AA FACILITIES & EQUIPMENT COMMITTEE

WIND GAUGE CALIBRATION

Introduction

Simple and cheap means are required to check the accuracy of athletics' stock of wind gauges. The proposed IAAF calibration testing procedures are appropriate for IAAF Product Certification but not for checking that individual gauges are still in calibration.

Full calibration testing in a wind tunnel is expensive and unnecessary if the wind gauge is found to be well out of calibration by the simple test described below.

Approximate Check of Wind Gauge Accuracy

1. Locate a long corridor or hall in which all the doors can be closed and is unoccupied for the period of the testing.
2. Mark the start and finish of a 20 metres straight line on the floor.
3. Check that you can walk the 20 metres in 10 seconds by using a stopwatch – it is a fast walking pace. It does not matter if you walk the distance slightly quicker than 10 seconds but it can not be longer than 10 seconds. Therefore it is desirable that a second person time the 20m walk every time to ensure that time taken is less than 10 seconds.
4. Set the wind gauge at the 10 second measuring interval.
5. Hold the wind gauge on your shoulder or under your arm with the wind gauge parallel to the ground, vertically orientated as it is when in athletics use and parallel to the straight line you have marked with the arrow indicating wind direction towards you so that you are measuring positive wind which is the one of most interest for record purposes It would be helpful for another person to check the positioning of the wind gauge for you
6. Start walking several metres before the start line to get the gauge vanes moving switch on the gauge at the Start line and walk from the start to the finish of the 20 metres at a brisk walking pace and stop dead on the 20m mark. The wind gauge will automatically record the wind speed after 10 seconds. As you have walked 20 metres in 10 seconds the actual average wind speed is 2.0 metres per second.
7. Read and record the wind speed indicated by the wind gauge.
8. Repeat the process walking in the opposite direction and record the wind speed result. Ensure that the vanes are stationary before starting.
9. The process may be repeated again and the average of all the wind speeds measured should be recorded against the identification number of the wind gauge.
10. If the average wind speed is between 1.9 and 2.1 metres per second then prima facie the wind gauge is in calibration. If it measures between 1.8 and 2.2 metres per second then the use of the wind gauge should be limited to less

important meetings. Outside the latter range then the wind gauge should be repaired if the cost is not prohibitive.

Approximate Check of the Wind Gauge Timing Device
Older vane wind gauges of the Cantabrian type use resistor-capacitor networks to time and these can drift with age... To test the gauge timing accuracy press the wind gauge start button and start a stopwatch simultaneously. Stop the watch when the LCD display on the wind gauge first appears. The stopwatch time should be 10 seconds plus about 0.2s to allow for the stopwatch operator's reaction time.

Notes
If you can not find a 20m long stretch of corridor then mark out a 10m length, set the wind gauge to time for 5 seconds and use the same test procedure. The longer test time is preferable.

It is important that during the test that the orientation of the wind gauge is as the gauge is designed to be used so that the effect of any vane bearing wear is replicated.

Testing in both directions will average out any unseen effects like wind eddies from protuberances or insets in the corridor or unfelt air movements.

Further Advice
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