ASM International

**Residual Stress Technical Committee (ASM-RSTC)**

**Mike Hill – Committee Chair (Oct 1, 2021 – Sep 30, 2022), mrhill@ucdavis.edu**

**James Pineault – Vice Chair, xrdlab@proto.com**

**Beth Snipes – Secretary, Beth.Snipes@tec-materialstesting.com**

**Notes for ASM-RSTC Meeting Dec 15, 2021**

Attendees: Mike Hill - [mrhill@ucdavis.edu](mailto:mrhill@ucdavis.edu); TJ Spradlin - [thomas.spradlin.1@us.af.mil](mailto:thomas.spradlin.1@us.af.mil);

David Furrer – [david.furrer@prattwhitney.com](mailto:david.furrer@prattwhitney.com) James Pineault - [xrdlab@protoxrd.com](mailto:xrdlab@protoxrd.com); Ray Fryan - [Ray.Fryan@asminternational.org](mailto:Ray.Fryan@asminternational.org); Beth Snipes - [Beth.Snipes@tec-materialstesting.com](mailto:Beth.Snipes@tec-materialstesting.com); [beth.snipes@gmail.com](mailto:beth.snipes@gmail.com);Lesley Frame - [lesley.frame@uconn.edu](mailto:lesley.frame@uconn.edu);Manoj Thete - [manoj.thete@cummins.com](mailto:manoj.thete@cummins.com); Bill Owen - [william.owen@prattwhitney.com](mailto:william.owen@prattwhitney.com);Jason Scheuring - [Jason.Scheuring@kaisertwd.com](mailto:Jason.Scheuring@kaisertwd.com); Scott Henry - [scott.henry@asminternational.org](mailto:scott.henry@asminternational.org); Andrew Payzant - [payzanta@ornl.gov](mailto:payzanta@ornl.gov); Dale Ball - [Dale.L.Ball@lmco.com](mailto:Dale.L.Ball@lmco.com); Seung-Yub Lee - [seungyub.lee@prattwhitney.com](mailto:seungyub.lee@prattwhitney.com);Gab Grodzicki - [ggrodzicki@protoxrd.com](mailto:ggrodzicki@protoxrd.com);Breuer, Dave [Dave.Breuer@cwst.com](mailto:Dave.Breuer@cwst.com); Philippe Bocher - [Philippe.Bocher@etsmtl.ca](mailto:Philippe.Bocher@etsmtl.ca);Andy Banka - [abanka@airflowsciences.com](mailto:abanka@airflowsciences.com); Abhijit Sengupta - [senguptaa@hotmail.com](mailto:senguptaa@hotmail.com); Steven Lampman - [Steven.Lampman@asminternational.org](mailto:Steven.Lampman@asminternational.org);Lynn Ferguson - [lynn.ferguson@dante-solutions.com](mailto:lynn.ferguson@dante-solutions.com);Ted Reutzel -  [ewr101@arl.psu.edu](mailto:ewr101@arl.psu.edu);Jim Harrison - [jimh.mic@gmail.com](mailto:jimh.mic@gmail.com); Amrita Bag - [amrita.bag@evrazna.com](mailto:amrita.bag@evrazna.com);Nihad Ben Salah - [nihad.bensalah@nbsmpconsult.com](mailto:nihad.bensalah@nbsmpconsult.com);Eckehard Mueller - [Eckehard.Mueller@hs-bochum.de](mailto:Eckehard.Mueller@hs-bochum.de);Tom Lachtrupp - [tlachtrupp@lambdatechs.com](mailto:tlachtrupp@lambdatechs.com);Steve Ferdon - [steve.e.ferdon@cummins.com](mailto:steve.e.ferdon@cummins.com);Gary Styger - [garystyger@gmail.com](mailto:garystyger@gmail.com);Toshi Suzuki -  [toshi-suzuki@pulstec.co.jp](mailto:toshi-suzuki@pulstec.co.jp);Karen Marken - [Karen.Marken@asminternational.org](mailto:Karen.Marken@asminternational.org);Adrian DeWald - [atdewald@hill-engineering.com](mailto:atdewald@hill-engineering.com);Kaitlin Inganna - [kaitlin.inganna@prattwhitney.com](mailto:kaitlin.inganna@prattwhitney.com);Joe Powell -  [joepowell@akronsteeltreating.com](mailto:joepowell@akronsteeltreating.com);Amy Nolan - [Amy.Nolan@asminternational.org](mailto:Amy.Nolan@asminternational.org);Darren Pagan - [dcp5303@psu.edu](mailto:dcp5303@psu.edu);Al Conle – [faconle@gmail.com](mailto:faconle@gmail.com)Carol Liang - ?? Guest Speaker

TODAY:

Brief subcommittee reports

Technical Presentation

"Retained Austenite Transformation Induced Residual Stress Change in Carburized 16MnCr5 Steel"

Wanhua (Carol) Liang, James Pineault, F. Albrecht Conle, and Timmothy H. Topper

In this presentation, we will show the amount of change in retained austenite (RA) and residual stresses (RS) in the carburized 16MnCr5 steel axial samples induced by different loading sequences. These data were obtained using X-ray diffraction.

Carol made an excellent presentation that was well-received by attendees. It was proposed that we make technical presentations a regular agenda item for our meeting. Thank you, Carol, for the great presentation!

This presentation to be uploaded to Connect after publication.

Action items

Scott Henry announced ASM is looking for volunteers/nominees for the Nominating Committee. This committee has a major impact on ASM’s future.

Adjourn

Action items for members:

1. Send updated roster information to Dave Furrer (see email request from Dave ([david.furrer@prattwhitney.com](mailto:david.furrer@prattwhitney.com)).
2. Consider advertising the committee when presenting at professional meetings (small or large)  
   **Action for Exec**: develop a 1-slide advert for ASM-RSTC to be used by committee members
3. Report RS-related society/organization activities to Mike Hill ([mrhill@ucdavis.edu](mailto:mrhill@ucdavis.edu)). RSTC will build a list of other professional organizations we link to (such as specific committees/codes/documents organized under ASTM, ASME, ISO, SAE, ICRS, ECRS, ICSP, etc.)
4. Report University RS activities to Joe Rasche via email ([joe.rasche@ansys.com](mailto:joe.rasche@ansys.com))
5. Recruit new members, especially developing engineers - Shout out to Gary Styger for his efforts!
6. Suggest presentation topics for future meetings
   1. Student presenters especially welcome; contact James Pineault ([xrdlab@protoxrd.com](mailto:xrdlab@protoxrd.com))

Summary items

We’ve added a Secretary to help support ASM-RSTC: Beth Snipes. Thank you, Beth!

**Notes captured during meeting**

**Standing Agenda for Residual Stress Committee:**

1. Prior meeting summary
   1. See notes sent by email
2. Subcommittee reports
   1. Industry Standards (Dale Ball, Chair)

AMS RS Standard (Dale Ball):

Dale recognized for receiving the 2021 Lincoln Award – Congratulations, Dale!

Standard was balloted for a second time and comments received. There may be another ballot. Subcommittee with meet late Dec/early Jan to discuss comments. Dale offered to report on standard to RSTC. Jason offered help with AMS

ASTM Workshop Summary (TJ Spradlin):

TJ heads up ASTM E08.04.06, the sponsor of the Workshop. The Workshop was held Oct. 28 and 29, 2021. Three presentations were made along with attendee discussions each day. Workshop Summary attached to minutes

* 1. Residual Stress Handbook (Dave Furrer, Chair)

TBD

* 1. Newsletter (Beth Snipes and Ben Wang, co-Chairs)

Our third issue will be published late Dec/early Jan. We received 3 entries in our logo contest. Scott will send out poll to vote on the logos. We continue to ask for news, articles, etc. for upcoming newsletters.

* 1. Education and Chapter Outreach (Jeff Bunn, Chair)

Members: Bunn, Hill, Ben Salah, Snipes, Sicotte, Styger, Furrer,

Jeff unavailable to report

Any new members?

AeroMat Workshop status (meeting date March 15-17, 2022)

Nihad has been organizing this Workshop

30 residual stress papers to be presented at SEM Annual Meeting (June 2022)

* 1. Professional Meetings. Conferences, Symposia (Lesley Frame, Chair)

Action for Committee: need a 1-slide advert for ASM-RSTC (plus link to RSTC Newsletters)

Volunteer?

See separate summary document (attached to minutes)

* 1. University Outreach (**TBD, Chair**)

Call from Joe Rasche on what academic labs are active in RS work

James Pineault sent in a link to a University group

Eckehard provided a list of German University labs engaged in XRD work

Gary S provided a list of South African universities

Gary S provided a list of topics for student research projects

Codes and Standards, like welding, tend to be vague, without useful RS info

Vibratory stress relief

Ted Reutzel may have a student who will make a presentation to the RSTC at a future meeting

1. New business (topics and/or activities)
2. Technical topic presentation
3. Committee Logistics
   1. Add another officer, Secretary?
   2. Add a subcommittee?
      1. Articulation with Other Professional Groups

Attachments

1. Summary notes from ASTM E08.04.06 Workshop on Residual Stress in Design and Sustainment, 04 Nov 2021 (provided by T.J. Spradlin, [thomas.spradlin.1@us.af.mil](mailto:thomas.spradlin.1@us.af.mil))
2. Summary of Upcoming Professional Meetings