ASM International

**Residual Stress Technical Committee (ASM-RSTC) - Sept. 1, 2023 – Aug. 31, 2024**

**Beth Snipes – Chair,** **beth.snipes@tec-materialstesting.com**

**Seung-Yub Lee – Vice Chair,** **seungyub.lee@prattwhitney.com**

**Rajan Bhambroo – Secretary,** **Rajan.Bhambroo.18@gmail.com**

**James Pineault – Past Chair,** **xrdlab@protoxrd.com**

**Notes for ASM-RSTC Meeting 20 December 2023**

Attendees: 25 attendees

Sudarsanam S Babu, Beth Snipes, Amy Kurr, Dan Dennies, Seung-Yub Lee, Amy Nolan, Julius Schoop, Eric Burba, Rajan Bhambroo, Lynn Ferguson, Dave , John Watton, Nicholas Bachus, Jeff Bunn, Gabe Grodzicki, Paul Shade, Thomas Lachtrupp, Ellie Taghaddos, Andrew Payzant, Tony Yao, Gary Styger, James Pineault, Scott McCarthy, Al Conle, Mohammed Belassel

New Members:

Sudarsanam Suresh Babu (Univ. of Tennessee), Dan Dennies (DMS Inc.), Amy Kurr (Univ. of Tennessee),

TODAYS AGENDA:

Action items for Members

Subcommittee reports

New Business

Technical Topic

Adjourn

Action items for members:

1. Please see “Relevant Links and Materials” section at the end of this document for relevant links https://www.asminternational.org/residual-stress-technical-committee/
2. Recruit new members, especially developing engineers and students – if you have anyone in mind, feel free to invite them!
3. New members: Please fill in roster information form if you have not already – thanks! Link: <https://forms.gle/3YwCTEWGz9NtG5nHA>
4. Suggest presentation topics for future meetings. Student and “Back to basics” presentations are especially welcome. Please contact Beth Snipes, beth.snipes@tec-materialstesting.com
5. A feedback form/survey will be distributed to the membership to solicit feedback – this will be coming shortly – Executive Committee to meet in January

**Standing Agenda for Residual Stress Committee:**

1. Subcommittee reports
	1. Industry Standards (Dale Ball, Chair, dale.l.ball@lmco.com)

SAE AMS RS AS7045 - Residual Stress Measurement and Classification, Metallic Structural Alloy Products and Finished Parts has been released and is publicly available.

ISO TC60 - Ronnie Rego is developing a program called DRS “Design for Residual Stress”, with the purpose of updating a gear design standard organized by the ISO TC60, in cooperation with Phillipe Bocher (RSTC) and representatives of the technical committee for gear design from BGA, Newcastle, Aachen and Munich. A debate with part of this team was conducted in person on October in the event The Brazilian Gear Conference ITA-WZL (BGC23).

CEN Technical Committee 138 (NDT) – Have opened the Working Group 10. In the process of sending out draft technical specification for comments. Deadline is November 24 for submission followed by vote. More like a guideline document.

Nikolaj Zangenberg will update ASM RSTC on CEN Technical Committee when more information is available. Technical Specification (TS) on diffraction using synchrotron – looking for collab. in APS or Chess?

ASTM E08.04.06 Task Group is developing a new “Standard Guide for Incorporating Residual Stresses into Structural Design and Sustainment,” headed by T. J. Spradlin. Any ASTM member can join E08 and assist in editing, voting on ballots, etc.

ASTM E2860 updated version is being developed by the E28.13 subcommittee. Scott McCarthy is heading this effort.

ASTM E1928-13(2019) Standard Practice for Estimating the Approximate Residual Circumferential Stress in Straight Thin-walled Tubing is being updated by the E28.13 subcommittee. Gary Schajer is heading this effort.

* 1. Residual Stress Handbook – Volume 25 (Dave Furrer, Chair, david.furrer@prattwhitney.com Assisted by Amy Nolan at ASM, amy.nolan@asminternational.org)

Subcommittee meeting on Dec 12, 2023. Goal is to identify authors for the 110 articles before the end of the year. Articles without authors by Jan. 31 will be dropped. Dave F. sent information from Amy to the handbook committee members. Hope to get some finished articles early next year. Some of the authors are expected to contribute to sections of a larger article.

Handbook will be two volumes. No. of Confirmed authors: Volume 25A 30 authors invited, Volume 25B 29 authors invited for a total of 59 confirmed authors. Anyone interested to be part of Handbook Committee can reach out to David Furrer or Amy Nolan.

If anyone has any ideas for authors or would like to help please contact Dave Furrer via email david.furrer@prattwhitney.com. Amy Nolan is handling ScholarOne and follow up questions: amy.nolan@asminternational.org.

* 1. Newsletter (co-Chairs: Beth Snipes, Beth.Snipes@tec-materialstesting.com , Ben Wang, wang.ben@cummins.com)

Newsletter to be published by early January. Draft newsletter is ready, and Ben is working on finalizing the newsletter. Participation from membership (new activities, honors) is appreciated. Any comments on making the newsletter more attractive for the membership are welcome.

Need membership feedback/input: Is the size/content/length suitable? Looking for other trivia ideas. Beth S. suggested shape memory alloys might have RS? Members and Students please feel free to contribute articles – still need a name for this section. Always feel free to contribute “members in the news” ideas for those who have received awards – don’t be shy to announce - let us know what you are doing!

Please contact Beth Snipes or Ben Wang.

 Link to current newsletter on ASM RSTC website:
 <https://www.asminternational.org/residual-stress-technical-committee/>

* 1. Education and Chapter Outreach (Jeff Bunn, Chair, bunnjr@ornl.gov)

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

Next IMAT workshop on Residual Stress will be conducted during the IMAT days. The workshop will be conducted in conjunction with the Residual Stress Symposia. Instead of a pre-conference workshop, the subcommittee will offer “workshops” as sessions. Sessions would include experts giving talk regarding the measurement techniques /modelling methods during the conference. Effort will be made to try to tie as much as possible with the Handbook content.

Another idea was to hold the workshop in its current format but during the conference and to include the workshop as part of the conference registration fee.

1.5. Professional Meetings, Conferences, Symposia (Rajan Bhambroo, Chair rajan.bhambroo.18@gmail.com,Toshi Suzuki, Vice Chair, toshi-suzuki@pulstec.co.jp)

If you are interested in joining this sub-committee, please email Rajan. (rajan.bhambroo.18@gmail.com)

Residual Stress Summit: Actively discussing the organization of next summit. Looking to coordinate with the RSTC. Hoping to organize the summit in 2024. The main challenge is the location and the host. If there are participants who are interested in becoming the local organizing committee, please reach out to Gary Schajer, Mike Hill or Mike Prime. Cost of organizing the meeting and attending the meetings are kept low. Please don’t hesitate to contact if you are interested in organizing the summit in your local area.. The focus of residual stress summit is chosen by the advisory committee and talks are invited to make the overall meeting coherent.

“Special Residual Stress” issue of the Journal of Materials Engineering and Performance (JMEP) moving forward. Peer review under way. Formal publication ~2024. Direct contacts are Lesley (lesley.frame@uconn.edu) and Rajan (rajan.bhambroo.18@gmail.com). Will also reach out to relevant past authors. Please let Andrew Payzant know if you have some time to review it would be greatly appreciated. What is status? Iuliana Cernatescu has accepted 2 papers for review and Al Conle accepted one – thanks for the assistance! – add Seung-Yub Lee

For Residual stress programming at IMAT, we need to be involved at the programming committee level. This was discussed during the Technical committees summit held during IMAT 2023. It was suggested that as a technical committee it would be good to have a representative on the programming committee who can coordinate the conference related activities for the Residual stress sessions. Need to identify someone to be contact point from RSTC. Will need a brief description of the sessions that might be added to call of papers. Residual Stress to be included as a feature topic. Rajan B. to act as contact point. Need more volunteers to make residual stress sessions a regular part of the IMAT programming.

List of Upcoming Conferences and Key Dates:

ECRS-11, Prague, ECRS11, June 3-6, 2024 - Call for papers? Tutorial/ Workshop being currently planned. Anyone interested please reach out to Nikolaj Zangenberg. At ECRS (Prague, May 20-24 2024), a tutorial/workshop on "Quantification and uncertainties in residual stress measurement" workshop is being planned. Nikolaj will provide more information as things progress and may reach out to members for help. [https://www.xray.cz/ecrs11/workshops.htm)](https://www.xray.cz/ecrs11/workshops.htm%29)

SEM Annual Meeting June 3-6 2024 in Vancouver Washington. <http://sem.org/annual> . Abstracts were due October 2nd, 2023. This group has Residual Stress Committee and we should collaborate where possible.

Aeromat 2024, 12-14 March, Charlotte, NC. Acceptance of abstracts is closed; however, if you would like to present, please let Jason Sheuring or Nihad Ben Salah know. Link: <https://www.asminternational.org/aeromat-2024/>

ICRS 2025– Contact Andrew Payzant payzanta@ornl.gov or Mike Prime prime@lanl.gov ASM to link up with ICRS – to be held in Detroit and will co-locate with IMAT in Detroit from October 20-24, 2025.

ICSP will be held at Purdue University in 2025 dates TBD.

American Conference on Neutron Scattering: Knoxville. Abstracts due: Jan 5th. [https://ceramics.org/event/american-conference-on-neutron-scattering-acns-2024/](https://urldefense.us/v2/url?u=https-3A__ceramics.org_event_american-2Dconference-2Don-2Dneutron-2Dscattering-2Dacns-2D2024_&d=DwMFAg&c=v4IIwRuZAmwupIjowmMWUmLasxPEgYsgNI-O7C4ViYc&r=3EeWCUCGKKasmLqs0MqS3Q&m=9tY_OdvWGXlivN5Pzr6klDHpRnIion3URa87oVXCtKGez3-6kO-RZTssSN0BWy3g&s=OUGme65RyeIJ5qNAADPY6qfF5Jd-zYVrs1D5xG55CyY&e=) . At least 2 symposiums on engineering materials (one chemistry focused one structural focused) Symposia : Chemistry Focused and Structure Focused. Funds are available for students to register and travel.

* 1. University Outreach Subcommittee (Joe Rasche, ad hoc Chair joe.rasche@ansys.com)

Joe still working on formalizing site. Dave F. and Joe R. worked on interfacing with Ansys’ Director Global Academic Programs. Ansys has volunteered to manage a hosting site that we can post to via the ASM site (i.e. no need for ASM to support) to connect Academia and Industry thus enabling a global reach. Looking for projects – is there anything you need looked at/analyzed? Need real problem statements from Organizations/Individuals that are very focused and well defined, then match Students and Faculty with projects. Contact Dave F. (david.furrer@prattwhitney.com) or Joe R. (joe.rasche@ansys.com) with ideas or topics.

If you know any students who want to participate in RSTC activities, please reach out to Beth Snipes.

* 1. **Technical Collaboration Sub-committee** [Chair: Mike Hill]

Goal of the Technical Collaboration Subcommittee engages with other committees, industry groups, and organizations to develop and execute collaborative programs, share expertise, and advance awareness about residual stresses

Mike Hill would like some help with this committee. Anyone interested please reach out to Mike Hill.

Will organize a meeting in the new year to kick-start this initiative.

ASTM E28.13 – Gary Schajer (Beth S., James P.)

ASTM E08 – Fatigue and Fracture – Mark James has been authorized to be liaison with Executive Committee bring items of potential interest to RSTC.

ASME Pressure Vessel and Piping Division (PVP) oversees the PVP Code. Residual stress issues, notably welding and fracture mechanics (crack growth and fracture), are frequently discussed in the Materials and Fabrication committee (PVP M&F). Mike Hill has links to M&F and can provide introductions to interested RSTC members. New members are added to M&F each July at the annual PVP Conference - John Cline is interested in being in the loop especially pipeline/pressure vessel related activity – also offered that numerous case studies could be made available – TBD.

SAE FD&E – Casey Gales and Peter Huffman. Casey to liaison and invite Peter to RSTC activities.

SEM – Mike Hill to reach out.

**AWS (American Welding Society):** Need to identify a contact point for AWS residual stress activities. AWS has a significant interest in the residual stress and we should reach out to AWS members to collaborate with AWS on the residual stress aspect.

Note: This sub-committee will be a collaborative effort and we would like to encourage members who are active in other technical organizations to be actively involved in the sub-committee activities.

Member News:

Ben Wang (Cummins Inc.) and Ben Wing (UT Knoxville) defended their PhD dissertations and completed the requirements for PhD degree. Congratulations.

Job Opportunity:

Pratt & Whitney is looking for an XRD or Residual Stress Engineer. Please reach out to Seung-yub Lee for any questions. Details can be found at the link below.

<https://globalhr.wd5.myworkdayjobs.com/REC_RTX_Ext_Gateway/job/PW100-East-Hartford-400-Main-Street-East-Hartford-CT-06118-USA/X-Ray-Diffraction---Residual-Stress-Engineer--Onsite-_01666436>

New business:

ASM Awards – We are able to submit nominations to ASM. We should be active in recognizing our RSTC members for these awards. Any volunteers to head up this activity?

* 1. ASM Fellow Award Nomination Deadline November 30,2023
	2. Nominating Committee: December 31, 2023?.
	3. All Other Awards: Deadlines vary between Feb 15th and March 1st. Awards are as follows:
		1. Gold Medal
		2. Silver Medal
		3. Bronze Medal
		4. Allan Putnam Service Award
		5. Honorary Membership
		6. Distinguished Life Membership

Please let Beth Snipes/Scott Henry know if anyone is interested in being nominated for the awards or you know anyone you want to be nominated for these awards. Please find the various awards and the eligibility criteria at

<https://www.asminternational.org/wp-content/uploads/2023/01/ASM-Awards.pdf>

RSTC should organize an in-person meeting at a conference where members are attending. We should try to have a hybrid meeting at the AEROMAT conference.

NOTE: Next meeting will be held on 17 January 2024. Merry Christmas, Happy Holidays, and Happy New Year!

**Relevant Links and Materials:**

**New members:** Please fill in roster information form <https://forms.gle/3YwCTEWGz9NtG5nHA>

**New web page:** Please feel free to share web page link for ASM-RSTC <https://www.asminternational.org/residual-stress-technical-committee>

**Advertising:** Please consider advertising the ASM-RSTC when presenting at professional meetings – Link to PowerPoint: <https://rb.gy/ojigo> Link to PDF: <https://rb.gy/v2l4s>

**LinkedIn shout-out:** Members please share/forward to improve visibility. <https://www.linkedin.com/posts/asm-international_the-asm-residual-stress-technical-committee-activity-6970438123017101312-97rt?utm_source=share&utm_medium=member_desktop>

**Student intro/outreach letter:** Please contact Beth Snipes beth.snipes@tec-materialstesting.com

**Newsletter ideas:** Please feel free to send newsletter ideas to Ben Wang wang.ben@cummins.com: always looking for contributions, i.e. Members in the News, Did you know? Trivia items, any fun reading ideas welcome, ideas for new features. The newsletters past and current can also be found on the ASDM-RSTC webpage: <https://www.asminternational.org/residual-stress-technical-committee>

**Outreach Poster:** Please contact Scott Henry if you have ideas for Mat. Sci. organizations you think might benefit from it scott.henry@asminternational.org