maintain yachts as close as possible from their original state, while integrating new solutions that bring real enhancements in terms of safety, comfort and maintenance.

More and more classic regatta organizations adopted this handicap and in 2011, it can be said that almost all regatta organized in the French Atlantic and Channel coasts use it. It was also used for the Classic Channel Regatta this year and it proved excellent and gave good results.

For sure, this handicap is not perfect. How a mathematical formula could fairly compare performances of so different yachts separated by decades of innovations ? But, with the experience and shipowners comments, we keep it evolving by small touches.

JCH11 FORMULA

2011 edition enhancements are in red.

Preamble:

- A yacht can not receive more than two JCH certificates per calendar year
- The delivery of a JCH certificate does not have to be understood as the eligibility of the boat to classic regattas. Eligibility to a specific regatta is specified by the eligibility rules the organizers has decided and displayed in the Notice of Race.

1. Rating

$$R = \frac{Lx\sqrt{S}}{6x3\sqrt{D}}$$

Where L = 0,5x(LWL+LOD) in metres.

S = (Mainsail Area + Forelug area or Mizzen area or Wishbone area or Jigger sail area + Gaff topsail area) + Ax(Sforesails) + (1-A)x(Sdownwindsails) in square metres, with A = 0,5 (the principle is that during a season there will be as much reaching as downwind courses)

Sforesails = maxi (Genoa area or High cut jib area + Staysail area or flying jib area + Jib area + Staysail area)

Sdownwindsails = maxi (Spinnaker area or Gennaker area or Sforesails or Sforesails + Fisherman area or Sforesails + ?? Staysail ?? area)

LOD Length over Deck in metres

LWL Length Water Line in metres

D Displacement in tons, calculated using one of the following formulas in order of applicability :

- | | |
|--|--|
| 1. Long keel boats: | $D = (L^{1,55} \times B^{1,12} \times Df^{0,43}) / 22$ |
| 2. Boats which LOD is less than 7 metres : | $D = (L^{1,32} \times B^{1,18} \times Df^{0,45}) / 22$ |
| 3. Drop keel boats : | $D = (L^{1,50} \times B^{1,17} \times Df^{0,40}) / 22$ |
| 4. Set in keel boats | $D = (L^{1,50} \times B^{1,12} \times Df^{0,45}) / 22$ |
| 5. Regatta series (see C7) | $D = (L^{1,28} \times B^{1,55} \times Df^{0,60}) / 22$ |
| 6. Other boats | $D = (L^{1,50} \times B^{1,15} \times Df^{0,70}) / 22$ |

In these formulas, B is the max Beam and Df is the draft

2. Correcting factors C = C1 + C2 + C3 + C4 + C5 + C6 + C7 + C8

. C1 Rigging type (extract of the complete table) :

bermudan sloop / cutter	1,000
gaffer/gunter cutter or sloop gaffer	0,980
Bermudan yawl	0,980
gunter yawl	0,965
gaffer yawl	0,940
bermudan / wishbone ketch	0,960
bermudan / wishbone schooner	0,940
bermudan catboat:	0,900
Topsail schooner / gaffer ketch	0,850

. C2 Hull type :

drop keel	- 0,050
long keel (straight and long)	- 0,050
classic keel (with garboard strake)	0,000
set-in keel (with no garboard strake)	0,050
Previous correction values must be added to : separate rudder	0,150

. C3 Sails :

The main sail and foresails must have a uniform colour and all sails must be made of sewn assemblies of panels visibly squared woven.

For spinnakers and gennakers, only sewn polyamide is admitted.

Bermudan mainsails with a gaff are prohibited.

Only wood or aluminium mast and boom are admitted.

Mast or boom different from original	0,050
Other spar different from original	0,050
Black color is not allowed for mobile spars : spinnaker boom, top mast, ...	

Cotton sails	- 0,150
no winch (in case the original design is with no winch)	- 0,050
long forced sail batten	0,050

. C4 Hull material :

traditional wood	0,000
moulded wood	0,020
plywood	0,010
aluminium	0,030
iron	0,030
other	0,030

.C5 Propeller :

3 fix blades	- 0,050
2 fix blades	- 0,040
folding/feathering	- 0,020
no propeller	0,000
others	0,030

.C6 Vintage bonus = C6.1 + C6.2

C6.1 Build year

for boats whose hull has been reconstructed, consider the date of the reconstruction. A hull is considered as "reconstructed" if at least two third of the frame and of the planking has been changed.

C6.2 Design year

Same formula is used for C6.1 and C6.2 :
 Until 1955, $C6.x = \text{year} / 1000 - 1,95$

From 1956 on,
 $C6.x = (0,00168x\text{year}^4 - 3,27015x\text{year}^3)10^{-10}$

.C7 Regatta series, day boats and open boats :

If the yacht part of a regatta class or is a day boat or an open boat or designed according to a handicap rule (metric, sqm, skerry, jauge universelle, jauge Godinet, linear rater....) then C7 = 0,200, else C7 = 0,000

3. Corrected rating: $Rc = R \times C$

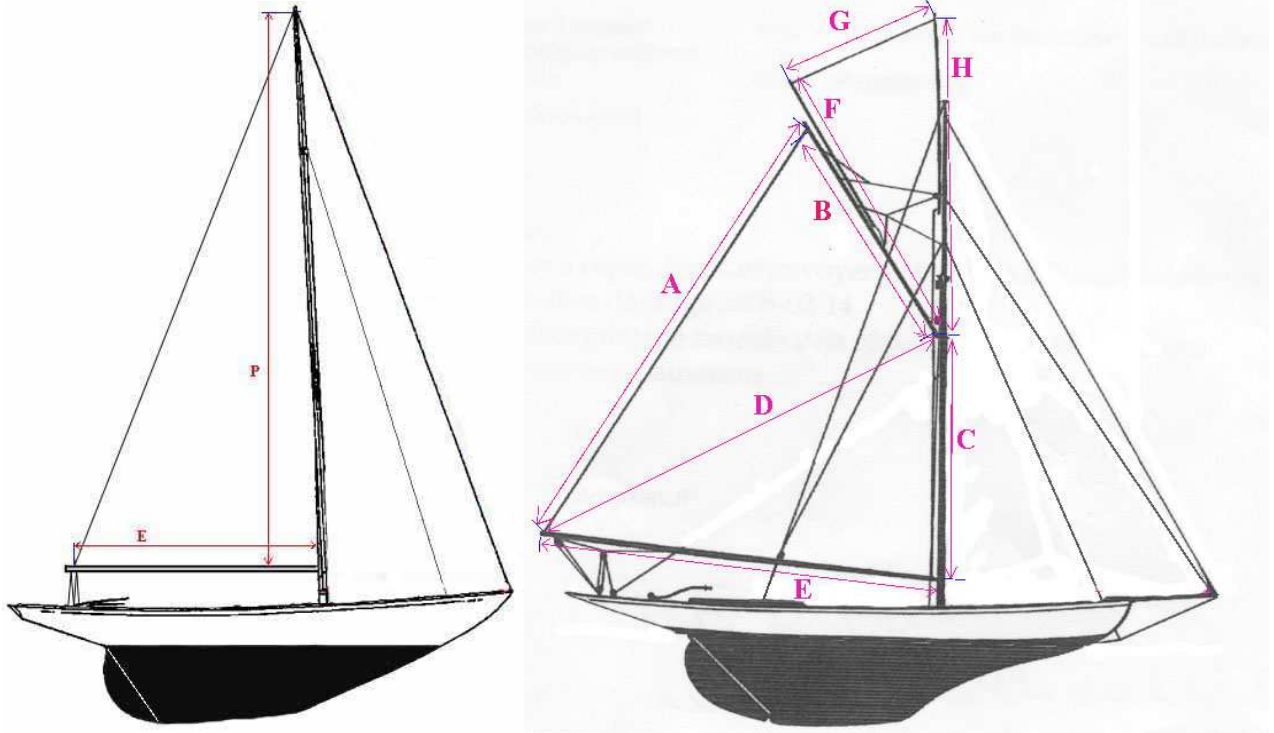
4. Time corrected Factor: $Ftc = 0,45 + 0,155 \times \sqrt{Rc}$

5. Corrected time : $Tc = Tr \times Ftc$ (with Tr = real time)

Illustrations for measurement of sails

All measurements are taken on the sails except P and E.

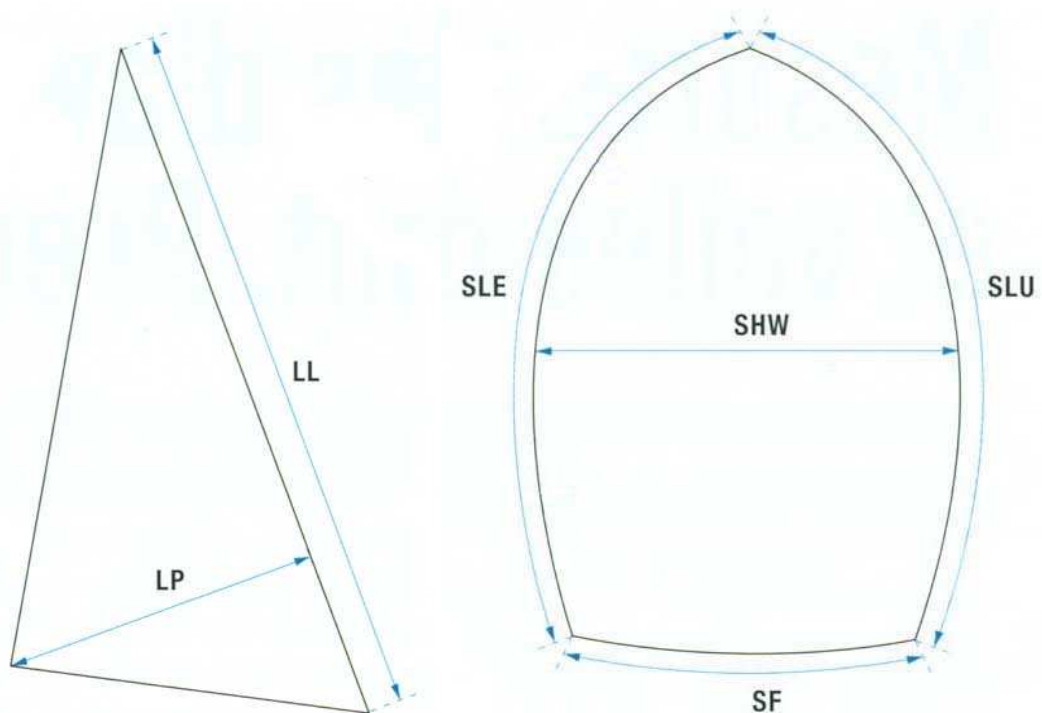
P and E shall be measured on the spars and, **in case no measurement marks are available**, the maximum dimension taking into account the rig and fittings will be measured.



Mainsails as well as mizzen and foresails areas of Bermudan yachts are calculated with a standard leach round of 15%.

Flying sails rigged between two masts (e.g. fishermen) are not taken into account **in the between mast foresail area of a schooner**. If applicable (see formula on page 1), they have an impact on downwind sails.

The width at half height of a foresail is less than 50% of its base .

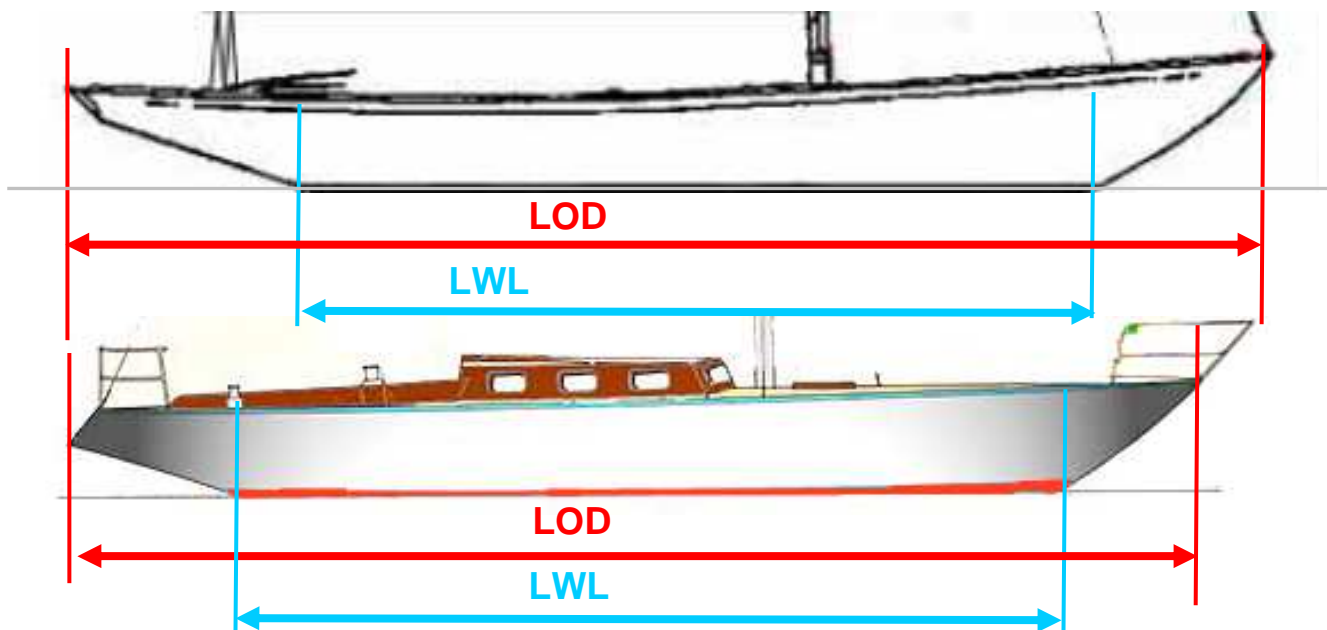


Illustrations relative to the measurement of the hull and to the keel types

LOD, Length over deck in metres : it is the maximal length of the hull, excluding pulpits, measured between two perpendiculars.

LWL, Length of waterline

Depending on the transom, measurements are illustrated below.



Long keel : a long keel is when, as in the below example, the ratio K/LWL is higher than 60%. The owner must bring the proof –picture or plan – than confirms his demand.



Exemple of rudder separated from the keel (here with a classic keel, ie with garboard strake)

