Rigging Analysis

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Rigging analysis is measuring characteristics of the stroke to evaluate the efficiency of the rigging setup.

1. **Drive Time** – is the measured time between the catch (blade buried) and when the blade is feathered.

Drive time, measured in hundredths of a second reflects the time taken on the drive phase of the stroke. A crew's drive time can be compared to typical drive times for their specific boat category and when considered with stroke rate, stroke ratio and environmental conditions will provide an analysis of the rigging length and load. High drive times would reflect longer stroke lengths and/or heavier rigging loads and lower times would reflect the opposite.

2. **Blade Slip** – is the distance the tip of the blade moves between the catch and finish measured parallel to the boat.

Blade slip reflects the dimensions of stroke length, stroke position and the balance between the power applied and the resistance, 'rigging load' (span/spread, outboard, inboard, blade area). Independent of technique and bladework, positive blade slip reflects good rigging provided the drive time has not substantially increased.

3. **Effective Stroke Length** – is the distance the boat moves during the drive phase of the stroke between catch and finish.

Stroke length is the result of work distance, stroke arc placement and length ratio (outboard/inboard). Effective stroke length includes the additional dimension of blade slip and the efficiency of the oar's connection in the water. Measuring the effective stroke length will provide insight to rigging efficiency as well as reflect on rowing technique.

4. **Stroke Position** – is the position of the stroke arc relative to the boat. Rigging analysis is completed by measuring the time taken between the catch and when the oar is perpendicular as a percentage of the time of the entire drive phase, catch to finish.

Stroke position is an important dimension of rigging and is a factor of Blade Slip. Increase stroke position to improve blade slip until the drive time in impacted.

5. **Stroke Rate** – needs no explanation.

Stroke Rate is a performance factor. Higher rating crews generally performance better. Taking more strokes is an opportunity to move the boat further in the same amount of time.

6. **Stroke Ratio** – the relationship, quotient of recovery time divided by drive time.

Stroke Ratio does not appear to be a performance factor in itself but does provide insight to the relationship between Stroke Rate and Drive Time. Traditionally it is thought the higher stroke ratios provide a rest period on the recovery and are a positive factor. However, lower stroke ratios reflect a lower recovery time and increase the speed at which the athlete(s) draws the footstops towards the seat (recovery acceleration). Lower recovery times provide an opportunity to increase boat acceleration on the recovery and achieve higher rates.