



**ASME Standards Technology, LLC  
Request for Proposals**

**RFP-ASMEST-09-03**

**BPVC#2 – External Pressure Design in the Creep Range**

Date Posted: July 21, 2008

Proposal Due Date: August 21, 2008

**1. Summary**

ASME Standards Technology, LLC is soliciting proposals for technical investigation for external pressure design in the creep range.

This project has resulted from ASME Pressure Technology Codes & Standards (PTCS) Standards Committee requests to identify, prioritize, and address technology gaps in current or new PTCS Codes, Standards and Guidelines. This project is one of several included for ASME FY09 funding and intended to establish and maintain the technical relevance of ASME codes & standards products. An overview of the annual ASME PTCS project selection process is included at <http://files.asme.org/STLLC/10192.pdf>.

**2. Scope of Work**

a. Scope Description

The ASME BPVC Sections I and VIII provide little guidance for how to deal with design for external pressure with materials being used in the creep range. Volunteers have been struggling with this problem without significant success for at least 20-years.

ASME Section VIII Division 1 and ASME Section II Part D provide design rules and data up to 1500°F. Information on effects of compression loading and buckling is provided in ASME Section II Part D, but is based on tensile (non-creep) data. The ASME BPVC Section I and VIII rules and/or the IID charts/tables need to provide guidance on how to design for external pressure (creep collapse) in the creep range. Section III provides guidance in the form of isochronous curves, but this approach is inconsistent with the time-independent approach that is taken by Sections I and VIII.

Project 07-11 (BPVC#5) “Validate Creep-Buckling Rules” addresses part of this question, but stops short of providing suggested design rules which allow an explicitly time-dependent consideration to be addressed by a nominally time-independent design code.

The project scope includes the following:

- Identify a method for design to resist external pressure for materials used in the creep range;
- Provide a go/no go criterion for determining when such analysis is/is not necessary. Consideration should be given to whether different rules need to be developed for continuous, cyclic and intermittent external pressure loadings;
- Provide a recommendation on how (volume, location, and format) this information should be published in ASME BPVC.

It is anticipated that the method chosen may likely use isochronous stress-strain curves. If so, a procedure for developing these curves for BPVC materials should be defined. The investigator should develop these curves using an approach consistent with that accepted by ASME Subcommittee II.

b. Deliverable

The project deliverable shall be a technical report provided as an electronic file in MS Word format. A report template and style guide will be provided by ASME ST-LLC. The report outline shall be approved by ASME ST-LLC. One peer review cycle is anticipated and modifications required to the report, as a result of the review cycle, are the responsibility of the contractor awarded the contract.

c. Schedule

Investigators shall submit a schedule with their proposal describing the major milestones and reporting schedule. ASME ST-LLC desires that the final deliverable be provided no later than April 30, 2009. This will allow publication in the 2010 Edition after subcommittee and committee consideration.

d. Reporting:

A brief status report shall be provided monthly to the ASME ST-LLC project manager. Progress reports shall be provided at ASME BPVC code week meetings.

e. Travel Requirements

Current travel is anticipated to present project results to ASME C&S committees during ASME BPVC code week meetings. Travel expenses shall be reimbursed, within the project budget, per the project Travel Policy.

f. Budget

The total budget is approximately \$21,750.

### **3. Applicant Eligibility Requirements**

ASME ST-LLC is seeking proposals from all qualified organizations including, but not limited to, engineering firms, consultants, academic institutions and Federally Funded Research and Development Centers. In addition to relevant technical qualifications and experience, applicants must possess an understanding of relevant ASME Codes and Standards.

### **4. Basis for Selection and Award**

Selection of a proposal by ASME ST-LLC will be achieved through a process of evaluating and comparing the relative merits of the applicant's complete responses. This process reflects ASME ST-LLC's desire to accept an application based on its potential in best achieving program objectives, rather than solely on evaluated technical merit or cost. Evaluation criteria includes, but is not limited to, the following:

- Technical capabilities
- Experience
- Price
- Schedule

- Agreement with Terms and Conditions

ASME ST-LLC reserves the right to award, in whole or in part, any, all, or none of the applications submitted in response to this solicitation.

## 5. Contract Terms and Conditions

A fixed-price contract is preferred, however labor hour and expenses-type proposals will also be considered. Draft terms and conditions are attached. The final contractual terms and conditions will be negotiated between ASME ST-LLC and the selected applicant(s) following award.

ASME ST-LLC shall provide required access to codes and standards and other technical references necessary for performance of the work.

## 6. Submission Requirements

- Proposal Due Date: Proposals and amendments of proposals must be received by August 21, 2008. Applicants are encouraged to transmit their proposal well before the deadline.
- Anticipated Selection and Award Date: It is anticipated that selection and award will be made within 2 weeks of the proposal due date.
- Application Preparation Costs: This solicitation does not obligate ASME ST-LLC to pay any costs incurred in the preparation and submission of proposals or in making necessary studies or designs for the preparation thereof or to acquire, or contract for any services.
- Application Clarification: ASME ST-LLC reserves the right to require proposals to be clarified or supplemented to the extent considered necessary. The award may be made after few or no exchanges, discussions or negotiations. Therefore, all applicants are advised to submit their most favorable application to ASME ST-LLC. ASME ST-LLC reserves the right, without qualification, to reject any or all proposals received in response to this solicitation and to select any proposal, in whole or in part, as a basis for negotiation and or award. ASME ST-LLC reserves the right to modify or cancel this solicitation. All questions relating to the solicitation must be submitted to the contact below. Any amendments to the solicitation will be posted on the ASME ST-LLC web site ([http://stllc.asme.org/Requests\\_Proposals\\_RFPs.cfm](http://stllc.asme.org/Requests_Proposals_RFPs.cfm)).
- Treatment of Proprietary Information: A proposal may include technical data and other data, including trade secrets and/or privileged or confidential commercial or financial information, which the applicant does not want disclosed to the public or used by ASME ST-LLC for any purpose other than proposal evaluation. To protect such data, the applicant should specifically identify the data to be protected.

- Proposal Preparation and Submittal Instructions:

ASME ST-LLC may form a committee of subject matter experts to evaluate the technical qualifications of applicants. To help facilitate this evaluation, responses should include two separate documents, a Technical Proposal, and a Financial Proposal.

1. Technical Proposal

- (a) Provide organization name and contact information.
- (b) Provide evidence of technical capabilities: the credentials, qualifications, capabilities, and experience of individuals and the organization.

- (c) Describe approach to accomplishment of the Scope of Work.
  - (d) Confirm agreement with the Scope of Work for the specified task(s)
2. Financial Proposal
    - (a) Provide a fixed price quotation or an hourly billing rate quotation and estimated project maximum.
    - (b) Confirm agreement with the draft Terms and Conditions, or state any specific exceptions.
  3. Submit Technical and Financial Proposals via e-mail to the ASME ST-LLC contact below.
  4. Responses must be received on or before the deadline.

**7. ASME Standards Technology, LLC Contact Information:**

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