U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

FEB 2[illegible] 2008

Mr. Rattan Bahia
Advance Engineered Products, Ltd.
144 Henderson Drive,
Regina, SK. Canada S4N 5P7

Ref. No. 07-0217

Dear Mr. Bahia:

This responds to your November 15, 2007 letter and follow-up telephone conversations requesting clarification of the general design requirements for structural integrity of specification DOT cargo tank motor vehicles under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Your questions are paraphrased and answered as follows:

Q. May the test in § 178.347-1(d)(9)(iv) pertaining to evaluating the strength of a weld seam in a bulkhead be used to satisfy the requirements for calculating the maximum design stress of a cargo tank specified in § 178.345-3(a)(3)?

A. No. The physical test required to determine the strength of a weld seam in a bulkhead under § 178.347-1(d)(9)(iv) in and of itself is not appropriate for the calculation of the maximum design stress for conditions described in paragraphs (b) and (c) of § 178.345-3.

Q. Is § 178.345-3(b) applicable only to cargo tanks that are designed, constructed, and certified to Section VIII of the ASME Code?

A. No. Section 178.345-3(b) applies to all cargo tanks built to Specification DOT 406, DOT 407, and DOT 412 requirements.

I hope this information is helpful. Please contact us if you require additional assistance.

Sincerely,

John A. Gale
Chief, Standards Development
Office of Hazardous Materials Standards

Derkinderen
§178.345-3
Cargo Tanks
09-0217

Drakeford, Carolyn <PHMSA>

From: INFOCNTR <PHMSA>
Sent: Thursday, November 15, 2007 1:49 PM
To: Drakeford, Carolyn <PHMSA>
Subject: FW: Interpretations-178.345-3 Structural Integrity

From: Rattan Bahia [mailto:rbahia@aepl.ca]
Sent: Thursday, November 15, 2007 12:27 PM
To: INFOCNTR <PHMSA>
Subject: Re: Interpretations-178.345-3 Structural Integrity

Please confirm that you have received the November 2, 2007email requesting an interpretation, as outlined below.

----- Original Message -----
From: Rattan Bahia
To: infocntr@dot.gov
Sent: Friday, November 02, 2007 11:34 AM
Subject: Interpretations-178.345-3 Structural Integrity

To:
Office of Hazardous Materials Standards
PHMSA
Attn: PHH-10

Please provide clarification/interpretation for the following;

178.345-3(a)(3) *Alternative test or analytical methods, or a combination thereof, may be used in place of the procedures described in paragraphs (b) and (c) of this section, if the methods are accurate and verifiable.*

Question
Would the following independent test meet the definition of alternative test: test to failure in tension, two test specimens of the same material to be used in the manufacture of the cargo tank, same thickness and configuration as the cargo tank and welded by the same welding procedures.

178.345-3(b) *ASME Code design and construction*

Question
Is this paragraph only applicable to cargo tanks which are designed, constructed and certified to the ASME Code.

Your attention to this request is appreciated.

Thankyou

Rattan Bahia
Advance Engineered Products Ltd.
144 Henderson Drive
Regina, SK. Canada
S4N 5P7
(306)721-5678

07-0217

Date: November 15, 2007

To:
Office of Hazardous Materials Standards
PHMSA
Attn: PHH-10
US DOT
400 7th Street SW
Washington DC
20590-001

Please provide clarification/interpretation for the following;

A) 178.345-3(a)(3) *Alternative test or analytical methods, or a combination thereof, may be used in place of the procedures described in paragraphs (b) and (c) of this section, if the methods are accurate and verifiable.*

Question
Would the following independent test meet the definition of alternative test: test to failure in tension, two test specimens of the same material to be used in the manufacture of the cargo tank, same thickness and configuration as the cargo tank and welded by the same welding procedures.

B) 178.345-3(b) *ASME Code design and construction*

Question
Is this paragraph only applicable to cargo tanks which are designed, constructed and certified to the ASME Code.

Your attention to this request is appreciated.

Thank you

Rattan Bahia

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Fax (306)721-5010