Unified control and multiple views in a wind tunnel

This case study highlights how Imetrum's Video Gauge™ software can integrate into your wind tunnel control system and combine multiple Mobius views to operate in a single coordinate system.

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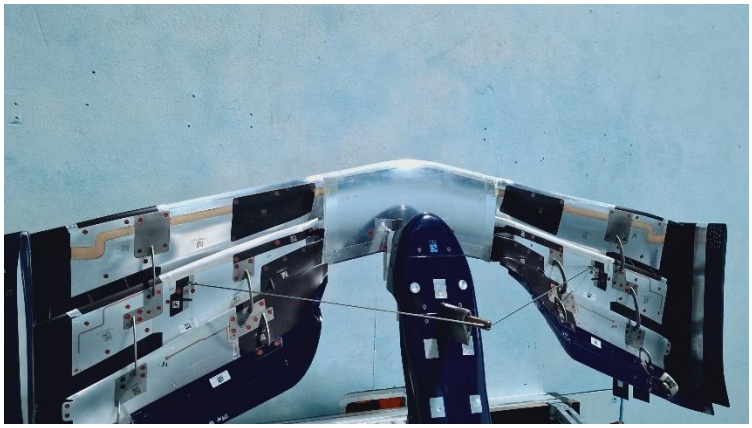
Challenge

Wind tunnels are complex pieces of equipment. They comprise of several different control systems, sensors and data capturing devices. A significant challenge is combining each system to deliver unified control and data capture such that the results can be correctly correlated to verify the desired design or characteristic.

When testing in a wind tunnel, the test objects can vary in shape, size and position as well as how they are moved throughout the test. This can result in it not always being in view and valuable test data being lost.

Solution

Video Gauge™ has the capability of being remotely controlled by other systems. This is done via the use of socket communications. Made up of a control communications channel and a live stream of results as well as a library of commands, Video Gauge™ can be integrated directly into almost any system. Commands can be sent at the required time by a wider control system and results integrated into a single data set.



Multiple views of the same test object can be also combined in Video Gauge™ using the Unified Coordinate System functionality. This can be created with multiple Mobius Measurement Heads and known reference points in the real world. Post processing of tests utilising a Unified Coordinate System is also possible by capturing the primary and secondary reference point data during the live test run.

Results

Video Gauge™ can be integrated into a wider control and data collection system. Delivering deeper insights as part of the wider system without additional user input.

Large scale measurement volumes for wind tunnels can be achieved by synchronising up to three Imetrum Mobius Measurement Heads via a single unified coordinate reference frame. Creating a global coordinate system, ensures that all Mobius Measurement Heads deliver results using the same axis alignment with respect to the real world.

Visit the website page: https://www.imetrum.com/case-studies/delivering-unified-control-and-combining-multiple-views-in-a-wind-tunnel/