



Shaping Tomorrow's
Built Environment Today

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TO: Willis Brayman, Chair TC 1.8, brayman.bicllc@att.net
Manfred Kehrler, Research Subcommittee Chair TC 2.1, MKehrler@wje.com
CC: Shinsuke Kato, Research Liaison Section 1.0, kato@iis.u-tokyo.ac.jp
FROM: Michael Vaughn, MORTS, mvaughn@ashrae.org
DATE: November 6, 2018
SUBJECT: Research Topic Acceptance Request (1862-RTAR), "Determining the Impact of Sealing Insulation System Metal Jacketing Joints on Water Intrusion and Retention in the System"

During their fall meeting, the Research Administration Committee (RAC) reviewed the subject Research Topic Acceptance Request (RTAR) and voted to accept it with comments for further development into a work statement (WS) provided that the key comment(s) and question(s) below are addressed to the satisfaction of your Research Liaison, Shinsuke Kato, kato@iis.u-tokyo.ac.jp, or RL1@ashrae.net, in the work statement draft.

1. The expected approach is vague, with regard to the potential variables.
2. More specific objectives are needed to evaluate the proposed research project.

The work statement draft must be approved by the Research Liaison prior to submitting it to RAC.

An RTAR evaluation sheet is attached as additional information and it provides a breakdown of comments and questions from individual RAC members based on specific review criteria. This should give you an idea of how your RTAR is being interpreted and understood by others. Some of these comments may indicate areas of the RTAR and subsequent WS where readers require additional information or rewording for clarification.

The first draft of the work statement should be submitted to RAC no later than **August 15, 2020** or it will be dropped from display on the Society's Research Implementation Plan. The next likely submission deadline for a new work statement on this topic is **May 15, 2019** for consideration at RAC's 2019 Annual meeting. The submission deadline after that for work statements is **August 15, 2019** for consideration at the RAC's 2019 fall meeting.

Project ID	1862	
Project Title	Determining the Impact of Sealing Insulation System Metal Jacketing Joints on Water Intrusion and Retention in the System	
Sponsoring TC	TC 1.8, 1.8 Mechanical Systems Insulation	
Cost / Duration	\$100,000 / 12 Months	
Submission History	1st Submission	
Classification: Research or Technology Transfer	Basic/Applied Research	
RAC 2018 Fall Meeting Review		
Essential Criteria	Voted NO	Comments & Suggestions
Background: The RTAR should describe current state of the art with some level of literature review that documents the importance/magnitude of a problem. References should be provided. If not, then note it in your comments.		4- No references are provided and it is unclear whether the Authors performed literature search to document whether the issue addressed in the RTAR has been studied in the past. 9 - An interesting research question, simple but important. No literature cited, only an assertion that this has never been studied. I did a quick check of the literature and did not find anything obvious on this topic either. 10 - No, references provided. According to the authors no reference is available. Some references about proper installation of hot insulation systems would be available but not listed. The authors should have listed references documenting at least the damage caused by water to metal jacketed insulation systems.
Research Need: Based on the background provided is the need for additional research clearly identified? If not, then the RTAR should be rejected.		2 - Not the building but plant system where the temperature is under 100 C degree also faces the same problems. The RTAR does not mention such the case. 9 - If no previous study, then there is a research need
Relevance and Benefits to ASHRAE: Evaluate whether relevance and benefits are clearly explained in terms of: a. Leading to innovations in the field of HVAC & Refrigeration b. Valuable addition to the missing information which will lead to new design guidelines and valuable modifications to handbooks and standards. Is this research topic appropriate for ASHRAE funding? If not, Reject.		9 - This would allow ASHRAE to provide a definitive answer, and hence useful new information. 10 - The authors should include also some typical applications of metal jacketing.
IF ABOVE THREE CRITERION ARE NOT ALL SATISFIED - MARK "REJECT" BELOW & CONTINUE REVIEW BELOW		
Other Criteria	Voted NO	Comments & Suggestions
Project Objectives: Based on the background and need, evaluate whether the project objectives are: 1. Aligned with the need 2. Specific 3. Clear without ambiguity 4. Achievable If not, then appropriate feedback should be provided.		9 - Objectives are too brief, just a single sentence that effectively repeats the questions. Steps need to be specified...what is to be tested, how, what measured, and where outcomes would go. 10 - More specific objectives are needed to evaluate the proposed research project. What are the parameters to be studied? What are the deliverables of the project? A guideline specifying whether, how, where and when metal jacketing joints should be sealed?
Expected Approach and Budget: Is there an adequate description of the approach in order for RAC to be able to evaluate the appropriateness of the budget? If not, then the RTAR should be returned for revision. Anticipated funding level and duration:		7 - The expected approach is vague, with regard to the potential variables. 9 - This is clear and goes some way to fill the gaps in the objectives. An achievable project, and \$100k for 12 months is probably reasonable. 10 - It seems that non standardized measurements approach is available to study the exposure to water. In such case a protocol must be developed before starting the measurements. The duration of the project is short, especially taking into account that a lot of experimental activity is needed. The funding level may be adapted as a consequence. 8 - Needs further refinement of approach
References: Are the references provided?		2 - The problems here will not investigated by academia.
	Initial Decision?	
Decision Options		Final Approval Conditions
ACCEPT AS-IS		4 - Two opinions on using metal jackets are presented. The opinions must be based on experience or past research. If latter the references supporting both opinions are needed. 7 - The expected approach is vague, with regard to the potential variables. The Work Statement should provide more details on the potential variables that should be tested, so that the bidders can accurately cost the project and so that the PMS doesn't create scope creep once the project is underway. 9 - RL should work with the TC to build up a clear WS that re-confirms 'no previous work', and addresses the objectives / steps needed to do the project. Also, the team should consider this: Is it not likely that, no matter how good the seals might be, you are likely to get moisture ingress over the years? And then how would you dry it out? How might the research take this risk into consideration? 10 - Include some references discussing the water damage to metal jacketed insulation systems. List clearly the objectives of the project and its outcome. Discuss how the measurements made during the project could be reproduced elsewhere or later to obtain repeatable and reproducible data. Make a careful evaluation of the project phases to estimate the duration in a reliable way.
ACCEPT W/COMMENTS		
REJECT		

ACCEPT Vote - Topic is ready for development into a work statement (WS).

ACCEPT W/COMMENTS Vote - Minor Revision Required - RL can approve RTAR for development into WS without going back to RAC once TC satisfies RAC's approval condition(s)

REJECT Vote - Topic is not acceptable for the ASHRAE Research Program

Research Topic Acceptance Request Cover Sheet

Date:

(Please Check to Insure the Following Information is in the RTAR)

- A. Title
- B. Executive Summary
- C. Background
- D. Research Need
- E. Project Objectives
- F. Expected Approach
- G. Relevance and Benefits to ASHRAE
- H. Anticipated Funding Level and Duration
- I. References

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Title:

RTAR #

(To be assigned by MORTS)

Results of this Project will affect the following Handbook Chapters, Special Publications, etc.:

Research Classification:

- Basic/Applied Research
- Advanced Concepts
- Technology Transfer

<input type="checkbox"/>
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Responsible Committee:

Date of Vote:

For		<input type="checkbox"/>
Against	*	<input type="checkbox"/>
Abstaining	*	<input type="checkbox"/>
Absent or not returning Ballot	*	<input type="checkbox"/>
Total Voting Members		<input type="checkbox"/>

RTAR Authors

Lead:

Others:

Co-sponsoring TC/TG/MTG/SSPCs (give vote and date)

Expected Work Statement Authors

Lead:

Others:

Potential Co-funders (organization, contact person information):

Has an electronic copy been furnished to the MORTS?

Has the Research Liaison reviewed the RTAR?

Yes

No

* Reasons for negative vote(s) and abstentions

RTAR # _____

Title:

Insert proposed project title

Executive Summary

Describe in summary form the proposed research topic, including what is proposed, why this research is important, how it will be conducted, and why ASHRAE should fund it (50 words maximum)

Background

Provide the state of the art with key references (at the end of this document) substantiating it (300 words maximum)

Research Need

Use the state of the art described above as a basis to specify the need for the proposed effort (250 words maximum)

Project Objectives

Based on the identified research need(s), specify the objectives of the solicited effort that will address all or part of these needs (150 words maximum)

Expected Approach

Describe in a manner that may be used for assessment of project viability, cost, and duration, the approach that is expected to achieve the proposed objectives (200 words maximum).

Check all that apply: Lab testing , Computations , Surveys , Field tests , Analyses and modeling , Validation efforts Other (specify) ()

Relevance and Benefits to ASHRAE

Describe why this effort is of specific interest to ASHRAE, its impact, and how it will benefit ASHRAE and the society. How does it align with ASHRAE Strategic Plans and Initiatives? How does it advance the state of the art in this area in general? Are there other stakeholders that should be approached to obtain relevant information or co-funding? (350 words maximum)

Anticipated Funding Level and Duration

Funding Amount Range: \$_____

Duration in Months: _____

References

List the key references cited in this RTAR

Feedback to RAC and Suggested Improvements to RTAR Process

Now that you have completed the RTAR process, RAC is interested in getting your feedback and suggestions here on how we can improve the process.