



# Royal Ocean Racing Club Rating Office

## Superyachts

### IRC Empty Weight

#### 1. What is a 'superyacht'?

For this and related purposes, it is a boat with LOA => 30m and DLR => 95.

#### 2. Empty Weight vs Light Ship vs Sailing Displacement

It is argued by the superyacht people that:

- a) It is not practical to empty a superyacht for measurement.
- b) If true IRC Empty Weight is used, the sailing displacement will always be more than IRC Displacement.
- c) That therefore for IRC purposes we should use 'Light Ship' displacement (broadly the lightest possible weight that the boat could ever sail with) in place of Empty Weight.

The above is to a great extent true. However, using light ship would be inconsistent with IRC generally albeit that superyachts rarely race against mainstream IRC boats.

#### 3. Analysis

The basis is data supplied by Rogers Yacht Design (RYD). Inspection of this suggests that it will be generally applicable to all superyachts.

Empty Weight has been derived by flotation in sailing trim. Itemised analysis of equipment on board for the flotation results in deduction of 6% from sailing trim displacement to get to empty condition.

Pragmatically and realistically, for safety, insurance and purely practical reasons, it will NEVER be possible for a superyacht to remove all of this additional weight.

Inspection of the RYD data suggests that an absolute minimum of 1.5%, and probably closer to 2%, of sailing displacement will always be carried on board, irrespective of how rigorously the crew empty the boat before racing.

#### 4. Proposal

For consistency among superyachts and the IRC fleet generally, it is therefore proposed that for superyachts, IRC Empty Weight is taken from either:

- a) Flotation in a defined condition followed by rigorous analysis to calculate IRC Empty Weight.
- b) Flotation in minimum sailing trim condition reduced by 4%.