August 6, 2009

MEMORANDUM TO: Meena Khanna, 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 2009 ASME PVP CONFERENCE

I attended the 2009 ASME PVP Conference held at Prague Hilton Hotel in Prague, Czech Republic during July 26-30, 2009. Attached is my summary trip report including the paper I presented on July 29, 2009.

Enclosure :
As stated

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

MEMORANDUM TO: Meena Khanna, 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 2009 ASME PVP CONFERENCE

I attended the 2009 ASME PVP Conference held at Prague Hilton Hotel in Prague, Czech Republic during July 26-30, 2009. Attached is my summary trip report including the paper I presented on July 29, 2009.

Enclosure :
As stated

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

DISTRIBUTION:
EMCB R/F K. A. Manoly Patrick L. Hiland Cynthia Dorsey

Document: G:\International Trip report-Basavaraju-Prague-Czech Republic-July 2009.doc

ADAMS Accession No.: ML092180504

OFFICE	EMCB:DE
NAME	C. Basavaraju
DATE	08/05/09

OFFICIAL RECORD COPY

INTERNATIONAL TRIP REPORT – JULY 2009 ASME PVP CONFERENCE

SUBJECT
Trip Report for International travel to attend 2009 ASME PVP Conference (PPXIV) held at Prague Hilton hotel in Prague, Czech Republic during July 26 -30, 2009

DATES OF CONFERENCE
July 26 through July 30, 2009

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
RESEARCH: David Rudland, M. EricksonKirk,
NMSS: C. Bajwa, G. Bjorkman
NRO: J. Xu, P.Y.Chen, S. Samadar

BACKGROUND/PURPOSE
The purpose of this international trip is to present a paper at the conference 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 700 technical papers organized into 180 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.

I presented the paper PVP2009-77747 titled “Special Design Considerations for Buried HDPE Piping in Nuclear Safety Related Applications” by C. Basavaraju and K. A. Manoly in the conference session 3.2B (DA-3-2). This paper is published in the conference proceedings. The paper and the presentation slides are included in the attachment to this trip report.

I did the peer reviews for 7 conference papers: (PVP2009-77125, PVP2009-78066, PVP2009-77915, PVP2009-77784, PVP2009-78001, PVP2009-77786, and PVP2009-77938). In addition, I was the chair for the conference session 3.1B (DA-3-1) that consisted of 4 papers (PVP2009-77147, PVP2009-77148, PVP2009-77938, and PVP2009-78007). I was also the co-chair for the conference session 4.1B (DA-3-3) that consisted of 5 papers (PVP2009-77125, PVP2009-77544, PVP2009-77915, PVP2009-78001, and PVP2009-77976). Furthermore, I was session developer for the conference sessions 3.1B (DA-3-1), 3.2B (DA-3-2). and 4.1B (DA-3-3) that consisted of 4 papers, 5 papers, and 5 papers respectively.

I also attended sessions with paper presentations on Welding Residual Stress and Flaw Evaluation for Dissimilar metal Welds with Alloy 52 Inlays; An Analytical Evaluation of the Effects of weld Material thickness on Residual Stresses Produced By Structural Weld Overlays

on Pressurized Water Reactor Cooling Piping; Evaluation of Fire Protection Piping in a DOE Performance Category 3 Structure; On-Line Monitoring System for Main Steam Piping of Power Plants; Comparison of Parent and Butt Fusion Material Properties of High Density Polyethylene; and Use of HDPE Piping in the Callaway Nuclear Plant Essential Service Water System; Materials Aging degradation of Reactor Vessel Internals Structural evaluation- Local finite Element Models; Materials Aging degradation of Reactor Vessel Internals Structural evaluation- Local Finite Element Models; Materials Aging degradation of Reactor Vessel Internals Structural evaluation- Local finite Element Models; Materials Aging degradation of Reactor Vessel Internals Structural evaluation- Global Finite Element Models. Finally, I attended the plenary lectures on “Sustainable energy for the third millennium”, and “Energy security and climate Change: How to Avoid a Catastrophe”.

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, structural analysis of reactor vessel internals. This knowledge gained will enhance my skills as a technical reviewer, and is beneficial to the agency.

Chakrapani Basavaraju

Attachment :

- Paper # PVP2009-77747 : Special Design Considerations for Buried HDPE Piping in Nuclear Safety Related Applications » by Chakrapani Basavaraju and Kamal A. Manoly (8 pages)
- Conference Presentation Slides, PVP2009-77747 (18 pages)