Staff Symbol: G-MSE-4 Phone: (202) 267-1444 FAX: (202) 267-1069

16714/164.107/GEN 16714/164.109/GEN 16714/164.107/4 16714/164.107/3 6 March 2002

Mr. Dennis C. Miller American Sprayed Fibers, Inc. 1550 East 91st Drive Merryville, IN 46410

Dear Mr. Miller:

This is in regard to the status of the submittal of your "Dendamix Marine" sprayed fiber insulation for approval as a component of Class B-15 draft stops under the IMO FTP Code, Annex 1, Part 3.

This material holds current approvals as meeting the IMO FTP Code as a noncombustible material and as Class A-60 structural insulation.

Southwest Research Institute (SwRI) Report Project No. 01.02754.002b, dated April 2001, indicates that specific draft stops utilizing "Dendamix Marine" sprayed fiber insulation met Class B-15 criteria in accordance with the IMO FTP Code, Annex 1, Part 3.

These draft stops were constructed of 3 foot by 3 foot (maximum) frames of 3x3x1/4 inch steel angles. The frames were covered with 18-gauge ½ inch wire mesh, and a 1/2 inch layer of "Dendamix Marine" sprayed fiber in a density of 7 lb/ft<sup>3</sup> (112 kg/m<sup>3</sup>) was applied to each side.

To address U.S. Coast Guard concerns about the possible adverse effects of ships' vibration on this draft stop construction, Southwest Research Institute also conducted vibration tests (SwRI Report 18.04044.01.136, dated September 28, 2001) of draft stops constructed as described above. The vibration tests were conducted in accordance with "Mechanical Vibrations of Shipboard Equipment, MIL-STD-167-1(Ships), Notice 1, June 19, 1987." The report indicates no cracks, delamination, holes, or chunks of material separating from the mesh surface during the vibration test.

In view of the above, your draft stops as constructed in the above SwRI reports are acceptable for use in Class B-15 applications.

Please note that this acceptance applies to wire mesh construction only. Vinyl mesh is not acceptable.

A copy of this letter is being forwarded to SwRI for record purposes. Questions concerning this subject may be directed to Mr. Klaus Wahle at the above address or telephone number.

MA

R I MARKIE

Chief, Lifesaving & Fire Safety Standards Div. Office of Design & Engineering Standards

By direction of the Commandant

Copy: G-MSC-1

J. Griffith Jr. (SwRI)



#### United States Coast Guard

# Certificate of Approval

Coast Guard Approval Number: 164.109/3/0

Expires: 07 March 2017

NON-COMBUSTIBLE MATERIAL (IMO)

AMERICAN SPRAYED FIBERS, INC. 2854 W. 161st Ave. Lowell IN 46356

Type "Dendamix Marine" sprayed fiber approved as meeting Part 1 of Annex 1 of the IMO FTP Code in a nominal density of 4 to 18 lb/cu. ft. (64 to 288 kg/cu. m).

Identifying Data: Part 1 - Southwest Research Institute (SwRI) Reports Project No. 01-2208-023a, Project No. 01-2208-023b, Project No. 01-2208-23c, Project No. 01-2208-023d, and Project No. 01-2208-23e, all dated October 1999; Follow-up - SwRI Project No. 01.25000.02.069, Revision 4 issued January 2013; and USCG letter dated 26 February 2013.

Factory: Wabash, IN, USA.

Approval valid only for products from above factory location.

Follow-Up Program: SWRI.

Supersedes Certificate No. 164.109/3/0 dated 19 July 2012 with revision to factory location and correction of product name.



The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 2004 and by the "Agreement between the European Free Trade Association countries which are part of the European Economic Area and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed October 2005. Item complies with requirements of Annex A.1, Item No. A.1/3.13 of the directive.

\*\*\* END \*\*\*

THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.



GIVEN UNDER MY HAND THIS 26<sup>th</sup> DAY OF FEBRUARY, 2013, AT WASHINGTON D.C.

K. J. HEINZ

Chief, Lifesaving and Fire Safety Division
BY DIRECTION OF THE COMMANDANT



#### United States Coast Guard

## Certificate of Approval

Coast Guard Approval Number: 164.107/3/0

Expires: 07 March 2017

STRUCTURAL INSULATION (IMO)

AMERICAN SPRAYED FIBERS, INC. 2854 W. 161st Ave. Lowell IN 46356

Type "Dendamix Marine" sprayed fiber approved as meeting Parts 1 and 3 of Annex 1 of the IMO FTP Code in nominal density of 7 lb/cu. ft. (112 kg/cu. m).

Approved as meeting Class A-60 insulation criteria when applied to steel bulkheads (vertical application) in a minimum thickness of 45 mm. Minimum insulation thickness applied over stiffeners is 18 mm. To be prepared and applied in accordance with manufacturer's instructions.

Identifying Data: Part 1 - Southwest Research Institute (SwRI) Project No. 01-2208-023d dated October 1999; Part 3 - SwRI Project No. 01.02754.01a dated January 2000; Follow-up - SwRI Project No. 01.25000.02.069, Revision 4 issued January 2013; and USCG letter dated 26 February 2013.

Factory: Wabash, IN, USA.

Approval valid only for products from above factory location.

Follow-Up Program: SWRI.

Supersedes Certificate No. 164.107/3/0 dated 19 July 2012 with revision to factory location and correction of product name.



The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 2004 and by the "Agreement between the European Free Trade Association countries which are part of the European Economic Area and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed October 2005. Item complies with requirements of Annex A.1, Item No. A.1/3.11 of the directive.

\*\*\* END \*\*\*

THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.



GIVEN UNDER MY HAND THIS 26<sup>th</sup> DAY OF FEBRUARY 2013, AT WASHINGTON D.C.

K. J. HEINZ

Chief, Lifesaving and Fire Safety Division
BY DIRECTION OF THE COMMANDANT

DEPT. OF HOMELAND SECURITY, USCG, CGHQ-10030 (REV. 3-03)



#### United States Coast Guard

## Certificate of Approval

Coast Guard Approval Number: 164.107/4/0

Expires: 07 March 2017

STRUCTURAL INSULATION (IMO)

AMERICAN SPRAYED FIBERS, INC. 2854 W. 161st Ave. Lowell IN 46356

Type "Dendamix Marine" sprayed fiber approved as meeting Parts 1 and 3 of Annex 1 of the IMO FTP Code in nominal density of 7 lb/cu. ft. (112 kg/cu. m).

Approved as meeting Class A-60 insulation criteria when applied to steel decks (horizontal application below the deck) in a minimum thickness of 11/16 inch (17.5 mm). To be prepared and applied in accordance with manufacturer's instructions.

Identifying Data: Part 1 - Southwest Research Institute (SwRI) Project No. 01-2208-23d dated October 1999; Part 3 - SwRI Project No. 01.02754.003b dated October 2001; Follow-up - SwRI Project No. 01.25000.02.069, Revision 4 issued January 2013; and USCG letters dated 8 March 2002 and 26 February 2013.

Factory: Wabash, IN, USA.

Approval valid only for products from above factory location.

Follow-Up Program: SWRI.

Supersedes Certificate No. 164.107/4/0 dated 19 July 2012 with revision to factory location and correction of product name.



The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 2004 and by the "Agreement between the European Free Trade Association countries which are part of the European Economic Area and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed October 2005. Item complies with requirements of Annex A.1, Item No. A.1/3.11 of the directive.

\*\*\* END \*\*\*

THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.



GIVEN UNDER MY HAND THIS 26<sup>th</sup> DAY OF FEBRUARY 2013, AT WASHINGTON D.C.

K, J. HENZ

Chief, Lifesaving and Fire Safety Division
BY DIRECTION OF THE COMMANDANT

DEPT. OF HOMELAND SECURITY, USCG, CGHQ-10030 (REV. 3-03)



#### United States Coast Guard

## Certificate of Approval

Coast Guard Approval Number: 164.107/7/0

Expires: 07 March 2017

STRUCTURAL INSULATION (IMO)

AMERICAN SPRAYED FIBERS, INC. 2854 W. 161st Ave. Lowell IN 46356

Type "Dendamix Marine" sprayed fiber insulation approved as meeting Parts 1 and 3 of Annex 1 of the IMO FTP Code in nominal density of 9.7 lb/cu. ft. (156 kg/cu. m).

Approved as meeting Class A-60 and Class A-30 insulation criteria when applied underneath aluminum decks (horizontal application) in a minimum thickness of 1 inch (25.4 mm) and 5/8 inch (15.3 mm), respectively. Same insulation thickness is applied over stiffeners. To be prepared and applied in accordance with manufacturer's instructions.

Identifying Data: Part 1 - Southwest Research Institute (SwRI) Project No. 01-2208-023d dated October 1999; Part 3 - SwRI Project No. 01.02754.002e dated April 2001 and Project No. 01.02754.002f dated April 2001; Follow-up - SwRI Project No. 01.25000.02.069, Revision 4 issued January 2013; and USCG letters dated 7 March 2002 and 26 February 2013.

Factory: Wabash, IN, USA.

Approval valid only for products from above factory location.

Follow-Up Program: SwRI.

Supersedes Certificate No. 164.107/7/0 dated 19 July 2012 with revision to factory location.



The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 2004 and by the "Agreement between the European Free Trade Association countries which are part of the European Economic Area and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed October 2005. Item complies with requirements of Annex A.1, Item No. A.1/3.11 of the directive.

\*\*\* END \*\*\*

THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.



GIVEN UNDER MY HAND THIS 26<sup>th</sup> DAY OF FEBRUARY 2013, AT WASHINGTON D.C.

K. J. WEINZ

Chief, Lifesaving and Fire Safety Division
BY/DIRECTION OF THE COMMANDANT

DEPT. OF HOMELAND SECURITY, USCG, CGHQ-10030 (REV. 3-03)



## United States Coast Guard

# Certificate of Approval

Coast Guard Approval Number: 164.107/8/0

Expires: 07 March 2017

STRUCTURAL INSULATION (IMO)

AMERICAN SPRAYED FIBERS, INC. 2854 W. 161st Ave. Lowell IN 46356

Type "Dendamix Marine" sprayed fiber insulation approved as meeting Parts 1 and 3 of Annex 1 of the IMO FTP Code in nominal density of 9.7 lb/cu. ft. (156 kg/cu. m).

Approved as meeting Class A-60 insulation criteria when applied to both sides of aluminum bulkhead (vertical application) in a minimum thickness of 2 inches each (50.8 mm). Same insulation thickness is applied over stiffeners. To be prepared and applied in accordance with manufacturer's instructions.

Identifying Data: Part 1 - Southwest Research Institute (SwRI) Project No. 01-2208-23d dated October 1999; Part 3 - SwRI Project No. 01.02754.002d dated March 2001; Follow-up - SwRI Project No. 01.25000.02.069, Revision 4 issued January 2013; and USCG letters dated 7 March 2002 and 26 February 2013.

Factory: Wabash, IN, USA.

Approval valid only for products from above factory location.

Follow-Up Program: SwRI.

Supersedes Certificate No. 164.107/8/0 dated 19 July 2012 with revision to factory location.



The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 2004 and by the "Agreement between the European Free Trade Association countries which are part of the European Economic Area and the United States of America on Mutual Recognition of

Certificates of Conformity for Marine Equipment" signed October 2005. Item complies with requirements of Annex A.1, Item No. A.1/3.11 of the directive.

\*\*\* END \*\*\*

THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.



GIVEN UNDER MY HAND THIS 26<sup>th</sup> DAY OF FEBRUARY 2013, AT WASHINGTON D.C.

K. J. HEINZ

Chief, Lifesaving and Fire Safety Division
BY DIRECTION OF THE COMMANDANT



#### **United States Coast Guard**

# Certificate of Approval

Coast Guard Approval Number: 164.107/9/0

Expires: 07 March 2017

STRUCTURAL INSULATION (IMO)

AMERICAN SPRAYED FIBERS, INC. 2854 W. 161st Ave. Lowell IN 46356

Type "Dendamix Marine" sprayed fiber insulation approved as meeting Parts 1 and 3 of Annex 1 of the IMO FTP Code in nominal density of 9.7 lb/cu. ft. (156 kg/cu. m).

Restricted to applications where fire hazard is on insulated side only.

Approved as meeting Class A-60 and Class A-30 insulation criteria when applied to the fire side of aluminum bulkheads (vertical application) in a minimum thickness of 1-1/4 inch (32.2 mm) and 1 inch (25.4 mm), respectively. Same insulation thickness is applied over stiffeners. To be prepared and applied in accordance with manufacturer's instructions.

Identifying Data: Part 1 - Southwest Research Institute (SwRI) Project No. 01-2208-023d dated October 1999; Part 3 - SwRI Project No. 01.02754.002j dated July 2001, SwRI Project No. 01.02754.003c dated October 2001, and SwRI letter dated November 12, 2001; Follow-up - SwRI Project No. 01.25000.02.069, Revision 4 issued January 2013; and USCG letters dated 7 March 2002 and 26 February 2013.

Factory: Wabash, IN, USA.

Approval valid only for products from above factory location.

Follow-Up Program: SwRI.

Supersedes Certificate No. 164.107/9/0 dated 19 July 2012 with revision to factory location.



The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 2004 and by the "Agreement between the European Free Trade Association countries which are part of the European Economic Area and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed October 2005. Item complies with requirements of Annex A.1, Item No. A.1/3.11 of the directive.

\*\*\* END \*\*\*

THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.



GIVEN UNDER MY HAND THIS 26<sup>th</sup> DAY OF FEBRUARY 2013, AT WASHINGTON D.C.

C.J. HEINZ

Chief Lifesaving and Fire Safety Division
BY DIRECTION OF THE COMMANDANT