MEASURED VELOCITY HAS DRIFT

FREQUENTLY ASKED QUESTION #20

Question:

I have a 3 channel IFA300 based hotwire anemometry system from TSI. We purchased this system in 2006 and it worked fine until very recently, when we noticed a definite drift in velocity. It always drifts downward. We checked our flow rig against a pitot tube and even a LDV system, and the velocity at our measurement point is not changing. Our 1210-20 probe seemed to be causing drift, so we bought a new one. It also has drift. We are not sure what is causing this- the probe or the IFA300. What can we do?

Answer:

Velocity drift can be caused by particles from a contaminated flow depositing on the probe sensor, which changes the heat flux properties. You can rule this out, however, by testing with several hotwire probes and going into, and out of, “Run” mode. If the velocity recovers, and then begins to drift again after re-entering Run mode, then we can be quite certain that the IFA itself is causing the drift, and it should be returned to TSI for evaluation and repair.

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