

COAT MM Sensor Calibration Procedure Conference 3-1-2017

Teleconference Attendees:

Hind Abi-Akar (Host), Mark Jarrett – Caterpillar

Jim Gutzwiller (Chairman), Elisa Santos – Infineum

Jim McCord, Jim Carroll (Secretary), Randy Harmon – SwRI

Alex Ebner – Lubrizol

Sean Moyer – TMC

Tim Griffin – Intertek

Agenda: Update on progress to run new calibration procedure.

The group discussed and debated the density output range to set in the Emerson transmitter. Whether it should stay as is or go from 0 (or more) to 1.5 (or less) g/cc.

The Emerson transmitter's output signal for density is always 4-20 ma. But, the transmitter can be programmed for the density range that 4-20 ma covers. Up until now in the COAT the density output range has been set to 0-2 g/cc.

Resolved: The output range would now be 0-1 g/cc to get better discrimination. This does not change the resolution of the meter.

Progress at laboratories

Intertek did not have an update but plans to run a calibration check out this week.

Lubrizol: There were Issues connecting their control and data acquisition to the new Micromotion sensor and getting the Puck 800 processor mounted away from heat. Should be able to put oil in and try to heat up the sensor this week.

SwRI: New enclosures are built and hardware is being mounted into them. Instrumentation group will be reconnecting everything to control and data acquisition. Should be checking heating system this week.

Hind and Mark: Keep in mind the timeline. Need to have a plan to immediately go to the filter tests so we should set a schedule now.

Resolved: All labs plan to run their first new calibration procedure try-out early next week. Each reading will be taken after 30 minutes stable temperature +/- 0.75C of target, then average 2 min of all data at 1Hz. Labs will use a new filter from TEI during this calibration procedure test.

Resolved: All labs to share data as soon as tests are completed.

Hind and Jim G stated that to get the test back on line the following must happen:

Need calibration done at all labs, write up proposed changes to the procedures, and recommend a sequence of reference oils for the filter tests. Then we need to get approval from the whole Surveillance panel.

To get statisticians oil sequence recommendation Elisa will randomize the sequence for the new filter tests.

Note: Tim also had a change of slope and end point with one of CAT's set-aside filters during his first calibration try out.

Next calibration group meeting will be on Thursday March 9, from 1-3pm CST. If the calibration procedure works well then prepare to describe results, new procedure description, and filter test sequence recommendation, and send it to the Panel on Friday.

A full surveillance panel meeting will be set for March 13 from 1-3pm CST. Approval from the panel for the calibration procedure and filter test plan is required to take the next step.

Mark's note on 1N tests

CAT got IN parts from SwRI and Lubrizol and is inspecting them. It is ongoing, engineer is out of country.