E-PROBE DAMPER INSTALLATION APPROVAL SHEET

Serial No._____

*Fabricated and inspected per E-Probe Damper Production Traveler. Yes_____ No____

Comments_____

Responsible Mechanical Engineer_____**Date**_____

*Cleaned and baked for ultra high vacuum environment. Yes_____No_____

Comments_____

Responsible Vacuum Engineer_____ **Date**_____

*RF Conditioned Yes_____No_____

Comments_____

_____

Responsible RF Engineer_____ **Date**_____

Group Leader_____ **Date**_____
(ASD/ME)

Comments_____

Group Leader_____ **Date**_____
(ASD/RF)

Comments_____

E-PROBE DAMPER PRODUCTION TRAVELER

Serial No._____

Responsible Engineer_____

Parts Machined by_____

***Visual Inspection**
Inspect knife-edge on vacuum flanges for nicks or any other damages.

Comments_____

***Send parts to ANL Inspection Department for inspection of critical dimensions.**

Inspected by_____ **Date**_____

Inspection Results_____

_____

PRE-ASSEMBLY CLEANING PROCEDURE

Clean all component parts in 2% citronox solution, using ultrasonic for 20 minutes. Rinse in de-ionized water, and then dry with hot nitrogen. Wrap parts in aluminum foil.
***Note:** Care should be taken to minimize nicks and scratches to knife-edges on vacuum flanges.

Cleaned by_____ **Date**_____

DAMPER-BODY WELDMENT AND MACHINING ASSEMBLY (Drawing #31040101-350301)

Assemble; 5/16x .035 wall tubing (items 1), Damper Body (item 2), and Water Sleeve (item 3) and weld as per drawing #31040101-350301.

HYDROSTATIC PRESSURE TEST PROCEDURE

Hydrostatically pressure test all weld joints at 250 psi for 30 minutes.

Tested by_____ **Date**_____

Test Pressure_____

Test Results_____

_____

MACHINING PROCEDURE

Machine assembly and inspect for concentricity and surface finish per drawing #31040101-350301.

Machined by_____ **Date**_____

Inspected by_____ **Date**_____

Inspection Results_____

_____

CLEANING PROCEDURE

Clean assembly after machining in 2% citronox solution, using ultrasonic for 20 minutes. Rinse in de-ionized water, and then dry with hot nitrogen. Wrap part in aluminum foil.

Cleaned by_____ **Date**_____

ITEM 4 (31040101-350002) ABSORBER ASSEMBLY TO DAMPER BODY.

Hot shrink-fit the absorber (item 4) to the machined assembly per drawing #31040101-350301.

DAMPER CENTER CONDUCTOR ASSEMBLY (31040101-350305)

BRAZING PROCEDURE

Braze items; Body Cap (item 2), Water Manifold (item 3), and E-Probe Conductor (item 4) per drawing #31040101-350305 in a vacuum oven.

Brazed by_____ **Date**_____

***Visually inspect brazed joints and remove excess braze material.**

Comments_____

HYDROSTATIC PRESSURE TEST PROCEDURE

Hydrostatically pressure test brazed joint between Water Manifold and E-Probe Conductor at 250 psi for 30 minutes.

Tested by_____ **Date**_____

Test Pressure_____

Test Results_____

VACUUM LEAK TESTING

Vacuum leak test brazed joint between body cap and e-probe conductor.

Leak test done by_____ **Date**_____

Sensitivity_____

Test Results_____

WELD PROCESS

Weld 1/4 x .035 wall tubing (item 1) to Water manifold (item 3) per drawing #31040101-350305

Welding done by_____ **Date**_____

HYDROSTATIC PRESSURE TEST PROCEDURE

Hydrostatically pressure test weld joint at 250 psi for 30 minutes.

Tested by_____ **Date**_____

Test Pressure_____

Test Results_____

E-PROBE DAMPER FINAL ASSEMBLY (31040101-350300)

Assemble; Body Flange (item 1), Damper Body sub-assembly (item 2), and Center Conductor sub-assembly (item 3) and weld per drawing #31040101-350300.

VACUUM LEAK TESTING

Vacuum leak test weld joints per drawing #31040101-350300

Leak test done by_____ **Date**_____

Sensitivity_____

Test Results_____

RF ENGINEER INSPECION

Inspected by_____ **Date**_____

Comments_____

POST-ASSEMBLY CLEANING PROCEDURE AND STORAGE

Clean assembled damper in 2% citronox solution. Rinse in deionized water and then dry with hot nitrogen. Bake in oven at 200 °C for 16.0 hours.

Cleaned and baked by_____ **Date**_____

VACUUM LEAK TESTING

Vacuum leak test all weld joints after baking per drawing #31040101-350300

Leak test done by_____ **Date**_____

Sensitivity_____

Test Results_____

***Assemble and store in a clean storage canister under vacuum.**