

HEAT FLUX CALIBRATION TASK GROUP

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Federal Aviation
Administration



AGENDA

- Updates To The Aviation Heat Flux Calibration Standard Draft Document
- Transition Target Date
- Next Steps



Draft - Aviation Heat Flux Calibration

- Introduction Section Was Added
- Minor Changes To Some Definitions
 - Heat Flux
 - Standardized Heat Flux Gauge
- Calorimeter Specification To Included Schmidt-Boelter Type Gauges (Thermopile)
- Better Defined Coating Parameters Used On The Front Surface Of The Heat Flux Gauges
- Refined The Data Acquisition System Specifications



Draft - Aviation Heat Flux Calibration

- Calibration Interim Remained Unchanged
- Added A Section On Laboratory Environmental Conditions Surrounding The Calibration Apparatus
- Calibration Setup:
 - Added A Requirement That When Transferring Calibration From A Standardized Gauge To A Working Gauge, They Must Be Of The Same Type (Gardon / Schmidt-Boelter)
 - Included A Better Definition Of Clamping On The Body Of The Instrument Behind The Sensors Field Of View Of The Radiant Heat Source



Draft - Aviation Heat Flux Calibration

- Calibration Procedure:
 - Added A Requirement To Measure Impedance (Ohm Reading) Of Heat Flux Gauges Before And After Calibration
 - Better Defined The Procedure For The Calibration Process Using The Cool Down Method
- Redefined The Requirement/Analysis Section To Include Successive Calibration Factor Criteria
- Added A Required Reporting Parameter Section



Draft - Aviation Heat Flux Calibration

Reorganized Structure of Document To Contain The Following Sections:

1. Introduction
2. Definitions
3. Calorimeter Specification
4. Data Acquisition System
5. Calibration Interim
6. Laboratory Environment
7. Calibration Setup
8. Calibration Procedure
9. Requirements/Analysis (Repeatability/Reproducibility)
10. Required Reporting Parameters



Transition Target Date

- Transition Target Date Of June Has Been Delayed
- Vatell Has Shipped A HFG to NIST (01/11) and Is Awaiting It's Return
- Working Group Will Be Notified Once More Information Is Available



NEXT

- Addition of Supplemental Section?

Paint Application Recommendations

Recommendations For Mounting And
Aligning HFG's

Radiant Heat Source

- Round Robin Testing With Calibration Facilities
- Continue To Look At Schmidt-Boelter Type Gauges
 - Install Gages Into OSU & NBS



Questions / Comments?

“Ocean: A body of water occupying about two-thirds of a world made for man - who has no gills.”

Unknown Author

