Date Distributed: December 17, 2012

THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS

SUBGROUP ON PRESSURE VESSELS AND PIPING

AGENDA

Meeting of January 15, 2013
Mobile, Alabama

The National Board of Boiler & Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, Ohio 43229-1183
Phone: (614)888-8320
FAX: (614)847-1828

1. **Call to Order – 1:00 p.m.**

2. **Announcements**

3. **Adoption of the Agenda**

4. **Adoption of the Minutes of July 17, 2012**

5. **Review of the Roster (Attachment 1)**

6. **Action Items (Attachment 2)**

NB10-0201 ***Part 1 S3, SG Pressure Vessels and Piping-*** Expand the section on installation of thermal fluid heaters. This action item is a result of splitting NB09-0601into two parts. A task group of D. Patten, G. Halley, M. Wadkinson and P. Bourgeois has been assigned. (No Attachment)

January 2010
A progress report was given.

July 2010
A progress report was given by Mr. Gary Scribner.

January 2011
A progress report was given by Mr. Scribner

July 2011
A progress report was presented. Correction was made to the task group as listed to removing G. Scribner as Chair and listing D. Patten as Chair and M. Wadkinson.

January 2012
Don Patten reported that there was no progress at this time.

July 2012
Mr. Patten gave a progress report.

January 2013
Mr. Patten is expected to report.

NB11-2001 ***Part 1, 2.9.4 SG Pressure Vessels and Piping-*** Address the safe venting of isolatable economizers where the outlet is below the inlet of other communicable chambers (Headers, drums, etc.) (Attachment 2, pp. 1-10)

July 2011
Trent Miller of Victory Energy was present in the Pressure Vessels & Piping SG meeting to discuss issues with the wording of NBIC Part 1, Section 2.9.4. After discussions it was decided by the SG that Mr. Miller will resubmit his request in the correct format in accordance with NBIC Sec. 8 procedures. His request will then be reviewed which may result in further research with other manufacturers and ASME Section I & VIII.

January 2012
David Olsen of Victory Energy presented a proposed change in 2.9.4. A task group of D. Patten (Chair), S. Konopacki and D. Olsen (Representative of Victory Energy) was assigned. The task group met to rework the proposal to submit to the SC for approval.

Secretary note: A letter ballot was given for this action item and the item's Chair, Don Patten, decided this item needed revision and requested that the ballot be closed for more work.

July 2012
Mr. Patten presented the negative feedback he had received. The group re-visited the item with Mr. Pillow on the reasoning behind his negative vote. After taking into consideration Mr. Pillow's opinion and the opinion of others, the group unanimously agreed to make a motion to reaffirm. The motion was unanimously approved. When this item was presented to the NBIC Committee, it was discovered that Mr. Wielgoszinski had also voted negative so the item was sent back to the SC for more work. Mr. Patten submitted an inquiry to ASME regarding this item and wants to wait for a reply before proceeding with this item.

January 2013
Mr. Patten is expected to report.

NB12-0302 ***Part 1, SG V&P*** Define installation requirements for (PVHO) hyperbaric chambers) This action item is a result of splitting NB09-0601into two parts. A task group of G. Scribner (Chair) and M. Richards has been assigned. (No Attachment)

January 2012
Mr. Scribner presented a progress report.

July 2012
Mr. Scribner presented a progress report. Concentration will be aimed in defining types and then identifying installation requirements.

January 2013
Mr. Scribner is expected to report.

7. New Business

8. Future Meetings

July 15-19, 2013, Columbus, Ohio
January 13-16, 2014, San Antonio, Texas

9. Adjournment

Respectfully Submitted,

Jeanne Bock
Secretary

ATTACHMENT 1

SG on Pressure Vessels and Piping

Member	Title	ExpirDate	Interest Category
Bock, Jeanne	Secretary		
Bourgeois, Paul		8/31/2013	Auth Inpection Agencies
Halley, Geoffrey		8/31/2013	Manufacturer
Konopacki, Stanley		8/31/2013	Users
Patten, Donald		2/28/2014	Manufacturer
Richards, H. Michael		8/31/2015	Users
Scribner, Gary	Chair	7/31/2014	Jurisdictional Authorities
Snyder, Raymond	Vice Chair	8/31/2015	Auth Inpection Agencies
Tyndall, Harold		1/31/2015	Auth Inpection Agencies
Wadkinson, Melissa		8/31/2015	Manufacturer

Total Members: 9

ATTACHMENT 2

Fw: LB NB11-2001
Robin Hough To: Jeanne Bock 07/24/2012 03:59 PM

From: Robin Hough/NationalBoard
To: Jeanne Bock/NationalBoard@NationalBoard

Robin Hough
NBIC Committee Coordinator
The National Board of Boiler and Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, OH 43229
614-888-8320 x 228
614-431-3236 Direct Line
----- Forwarded by Robin Hough/NationalBoard on 07/24/2012 03:59 PM -----

From: Robin Hough/NationalBoard
To: bryan.schulte@nrgenergy.com, chopkins@seattleboiler.com, david.parrish@fmglobal.com, canonicod@epbfi.com., DCook@dir.ca.gov, fhart@furmanite.com, Gary.Scribner@dfs.dps.mo.gov, ggalanes@MWGen.com, HMICHAELRICHARDS.PE@GMAIL.COM, Paul Welch <Paul.Welch@dol.state.ga.us>, banthony@dit.state.ri.us, jim.riley@conocophillips.com, "Pate, Ralph" <Ralph.Pate@labor.alabama.gov>, jpillow@commonarc.com, jsekely@comcast.net, jwrichar@aol.com, pcbourge@travelers.com, paul.edwards@shawgrp.com, raymond.snyder@ariseinc.com, breetz@state.nd.us, Robert_Wielgoszinski@hsbct.com, RLPulliam@babcock.com, stanleys@dot.gov, Terry Parks/NationalBoard@NationalBoard, mike.webb@xcelenergy.com, Lmac@gLabap.com
Cc: Don.Patten@RFMacDonald.com
Date: 04/16/2012 10:47 AM
Subject: LB NB11-2001

Gentlemen:

The subject letter ballot has now closed. The ballot has passed but due to the concerns of the negative voters the project chair, Don Patten, has decided to withdraw the ballot and take it back to the subcommittee for more work. This item will appear on the agendas for the July meeting.

Thank you,

Robin Hough
NBIC Committee Coordinator
The National Board of Boiler and Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, OH 43229
614-888-8320 x 228
614-431-3236 Direct Line

COMMITTEE CORRESPONDENCE

COMMITTEE: NBIC

TO: NBIC Committee

ADDRESS WRITER CARE OF:
The National Board of Boiler &
Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, Ohio 43229-1183
Phone: (614) 888-8320
Fax: (614) 847-1828

FROM: Robin Hough
NBIC Secretary

SUBJECT: Letter Ballot NB11-2001 MC

DATE: March 30, 2012

Committee Members,

Letter ballot NB11-2001 MC has now closed. The ballot was approved. The voting results are:

20	Approved
1	Disapproved
1	Abstained
1	Not Voting
3	Not Returned

Per the NBIC Procedures 7.3.2:

"NBIC Committee or subcommittee members shall be apprised of any unresolved comments and given two (2) weeks from notification to reconsider their original vote."

The ballot will remain open until April 13, 2012 for your reconsideration.

:rmh

Ballot Votes NB11-2001 MC

Name	Email	Votes	Vote Date
Paul Edwards	paul.edwards@shawgrp.com	Abstention	03/26/12
Benjamin Anthony	banthony@dlt.state.ri.us	Approve	03/20/12
Bob Reetz	breetz@nd.gov	Approve	03/06/12
Bryan Schulte	bryan.schulte@nrgenergy.com	Approve	03/21/12
Dave Parrish	david.parrish@fmglobal.com	Approve	03/01/12
Domenic canonico	canonicod@epbfi.com	Approve	02/29/12
Don Cook	dcook@hq.dir.ca.gov	Approve	03/01/12
Frank Hart	fhart@furmanite.com	Approve	02/29/12
Gary Scribner	Gary.Scribner@dfs.dps.mo.gov	Approve	03/05/12
George Galanes, PE	ggalanes@mwgen.com	Approve	03/02/12
Jim Riley	jim.riley@conocophillips.com	Approve	03/02/12
Jim Sekely	jsekely@comcast.net	Approve	02/29/12
John Richardson	jwrichar@aol.com	Approve	03/07/12
Lawrence McManamon	lmac@glabap.com	Approve	03/02/12
Michael Richards	hmrichar@southernco.com	Approve	03/02/12
Michael Webb	mike.webb@xcelenergy.com	Approve	03/01/12
Paul Bourgeois	pcbourge@travelers.com	Approve	03/06/12
Paul Welch	paul.welch@dol.state.ga.us	Approve	03/20/12
Raymond Snyder	raymond.snyder@ariscinc.com	Approve	03/01/12
Ronald Pulliam	rlpulliam@babcock.com	Approve	03/04/12
Stanley Staniszewski	stanley.staniszewski@dot.gov	Approve	03/21/12
James Pillow	jpillow@commonarc.com	Disapprove	03/21/12
Craig Hopkins	chopkins@seattleboiler.com	Not Voted	N/A
Ralph Pate	ralph.pate@labor.alabama.gov	Not Voted	N/A
Robert Wielgoszinski	Robert_Wielgoszinski@hsbct.com	Not Voted	N/A
Terry Parks	tparks@nationalboard.org	Not Voting	02/29/12

Ballot Comments NB11-2001 MC

Ballot Comments

Name	Document	Comment	Date Created
Donald Patten	NB11-2001	I looked at ASME 2007 edition Addenda 2009 and found nothing stipulating the location of a relief valve for isolable economizers. Please see a copy of the attached from said edition. If anyone can point me in the direction of where I can find this information I would greatly appreciate it.	03/27/2012
Donald Patten	NB11-2001	I responded with a copy of the attached from ASME. I could not find any stipulation for isolable economizers relief valve location. I had asked Mr. Pillows to please provide this information so I could review.	03/27/2012
Donald Patten	NB11-2001	I look at ASME Section 1 2007 Addenda 2009. I could not find any stipulation of relief valve location. See attached copy of PG 67.2.6. If you could point me to the section that designates or stipulates installation location of a relief valve for an isolable economizer I would greatly appreciate it.	03/27/2012
Paul Edwards		I would like to see a response to Mr. Pillow's concern.	03/26/2012
James Pillow		Jpillow 3/21/12 I disapprove because the proposal is an attempt to re-write ASME Section I rules that already address mounting of pressure relief valves. Section I does not allow the mounting of the valves "as recommended by the Manufacturer". Keep in mind that Part 1 of the NBIC does not overrule the Section I rules.	03/21/2012
Donald Patten		Mr. Richardson, I queried Mr. Olson at Victory Energy and below is his comments: Locating the PSV at the outlet without specifying an outlet location does not support an idea that the outlet of an isolated economizer is the strategic location for the PSV. The commenter is correct that, when the economizer is isolated, rarified fluid will immediately begin to collect at the upper areas. Due to the fact that the PSV can be set very close to operating pressures, the time element may not always come into effect. Anyway we look at it, allowing or the PSV location to be determined by the Designer is most beneficial. Regards, David Olson	03/21/2012
John Richardson		I approve this ballot with some hesitation. During normal operation the cooler, more dense fluid if. water or wet steam would be entering the top of the exchanger. The valve is apparently sized for steam but is the slower discharge rate advisable ?? When isolation occurs a sudden transient would follow in which the more rarified fluid would collect at the top. Is it possible that the original requirement to place the PRV at or neer the outlet was due to the time element?? How rapid is the pressure rise in the heat	03/07/2012

	exchanger?? How long does the heat input continue?? I trust Victory Energy has looked at all the credible scenarios. Perhaps I will have a chance to look at this a bit closer before the ballot closes.	
George Galanes, PE	This is more of an editorial comment, but I believe it would be better stated below; The safety valve shall be installed in a location either recommended by the manufacturer, or if no recommendation is provided shall be located as close as practical to the economizer outlet.	03/02/2012

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Robin Hough		This commnet comes from Donald Patten: I was unaware of any conflicts with ASME. When we as the subcommitte voted we all voted for the submitted change. Now that there is a conflict. I agree that this should be sent back to us and I will submit to the ASME on this subject. 04/13/2012	04/13/2012
Robin Hough		I was unaware of any conflicts with ASME. When we as the subcommitte voted we all voted for the submitted change. Now that there is a conflict. I agree that this should be sent back to us and I will submit to the ASME on this subject. 04/13/2012	04/13/2012
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Robert Wielgoszinski		I vote negative on this in support of the other negative ballotors. First, was this item discussed at the Part 1 Installation subcommittee meeting? If so, what was the result of the deliberation? Was there a vote taken? What was the result of that vote? Secondly, this proposal conflicts with the intent of the ASME Code Section I and inclusion in the NBIC would usurp the completion of ASME Code requirements. If this valve alignment is something that is allowed or common in other international boiler standards, then perhaps the	04/11/2012

		proposal should be revised accordingly.	
Michael Webb		To Jim Pillow's comment: Seemingly the original code of construction may be circumvented. As indicated by the statement of need, there is no intent to deviate from the requirements of ASME Section 1 or Section VIII, Div.I as applicable; but the proposed language as stated does not align the manufacturer to the original code of construction. In my opinion, Mr. Pillow's comment needs to be addressed and the language refined to reflect an alignment to the original code of construction. M. Webb	04/11/2012
George Galanes, PE		GWG 4/11/12; I am changing my vote from approve to disapprove. After further re-consideration and no follow-up response to Mr. Pillow's original comment regarding Section I rules by the PM, I believe the proposed change is unnecessary because the NBIC is not a construction code. There is no need to reference the Manufacturer's recommendation in locating a PRD. The original wording is acceptable and does not conflict with Section I.	04/11/2012
Bob Reetz		I would like to change my vote from approve to disapprove after viewing Mr. James Pillow's comments. We should not be addressing this issue as it is the jurisdiction of Section I and should be handled there. Part I of the NBIC cannot be used to overrule Section I. The request should be handled by Section I. Section I, Figure PG 58.3.1(b), shows the location of a safety valve for an isolable economizer to be the outlet and not the inlet. I am not sure if Donald Patten has viewed this section.	04/02/2012
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Don Patten Comment

Copy from ASME Section 1 – 2007 Edition Addenda 2009

PG-67.2.6 Any economizer that may be shut off from the boiler, thereby permitting the economizer to become a fired pressure vessel, shall have one or more pressure relief valves with a total discharge capacity, in lb /hr (kg/hr), calculated from the maximum expected heat absorption in Btu/hr (W), as determined by the Manufacturer, divided by 1,000 (646). This absorption shall be stated in the stamping (PG-106.4). For overpressure conditions where the fluid relieved is water, the discharge capacity of the pressure relief valve, or valves shall be sufficient to prevent the pressure from exceeding the limits of PG-67.2.

NB 11-2001 *Part 1, 2.9.4 SG Pressure Vessels and Piping* - Address the safe venting isolatable economizers where the outlet is below the inlet of other communicable chambers (Headers, drums, etc.)

Current Language:

2.9.4 ECONOMIZERS

An economizer that may not be isolated from a boiler does not require a safety relief valve. Economizers that may be isolated from a boiler or other heat transfer device, allowing the economizer to become a fired pressure vessel, shall have a minimum of one safety relief valve. Discharge capacity, rated in lbs/hr (kg/hr), of the safety relief valve or valves shall be calculated from the maximum expected heat absorption rate in Btu/hr (Joules/hr) of the economizer, and will be determined from manufacturer data, divided by 1000. The safety relief valve shall be located as close as possible to the economizer outlet.

Proposed Language:

2.9.4 ECONOMIZERS

An economizer that may not be isolated from a boiler does not require a safety relief valve. Economizers that may be isolated from a boiler or other heat transfer device, allowing the economizer to become a fired pressure vessel, shall have a minimum of one safety relief valve. Discharge capacity, rated in lbs/hr (kg/hr), of the safety relief valve or valves shall be calculated from the maximum expected heat absorption rate in Btu/hr (Joules/hr) of the economizer, and will be determined from manufacturer data, divided by 1000. The safety relief valve shall be installed in a locationed recommended by the manufacturer, when no recommendation exists the location shall be as close as practical possibleto the economizer outlet.

Statement of Need

Victory Energy intends to design isolatable economizers, in accordance with ASME Section I and VIII Div1, and have the PSV located on the uppermost chamber instead of the Outlet connection. ASME requirements for PSVs ensure that the PSV is large enough to vent the energy in the form of steam. The same size PSV venting hot water potentially releases many more times the energy as venting steam. The amount of energy released in a given time is often excessive for vent piping, condensate tanks, and drains to handle. It is preferred to vent the energy as steam, over a longer period of time. Rapid draining of the economizer also allows the economizer to rapidly increase in temperature, causing undue stress. Furthermore, this request should serve to more closely align this part of the code with the ASME codes.

Background Information

An example would be a vertical counterflow economizer where the inlet header is located above the outlet (as in Figure 1) If the designer can specify where the PSV be located then the PSV may be placed such that the release of energy, via steam, happens more slowly through the same size PSV.

Figure 1 illustrates a counter-flow economizer, in a vertical up gas path, having horizontal headers, with the outlet header below the inlet. When this type of economizer is isolated during operation, and the PSV is tripped, steam will begin to collect in the upper "inlet" header. This design allows a more controlled venting of isolatable economizers by venting steam instead of hot water. Figure 1 also illustrates moving the safety relief valve from the outlet to the preferred location.

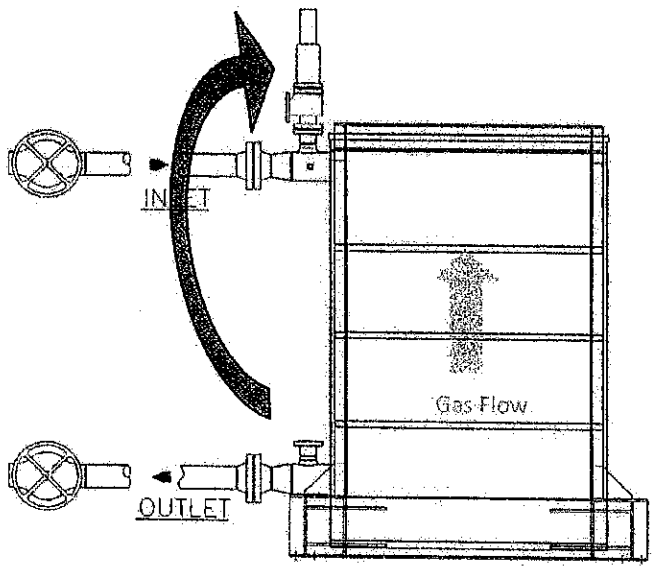

Figure 1

David Olson

QCM

Victory Energy Operations, LLC

918-340-9942