## The Beaufort Scale

| Force | Speed in<br>Knots | Description     | Force | Speed in<br>Knots | Description   |
|-------|-------------------|-----------------|-------|-------------------|---------------|
| 0     | < 1               | Calm            | 7     | 28 – 33           | Near Gale     |
| 1     | 1-3               | Light air       | 8     | 34 – 40           | Gale          |
| 2     | 4-6               | Light breeze    | 9     | 41 – 47           | Strong Gale   |
| 3     | 7 – 10            | Gentile breeze  | 10    | 48 – 55           | Storm         |
| 4     | 11 – 16           | Moderate breeze | 11    | 56 – 63           | Violent Storm |
| 5     | 17 – 21           | Fresh breeze    | 12    | >= 64             | Hurricane     |
| 6     | 22 – 27           | Strong breeze   |       |                   |               |

## **Tonnage**

**Tonnage** is neither the weight of the vessel, nor a measurement of the amount of water it displaces, but rather a measurement of the vessel's volume. The term derives from the taxation paid on tuns of wine, and was later used in reference to the weight of a ship's cargo. In modern maritime usage, "tonnage" specifically refers to a calculation of the volume or cargo volume of a ship.

**Gross tonnage** refers to the overall volume of a vessel, the volume of all ship's enclosed spaces (from keel to funnel) measured to the outside of the hull framing. It is always larger than gross register tonnage, though by how much depends on the vessel design. It was a measurement of the enclosed spaces within a ship expressed in "tons" – a unit which was actually equivalent to 100 feet.

Tonnage measurements are now governed by an IMO Convention (International Convention on Tonnage Measurement of Ships, 1969 (London-Rules)), which applies to all ships built after July 1982. In accordance with the Convention, the correct term to use now is GT, which is a function of the volume of all enclosed spaces of the ship. There are two methods for calculating gross tonnage. A complex formula is used for commercial ships and the tonnage is usually figured out precisely by a hired tonnage measurer. Vessels under 79 feet LOA are eligible to be measured under the Simplified Measurement System.

A documented pleasure vessel's tonnage is listed on the USCG documentation papers, calculated using the Simplified Measurement System. An extract of USCG information on documented vessels is also available online at <a href="http://cgmix.uscg.mil/PSIX/VesselSearch.aspx">http://cgmix.uscg.mil/PSIX/VesselSearch.aspx</a>.