



ENGINEERED RESIDUAL STRESS IMPLEMENTATION (ERSI) WORKSHOP 2017

Date: September 21 – 22, 2017

Location: Weber State University's Center for Continuing Education,
775 University Park Blvd., Clearfield, UT 84015

Thursday September 21 Agenda:

07:30-08:00 Arrive, Breakfast, Welcome and Review

- *Mr. Scott Carlson, Mr. Robert Pilarczyk, Mr. Dallen Andrew*

Presentations by Leads Covering Progress:

- Presentation Designed for 30 min Presentation with 15 mins for Questions

08:00-08:45 **Integrator Review – Programmatic Overview and Roadmap**

- *Dr. T.J. Spradlin (USAF – AFRL)*

08:45-09:30 **Analytical Methods for Residual Stress Integration into Fatigue Predictions**

- *Mr. Robert Pilarczyk (Hill Engineering, LLC.)*

09:30-09:45 BREAK

09:45-10:30 **Testing and Validation of Analytical Methods**

- *Dr. Tom Mills (Analytical Processes/Engineering Solutions, Inc. (AP/ES))*

10:30-11:15 **Residual Stress Process Simulation**

- *Mr. Keith Hitchman (Fatigue Technologies Incorporated (FTI))*

11:15-12:00 **Risk Analysis and Uncertainty Quantification**

- *Mr. Lucky Smith and Ms. Laura Domyancic (Southwest Research Institute (SwRI))*

12:00-13:00 LUNCH

13:00-13:45 **Quality Assurance and Data Capture**

- *Dr. Carl Magnuson (Texas Research Institute/Austin, Inc.(TRI-Austin)) & Mr. Hazen Sedgwick (USAF – A-10 ASIP)*

13:45-14:30 **Effects of Residual Stress on NDI Methods**

- *Mr. John Brausch (USAF – AFRL)*

14:30-15:15 **Residual Stress Measurements**

- *Dr. Mike Hill (Hill Engineering, LLC.)*

15:15-1730 **Break into Groups for Discussion and Planning**

-Proposed Groups – Subcommittee Leads Will Coordinate Discussion

- Analytical Methods for Residual Stress Integration into Fatigue Predictions

- Testing and Validation of Analytical Methods

- Residual Stress Process Simulation

- NDI & Quality Assurance and Data Management

- Risk Analysis and Uncertainty Quantification

- Residual Stress Measurement



Friday September 22 Agenda:

07:30-08:00 **Welcome and Breakfast**

Presentations by Leads Covering Plans for Future Work for 2017 - 2018:

08:00-08:30 **Analytical Methods for Residual Stress Integration**

- *Mr. Robert Pilarczyk (Hill Engineering, LLC.)*

08:30-09:00 **Residual Stress Measurements**

- *Dr. Mike Hill (Hill Engineering, LLC.)*

09:00-09:10 **BREAK**

09:10-09:40 **Effects of Residual Stresses on NDI Methods and Quality Assurance and Data Capture**

- *Mr. John Brausch (USAF – AFRL), Dr. Carl Magnuson (Texas Research Institute/Austin, Inc.(TRI-Austin)) & Mr. Hazen Sedgwick (USAF)*

09:40-10:10 **Testing and Validation of Analytical Methods**

- *Dr. Tom Mills (Analytical Processes/Engineering Solutions, Inc. (AP/ES))*

10:10-10:40 **Residual Stress Process Simulation**

- *Mr. Keith Hitchman (Fatigue Technologies Incorporated (FTI))*

10:40-11:00 **BREAK FOR LUNCH**

11:00-11:30 **Risk Analysis and Uncertainty Quantification**

- *Mr. Lucky Smith & Ms. Laura Domyancic (Southwest Research Institute (SwRI))*

11:30-12:00 **Integrator and Programmatic Review**

- *Dr. T.J. Spradlin (USAF – AFRL)*

12:10-13:00 **Review and Final Discussion of ERSI Efforts**

- *Mr. Scott Carlson, Mr. Robert Pilarczyk, & Mr. Dallen Andrew*

1300 **Adjourn**