

July 30, 2012

MEMORANDUM TO: Martin C. Murphy, Chief
Mechanical & Civil Engineering Branch
Division of Engineering

FROM: Chakrapani Basavaraju, Mechanical Engineer **/RA/**
Mechanical & Civil Engineering Branch
Division of Engineering

SUBJECT: INTERNATIONAL TRIP REPORT – JULY 2012 ASME PVP
CONFERENCE

I attended the 2012 ASME PVP Conference held at Sheraton Centre Toronto Hotel in Toronto, Canada during July 15-19, 2012. Attached is the summary trip report.

Enclosure :
As stated

CONTACT : Chakrapani Basavaraju, NRR/DE/EMCB
(301) 415-1221

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INTERNATIONAL TRIP REPORT – JULY 2012 ASME PVP CONFERENCE

SUBJECT

Trip Report for International travel to attend 2012 ASME PVP Conference held at Sheraton Centre Toronto hotel in Toronto, Canada during July 15-19, 2012.

DATES OF CONFERENCE

July 15 through July 19, 2012

ATTENDEE, TITLE AND AGENCY AFFILIATION

Chakrapani Basavaraju, Mechanical Engineer
Mechanical and Civil Engineering Branch (EMCB), Division of Engineering (DE), Office of Nuclear Reactor Regulation (NRR)

OTHER NRC ATTENDEES

David Rudland RES/DE
Howard Rathbun RES/DE
Christopher S. Bajwa - NMSS/SFST
Do-Jun Shim RES contractor
Harold Adkins - NMSS Contractor

BACKGROUND/PURPOSE

The purpose of this international trip is to attend the conference, attend PVP technical committee meeting as a member of the Design & Analysis (D&A) technical Committee, chair 3 D&A sessions, co-chair 1 D&A session on Non-linear Analysis, and understand the latest developments in the design and analysis of mechanical components, piping, and pressure vessels from the presentations by technical experts from all over the world.

SUMMARY OF TRIP REPORT

The conference consisted of more than 550 technical papers organized into 150 sessions, panel sessions, tutorials, and exhibits on NDE (Non-destructive examination) and software demonstrations. The participants from Europe, Africa, the Middle East, Asia, the Americas, and the Oceania Islands were present at the conference. The topics included a broad range of fields such as advances in Design and analysis of mechanical and piping components, pressure vessels, Code and Standards, Computer applications, Bolted Joints, Fluid Structure Interaction, Materials & Fabrication, Seismic Engineering, Finite element analysis, Vibrations and dynamic loading.

As a member of the PVP's Design and Analysis (D &A) Technical Committee, I attended the committee meetings which included planning for the next year conference, 2013 ASME PVP Conference. I am session developer and organize 4 sessions on D&A of Piping & Piping Components with 15 to 16 technical papers.

I performed the peer reviews for 2 conference papers: PVP2012-78801: Failure Analysis for Burst of the High Temperature Steam Pipe, and PVP2012-78776: Determination of Material damping values for High Density Polyethylene Pipe Materials.

ENCLOSURE

In addition, I was the chair for 3 conference sessions: (i) 2.1H (DA-2-1) that consisted of 3 papers (PVP2012-78152, PVP2012-78161, and PVP2012-78197),; (ii) 2.3H (DA-2-3) that consisted of 4 papers (PVP2012-78685, PVP2012-78686, PVP2012-78717, and PVP2012-78790 (iii) 2.4H (DA-2-4) that consisted of 4 papers (PVP2012-78331, PVP2012-78422, PVP2012-78800, and PVP2012-78801).

I was also the co-chair for one conference session: 2.2I (DA-4-3) on Nonlinear Analysis that consisted of 4 papers (PVP2012-77198, PVP2012-78654, PVP2012-78752, PVP2009-78001, and PVP2012-78674).

Furthermore, I was session developer for 4 conference sessions on Design & Analysis of Piping & Piping Components 2.1H (DA-2-1), 2.2H (DA-2-2), 2.3H (DA-2-3), and 2.4H (DA-2-4) that consisted of 3 papers, 4 papers, 4 papers, and 4 papers respectively, coordinating peer reviews and assigning papers to D&A sessions.

I also attended sessions with paper presentations on Flow Induced Vibrations, Thermal hydraulic Phenomena and Interactions, Welding Residual Stress and Flaw Evaluation and Distortion Simulation; Environmental fatigue Issues, Leak before Break; and Piping and Equipment Dynamics. I attended the authors' briefing sessions for the sessions I chaired. Finally, I attended the plenary lecture on "Nuclear Refurbishment at Ontario Power Generation".

I attended some selected sessions during the five days of the conference, where papers of direct interest to my background are presented by experts. As a result, I was able to enrich my knowledge in the areas such as weld residual stresses, acoustic vibrations, sub-modeling and finite element analysis, polyethylene piping, and Environmental fatigue. This knowledge gained will enhance my skills as a technical reviewer, and is beneficial to the agency.

I am attaching 3 papers that are of special interest to our branch.

Chakrapani Basavaraju

Attachments:

- Paper # PVP2012-78085 :Acoustic Resonance in a Reservoir-Double Pipe-Orifice System. (ML12208A219)
- Paper # PVP2012-78581 :LBB Under Beyond Design Basis Seismic Loading. (ML12208A222)
- Paper # PVP2012-78301 :Fatigue Life of Strain Hardened Austenitic Stainless Steel in Simulated PWR Primary Water. (ML12208A223)