

CALCULATING PERSONAL HANDICAP CHANGES

The system used for handicap calculations is found in the RYA publication YR2 Portsmouth Yardstick Scheme (see specimen race one). The simplified method is described below.

The elapsed Time for each helm sailing a PY race or class race is taken by the Race Officer & recorded on the lap chart. These times are then put into a computer programme to calculate the Following:-

- 1) The corrected time (CT) for each boat, using the existing PH number of the helm, is then calculated.
- 2) An average corrected time (ACT) is then obtained using the best performing two thirds of the fleet (this is to eliminate poor performers).
- 3) A standard corrected time (SCT) is then produced by multiplying the ACT by 1.05. All boats with CTs exceeding this figure, in other words more than 5% slower the ACT, are regarded as 'poor performers' and these boat times are not included in the calculation for the STC .
- 4) A performance number is then obtained for each helm by dividing the elapsed time by the SCT x 1000.
- 5) A performance indicator is then obtained for each helm by subtracting the class PY number from the performance number.
- 6) After each race the PI is recorded against each helm
For Helms with a Club Number (CN), The computer averages out PIs to recommend a performance change (PC). The last twenty races are used to obtain the PC or all races if a helm has not sailed twenty races.
For Helms with a Trial number (TN) adjustment is made after every race until four races are completed. They are then converted to a CN.

All personal handicaps are expressed in a similar manner as a Portsmouth Yardstick number, using the same calculation.

The Sailing Committee reviews recommended changes monthly and approves any changes to be made.

For those interested one unit difference in the PH numbering is equivalent approximately 3 seconds in a race of 55minutes. e.g . A helm with a PH of 1127 must beat someone with a PH of 1130 by approx. 9 seconds .

FORMULAE FOR CALCULATING PERFORMANCE NUMBER (PN) IN A RACE

- 1) CALCULATE CORRECTED TIME (CT)
- 2) CALCULATE AVERAGE CORRECTED TIME (ACT)

$$\text{ACT} = \frac{\text{Total sum of CTs for all boats sailed}}{\text{Number of boats sailed in race}}$$

- 3) MULTIPLY ACT x 1.05 (This is to eliminate poor performers from next calculation).
- 4) CALCULATE STANDARD CORRECTED TIME (SCT).

$$\text{SCT} = \frac{\text{Total sum of CTs faster than ACT x 1.05}}{\text{Number of boats faster than ACT x 1.05}}$$

- 5) CALCULATE THE PERFORMANCE NUMBER (PN).

$$\text{PN} = \frac{\text{Elapsed time}}{\text{SCT}} \times 1000$$

A Performance number is calculated for every boat sailing in a race.

- 6) CALCULATE PERFORMANCE INDICATOR (PI)

$$\text{PI} = \text{CLASS PY} - \text{PN}$$

FORMULAE FOR CORRECTED TIMES

PORTSMOUTH YARDSTICK

$$\text{Corrected time} = \frac{\text{Elapsed time}}{\text{Portsmouth Number}} \times 1000$$

PERSONAL HANDICAP

$$\text{Corrected time} = \frac{\text{Elapsed time}}{\text{Handicap Number}} \times 1000$$