

List of Lloyd's Register Approved Material / Components for GTT N096 Membrane Containment System

Last update on: 16 July 2019

*The certificates written in light blue are expired
or not valid anymore due to superseded specifications*

Reference:

*GTT Mk III, Mk V & N096 MEMBRANE CONTAINMENT SYSTEM
MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]*

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
GLASS WOOL	CHINA: Zhejiang Pusen New Material Technology Co., Ltd, Qianyuan Town, Deqing County, Zhejiang Province, China	D22, D35	M3016 Rev. 02	APPROVED	Certificate No. COMP254-19 Comm. Date: 20 May 2019 Expiry Date: 31 March 2024 (Applicable for NO96 system only)
	KOREA: Woo Sung Insulation Industry 132, Myeongnyesandan 5-ro, Jangan-eup, Gijang-gun, Busan Korea	Fibre Glass Wool – 22 (WSDY-GW01), 35 (WSDY-GW02) & 40 (WSDY-GW03) Kg/M ³ .	M3016 Rev. 02	APPROVED	Certificate No. COMP204-17 Issue Date: 19 April 2017 Expiry Date: 18 April 2022 The sourcing is from KCC, Byucksan & Saint Gobain Isover. For the 35 (WSDY-GW02) grade, the sourcing is limited to KCC & Byucksan.
	KOREA: You Shin Dan Yeol Co., Ltd. 180, Goyeon-Ro, Ungchon-Myeon, Ulsan.	YSDY-GW21-20 Fiber Glass Wool (22 kg/m3) YSDY-GW21-34 Fiber Glass Wool (35 kg/m3) YSDY-GW21-40 Fiber Glass Wool (40 kg/m3)	M3016 Rev. 02	APPROVED	Certificate No. COMP165-15a Issue Date: 31 May 2018 Expiry Date: 23 Nov 2020
	CHINA: Kunshan Kyungdong Ceratech Co., Ltd. No.50, Xiabin Road, Lujia Town, Kunshan City, Suzhou City, Jiangsu, P.R.China	Glass Wool (22 kg/m ³ & 35 kg/m ³)	M3016 Rev. A	Approved in the past. GTT spec superseded	Certificate No. COMP232-18 Issue Date: 01 June 2018 Expiry Date: 30 Nov 2018 The sourcing is from KCC only.
	KOREA: S & C Engine Co. Ltd, #606-8, Unjeon-ri, Bubuk-myeon, Miryang-si, Gyeongsangnam-do, Korea, 627-852.	Glass Wool (22 kg/m ³ , 35 kg/m ³ , 40 kg/m ³)	M3016 Rev. A	Approved in the past. GTT spec superseded	Certificate No. COMP149-14 Issue Date: 22 September 2014 Expiry Date: 21 September 2019

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	FRANCE: Saint-Gobain ISOVER Division Marchés Techniques Les Renardières 7, Place de Saverne 94215 Courbevoie Cedex France	ISOVER PI Marine 682 37kg/m ³	226F	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP018-05 Issue Date: 24 November 2005 Expiry Date: 23 November 2010
	KOREA: Woo Sung Insulation Industry #1, Yongdang-ri, Ungsang-ueb Yangsan, Kyungnam KOREA	Fibreglass Wool (38.9 kg/m ³)	226F	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP024-06 Issue Date: 24 July 2006 Expiry Date: 23 July 2011
GLASS CLOTH	KOREA: YOU SHIN DAN YEOL CO Ltd 115-1, Sajik3-Dong Dong Rae-Gu, Busan KOREA	Fiberglass Cloth (NO96) 0.18T, Quality - B	M3017 Rev. B	APPROVED	Certificate No. COMP206-17 Issue Date: 14 August 2017 Expiry Date: 13 August 2022
	FRANCE: Hexcel Reinforcements Z.I. Les Nappes, B.P. 27 38630 Les Avenières FRANCE	Fibreglass Cloth	225C	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP028-06 Issue Date: 09 August 2006 Expiry Date: 08 August 2011
	KOREA: Woo Sung Insulation Industry #1, Yongdang-ri, Ungsang-ueb Yangsan, Kyungnam KOREA	Fibre Glass Cloth	225C	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP025-06 Issue Date: 24 July 2006 Expiry Date: 23 July 2011
	JAPAN: Unitika Ltd. (ex Unitika Glass Fiber Co., Ltd.) 18-17, 1-Chome, Minamisenba, Chuo-Ku, Osaka, 542-0081, Japan Tel: +81 (0) 6 6263 7041 Fax: +81 (0) 66263 4511	H160M	225C	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP008-05 Issue Date: 30 March 2005 Expiry Date: 29 March 2010

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
STAPLES	KOREA: MOOJEUNG INDUSTRY 14-39 Oedogam-gil, Wollong-myeon, Paju-si, Gyeonggi-do KOREA	Stainless Steel Staples - Types A, A1, B, C, E & F Galvanised Steel Staples - Types A, A1, B, C, E & F	M3019 Rev. 03	APPROVED	Certificate No. COMP200-17 Issue Date: 27 June 2017 Expiry Date: 26 June 2022
	CHINA: Young Woo (Cangzhou) Fastener Co., Ltd. Cangzhou City, Hebei Province, China	Galvanised Steel Staples Types A, A1, B, C, E & F	M3019 Rev. 03	APPROVED	Certificate No. COMP197-17 Issue Date: 05 April 2017 Expiry Date: 04 April 2022
	CHINA: Young Woo (Cangzhou) Fastener Co., Ltd. Cangzhou City, Hebei Province, China	Stainless Steel Staples Types A, A1, B, C, E & F	M3019 Rev. 03	APPROVED	Certificate No. COMP196-17 Issue Date: 05 April 2017 Expiry Date: 04 April 2022
	KOREA: Young Woo Fastener Co., Ltd. Yangsan-City Gyongsangnam-Do Korea	Stainless Steel Staples Types A, A1, B, C, E & F.	M3019 Rev. 03	Approved in the past. Certificate expired	Certificate No. COMP139-14a Issue Date: 16 Feb 2015 Expiry Date: 8 May 2019
	KOREA: Young Woo Fastener Co., Ltd. Yangsan-City Gyongsangnam-Do Korea	Galvanised Steel Staples Types A, A1, B, C, E & F.	M3019 Rev. 03	Approved in the past. Certificate expired	Certificate No. COMP134-14b Issue Date: 16 Feb 2015 Expiry Date: 16 April 2019
	KOREA: KOREA SENCO CO. LTD. 11 th Floor, Kyunghnam Saemaul Bldg. 206-5, Myungseo-dong, Changwon, Kyunghnam, KOREA	AISI 304 STAINLESS STEEL STAPLES TYPES A, B, C, D & E	464F	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP020-06 Issue Date: 10 July 2006 Expiry Date: 16 March 2009
	KOREA: Young Woo Fastener Co., Ltd. Yangsan-City Gyongsangnam-Do	TYPES A, B, C & E	464F	Approved in the past. Certificate expired and	Certificate No. COMP003-03 Issue Date: 11 December 2003 Expiry Date: 12 December 2008

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	Korea SPAIN: SIMES SENCO S.A. Elcano - Egues Apartado 65 31080 Pamplona Spain Tel: +34 948 330 412 Fax: +34 948 330 651	TYPES A, B, C, D, E & F	464F	GTT spec superseded Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP016-05 Issue Date: 24 October 2005 Expiry Date: 23 October 2010
GLASS WOOL (for Insulating Box)	KOREA: You Shin Dan Yeol Co., Ltd. 55, Sojugongdan 4-gil, Yangsan-si, Gyeongsangnam-do, Korea	Glass Wool (35 kg/m ³) for Box Filling	M3026, Rev. 1	APPROVED	Certificate No. COMP239-18 Comm. Date: 08 October 2018 Expiry Date: 07 October 2023
	CHINA: Kunshan Kyungdong Ceratech Co., Ltd, No.50, Xiabin Road, Lujia Town, Kunshan City, Suzhou City, Jiangsu, P.R.China.	Glass Wool (35 kg/m ³) for Box Filling	M3026, Rev. 1	APPROVED	Certificate No. COMP230-18 Issue Date: 01 June 2018 Expiry Date: 31 May 2023 The sourcing of raw material is from KCC only.
	CHINA: Zhejiang Pusen New Material Technology Co., Ltd. 25, Beijiao Road, Qianyuan Town, Deqing County, Zhejiang Province, 313216, China	Glass Wool (PSGW 35 kg/m ³) for Box Filling	M3026, Rev. 1	APPROVED	Certificate No. COMP227-18a Issue Date: 21 May 2018 Expiry Date: 20 May 2023
	KOREA: Woo Sung Insulation Industry, 132, Myeongnyesandan 5-ro, Jangan-eup, Gijang-gun, Busan Korea	Glass Wool (35 kg/m ³) for Box Filling	M3026, Rev. 1	APPROVED	Certificate No. COMP203-17 Issue Date: 19 April 2017 Expiry Date: 18 April 2022 The sourcing of raw material is from KCC, Byucksan & Saint Gobain Isover.

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	KOREA: S & C Engine Co. Ltd, #606-8, Unjeon-ri, Bubuk-myeon, Miryang-si, Gyeongsangnam-do, Korea, 627-852.	Glass Wool (35 kg/m ³) for Box Filling	M3026, Rev. 1	APPROVED	Certificate No. COMP150-14 Issue Date: 22 September 2014 Expiry Date: 21 September 2019
PERLITE	CHINA: Kunshan Kyungdong Ceratech Co., Ltd. Xiabin Road 50# Lujia Town Kunshan Jiangsu, P.R. China	CR-615C Water Repellent Expanded Perlite	M3501 Rev. A	APPROVED	Certificate No. COMP235-18 Issue Date: 19 July 2018 Expiry Date: 18 July 2023
	KOREA: KYUNG DONG ONE CO., LTD GEOJE FACTORY 3370, Geojedae-ro, Geoje-si, Gyeongsangnam-do, KOREA	Water Repellent Perlite CR-615	M3501 Rev. A	APPROVED	Certificate No. COMP201-17 Issue Date: 03 July 2017 Expiry Date: 02 July 2022
	CHINA: Tianjin Incom Science & Technology Company Limited, Tianjin, China MANUFACTURING PLACE: Langfang Incom Perlite Co Ltd, Xinwu Industrial Park, Langfang, Hebei Province, P.R.China	CP-502B Water Repellent Expanded Perlite	M3501 Rev. A	Approved in the past. Certificate expired	Certificate No. COMP142-14 Issue Date: 04 June 2014 Expiry Date: 03 June 2019
	KOREA: KD ONE Co., Ltd 19-5, Baeksukpo-Ri Youngin-Myun, Asan Chungcheongnam-Do,336-821 MANUFACTURING PLACE: KD ONE Co., Ltd STX Metal Site Factory 533, Dalseodaero Dalsoe-gu, Daegu KOREA	Water Repellent Perlite CR-615	M3501 Rev. A	Approved in the past. Certificate expired	Certificate No. COMP079-12 Issue Date: 26 September 2012 Expiry Date: 25 September 2017

Last update on: 16 July 2019

*The certificates written in light blue are expired
or not valid anymore due to superseded specifications*

Reference:

*GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM
MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]*

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	KOREA: KyungDong Ceratech Co., Ltd. 19-5, Baeksukpo-Ri, Youngin-Myun, Asan City Chungchungnam-Do, 336-821 KOREA MANUFACTURING PLACE: KyungDong Ceratech Co., Ltd. DSME Site Factory 1, Aju-Dong, Geoje-City Kyongnam KOREA	LNG Perlite CR-615	112K	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP029-06 Issue Date: 14 September 2006 Expiry Date: 13 September 2011
	KOREA: KyungDong Ceratech Co., Ltd. 19-5, Baeksukpo-Ri, Youngin-Myun, Asan City Chungchungnam-Do, 336-821 KOREA MANUFACTURING PLACE: KyungDong Ceratech Co., Ltd. Anjung Factory Anjung National Corp. 7-5B, Anjungri Kwang-do-Myeon, Tongyeong City Kyeong-Nam	LNG Perlite CR-615	112K	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP030-06 Issue Date: 14 September 2006 Expiry Date: 13 September 2011
	FRANCE: CECA Rue Raoul Vergez 64150 Abidos France Tel: +33 559 14 61 61 Fax: +33 559 14 61 69	CECAPERL	112K	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP017-05 Issue Date: 9 November 2005 Expiry Date: 8 November 2010

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
PLYWOOD	FINLAND: UPM-KYMMENE WOOD OY, Niemenkatu 16, P.O. Box 203, FIN-15141 Lahti, Finland Production Facility: Joensuu Mill, Finland	Wisa-LNG Birch Plywood thickness: 6.5, 9, 12, 15, 21, 24, 30 and 35mm	M3502 Rev. A	APPROVED	Certificate No. COMP253-19 Comm. Date: 01 May 2019 Expiry Date: 30 April 2024 Remark: Jyvaskyla mill is only used for cutting, sorting and packaging.
	FINLAND: UPM-KYMMENE WOOD OY, Niemenkatu 16, PL 203-P.O. Box 203, FIN-15141 Lahti, Finland Production Facility: Chudovo Mill, Russia	Wisa-LNG Birch Plywood thickness: 6.5, 9, 12, 15, 21, 24, 30 and 35mm	M3502 Rev. A	APPROVED	Certificate No. COMP251-19 Comm. Date: 16 Sep 2018 Expiry Date: 15 Sep 2023 Remark: Jyvaskyla mill is only used for cutting, sorting and packaging.
	FINLAND: UPM-KYMMENE WOOD OY, Niemenkatu 16, PL 203-P.O. Box 203, FIN-15141 Lahti, Finland Production Facility: Jyvaskyla mill Russia	Wisa-LNG Birch Plywood thickness: 9, 12, 15, 21 & 24mm	M3502 Rev. A	APPROVED	Certificate No. COMP244-18 Comm. Date: 08 Oct 2018 Expiry Date: 07 Oct 2023
	FINLAND: UPM-KYMMENE WOOD OY, Niemenkatu 16, PL 203-P.O. Box 203, FIN-15141 Lahti, Finland Production Facility: Otepää Mill, Estonia	Wisa-LNG Birch Plywood thickness: 9, 12, 15, 30 and 35mm	M3502 Rev. A	APPROVED	Certificate No. COMP223-18 Comm. Date: 13 March 2018 Expiry Date: 12 March 2023 Remark: Jyvaskyla mill is only used for cutting, sorting and packaging. The Curtain gluing is used in the production process.
	FINLAND: Metsa Group, Metsa Wood Punkaharju Plywood Mill,	Finnish Birch Plywood (thickness 6.5, 9, 12, 15, 21, 24, 30 & 35mm)	M3502 Rev. A	APPROVED	Certificate No. COMP202-17 Comm. Date: 18 May 2017

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	PO Box 11, FI-58501 Punkaharju, Finland				Expiry Date: 17 May 2022
	RUSSIA: NAO SVEZA Ust Izhora. Saint Petersburg, pos Pontonniy, Russia.	SVEZA Gas NO96 Plywood Thickness: 6.5, 9, 12, 15, 21, 24, 30 & 35mm	M3502 Rev. A	APPROVED	Certificate No. COMP193-17a Comm. Date: 05 January 2017 Expiry Date: 04 January 2022
	FINLAND: UPM-KYMMENE WOOD OY, Niemenkatu 16, PL203 - P.O. Box 203, FIN-15141 Lahti, Finland Production Facility: Otepää Mill, Estonia	WisalNG Birch Plywood thickness: 6.5, 9, 12, 15, 21, 24, 30 and 35mm	M3502 Rev. A	APPROVED	Certificate No. COMP186-16 Comm. Date: 22 March 2016 Expiry Date: 21 March 2021 Remark: Jyvaskyla mill is only used for cutting, sorting and packaging.
	FINLAND: UPM-KYMMENE WOOD OY, Niemenkatu 16, PL 203-P.O. Box 203, FIN-15141 Lahti, Finland Production Facility: Otepää Mill, Estonia	WisalNG Birch Plywood thickness: 21 & 24mm	M3502 Rev. A	Certificate's validity expired	Certificate No. COMP224-18 Comm. Date: 13 March 2018 Expiry Date: 18 Sep 2018 Remark: Jyvaskyla mill is only used for cutting, sorting and packaging. The Curtain gluing is used in the production process.
	FINLAND: UPM-KYMMENE WOOD OY, Niemenkatu 16, P.O. Box 203, FIN-15141 Lahti, Finland Fax: +358 204156427) Production Facility: Kaukas Mill, Lappeenranta, Finland	WisalNG Birch Plywood (face veneers quality of BB, thickness: 6.5, 9, 12, 15, 21, 24, 30 and 35mm	149 Rev. R 1002 Rev. D	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP019-05 Issue Date: 15 November 2005 Expiry Date: 14 November 2010

Last update on: 16 July 2019

*The certificates written in light blue are expired
or not valid anymore due to superseded specifications*

Reference:

*GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM
MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]*

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
INSULATION BOXES	Daewoo Shipbuilding & Marine Engineering Co., Ltd MANUFACTURING PLACE: DSME Site Factory, 3370, Geoje-daero, Gyeje-si, Gyeongsangnam-do, KOREA	Non-Standard Insulation Boxes, filled with Perlite / Glass Wool	M3503 Rev 04	Certificate's validity expired	Certificate No COMP144-14a Issue Date: 30 June 2017 Expiry Date: 02 July 2019
	Daewoo Shipbuilding & Marine Engineering Co., Ltd MANUFACTURING PLACE: Anjung Factory, 27, Chunwon 1-ro, Gwangdo-myeon, Tongyeong-si, Gyeongsangnam-do, KOREA	Standard Insulation Boxes, filled with Perlite / Glass Wool	M3503 Rev 04	Certificate's validity expired	Certificate No COMP143-14a Comm Date: 30 June 2017 Expiry Date: 02 July 2019
	China Ship Power Station Co Ltd. MANUFACTURING PLACE: Insulation Workshop of Hudong Zhonghua Shipbuilding, No-130, Gongqing Road, Shanghai, China.	Standard and Non-Standard Insulation Boxes, filled with Perlite	M3503 Rev C	GTT spec superseded	Certificate No COMP147-14a Issue Date: 03 September 2014 Expiry Date: 24 July 2019
	STX Heavy Industries Co., Ltd. 533 Dalseodaero Dalseo-gu Daegu, Korea 704-946	Standard and Non-Standard Insulation boxes filled with Glass Wool	M 3503 Rev C	GTT spec superseded	Certificate No COMP113-13 Issue Date: 08 October 2013 Expiry Date: 15 August 2018 Remark: <i>This certificate supersedes the provisional certificate (PROVCOMP105-13) issued on Aug 16th 2013.</i>
	STX Metal Co., Ltd. 357-75, Hosan-dong, Dalseo-gu Daegu, Korea 704-946	Standard and Non-Standard Insulation Boxes	M3503 Rev B	Approved in the past. GTT spec superseded	Certificate No COMP083-12 Issue Date: 10 October 2012 Expiry Date: 09 October 2017

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	JAPAN: MEISEI INDUSTRIAL CO. LTD., 1-8-5 Kyomachibori, Nishi-ku, 550-0003 Osaka, Japan Tel: +81 6 6447 0278 Fax: +81 6 6449 1621	Insulation boxes (Standard and Non-Standard Type)	150M	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP006-05 Issue Date: 11 July 2005 Expiry Date: 10 July 2010
	JAPAN: NAMIREI-SHOWA Co., Ltd. 4-14-8, Hamadera Ishizuchonishi Sakai, Osaka, 592-8333 JAPAN MANUFACTURING PLACE: Kariya Mokuzai Kogyo Co., Ltd. Gifu Cabinet Factory Gifu JAPAN	Standard and non-standard type insulation boxes	150M	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP007-06 Issue Date: 11 May 2006 Expiry Date: 10 July 2011
	SPAIN: IKASALDE BOX S.A. Pol. Ind. Zubieta, 3 U.I. 11 48340 Amorebieta Spain	Standard and special insulation Iksalalde boxes	150M	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP020-05 Issue Date: 25 November 2005 Expiry Date: 24 November 2010
	KOREA: DSME Insulation Box Factory Co., Ltd. 1, Aju-Dong, Geoje-City Kyongnam KOREA MANUFACTURING PLACE: DSME Insulation Box Factory Co., Ltd. DSME Site Factory 1, Aju-Dong, Geoje-City Kyongnam KOREA	Non-Standard Insulation Box (Lines A (former Line C) and B)	150M	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP011-07 Issue Date: 06 December 2007 Expiry Date: 24 August 2011

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	KOREA: DSME Insulation Box Factory Co., Ltd. 1, Aju-Dong, Geoje-City Kyongnam KOREA MANUFACTURING PLACE: DSME Insulation Box Factory Co., Ltd. Anjung Factory Anjung National Corp. 7-5B, Anjungri Kwang-do-Myeon, Tongyeong City Kyeong-Nam KOREA	Standard and Non-Standard Insulation Box	150M	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP032-06 Issue Date: 25 August 2006 Expiry Date: 24 August 2011
INSULATION MATERIAL - RIGID	ITALY: DIAB S.p.A., Via Alemagna, 29 32013 Fae di Longarone, Belluno, Italy	DIVINYCELL CY 33, CY55 & CY100	M3504 Rev. A	APPROVED	Certificate No. COMP252-19 Comm. Date: 21 April 2019 Expiry Date: 20 Apr 2024 (CY100 is to be confined to the man-hole plug in the liquid dome region)
	CHINA: Zhejiang Province Deqing County Pusen Fireproof Material, Qianyuan Town, Deqing County, Zhejiang Province, China	P60	M3504 Rev. A	Approved in the past. Certificate expired	Certificate No. COMP137-14 Issue Date: 25 April 2014 Expiry Date: 24 April 2019
	CHINA: Zhejiang Province Deqing County Pusen Fireproof Material, Qianyuan Town, Deqing County, Zhejiang Province, China	PU, P33	M3504 Rev. A	Approved in the past. Certificate expired	Certificate No. COMP135-14 Issue Date: 22 April 2014 Expiry Date: 21 April 2019

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	JAPAN: Japan Foam & Composites Incorporated No. 21 Matsuya Bldg. 8F 10-1, Edobori 1-chome, Nishi-ku Osaka, 550-0002 Japan (Manufacturing place: China Techno Foam Co., Ltd. No. 38 Kaitou Road Qingdao Economic & Technical Development Zone Shangdong, 266510	Insulating: Navicel Q33	313E	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP005-06 Issue Date: 12 April 2006 Expiry Date: 11 April 2006
	JAPAN: Japan Foam & Composites Incorporated No. 21 Matsuya Bldg. 8F 10-1, Edobori 1-chome, Nishi-ku Osaka, 550-0002, Japan (Manufacturing place: China Techno Foam Co., Ltd. Qingdao Development Zone Shangdong, 266510	Insulating & Supporting: Navicel Q60, Navicel Q100	313E	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP006-06 Issue Date: 12 April 2006 Expiry Date: 11 April 2006
	JAPAN: Foamtech Co., Ltd. 2-10-30, Minamisenba Chuo-ku Osaka, 542-0081 JAPAN	Only non-supporting type: Kanep pearl CF equivalent to 30 times expansion	313E	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP019-06 Issue Date: 06 July 2006 Expiry Date: 05 July 2011
	ITALY: Montaggi & Impianti S.r.l. Via Riccardo Sineo, 13 15045 SALE (AL) ITALY	Rigid Insulating Type: HEREX C70.33 MI	313E	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP026-06 Issue Date: 03 August 2006 Expiry Date: 02 August 2011
	Manufacturing Place: Aluisse Italia S.p.A. (AIREX-AG) Zona Industriale Localita Villanova 32013 LONGARONE (BL) ITALY	Rigid Insulating & Supporting Type: HEREX C70.55 MI	313E		Certificate No. COMP027-06 Issue Date: 03 August 2006 Expiry Date: 02 August 2011

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
INSULATING MATERIAL - FLEXIBLE	KOREA: Woo Sung Insulation Industry 132, Myeongnyesandan 5-ro, Jangan-eup, Gijang-gun, Busan Korea	Flexible Insulating Material (Type F)	M3504 Rev. A	APPROVED	Certificate No. COMP207-17 Issue Date: 12 Oct 2017 Expiry Date: 11 Oct 2022 The sourcing of raw material is from SERIM TTC.
	KOREA: You Shin Dan Yeol Co., Ltd. 180, Goyeon-Ro, Ulsan.	Flexible Insulating Material	M3504 Rev. A	APPROVED	Certificate No. COMP190-16 Issue Date: 22 March 2016 Expiry Date: 21 March 2021
	CHINA: Zhejiang Province Deqing County Pusen Fireproof Material, Qianyuan Town, Deqing County, Zhejiang Province, China	P20 (Type-F)	M3504 Rev. A	Approved in the past. Certificate expired	Certificate No. COMP136-14 Issue Date: 22 April 2014 Expiry Date: 21 April 2019
	KOREA: Woo Sung Insulation Industry #1, Yongdang-ri, Ungsang-ueb Yangsan, Kyungnam KOREA	Flexible Insulating Material ("F" Type)	315E	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP023-06 Issue Date: 24 July 2006 Expiry Date: 23 July 2011
NO96-L-03: REINFORCED POLYURETHANE FOAM (R-PUF)	KOREA: Hankuk Carbon Co., Ltd. 719-13, Sangnam-ro, Sangnam-Myeon Miryang-Si Kyungnam Korea	HRF-1300 HFC-245fa/HFO-1233zd blown 9CSM (290mm)	M3505, Rev 1	APPROVED	Certificate No. COMP212-18 Issue Date: 02 Jan 2018 Expiry Date: 01 Jan 2023

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	CHINA: Jiangsu Yoke Technology Co., Ltd North Jingxi Road, Yixing Economic Development Zone, Yixing, Wuxi, Jiangsu, China	Y-HL-C-130 (HFC-245fa blown & 7 CSM. Density 130 kg/m ³) 210mm	M3505, Rev 1	APPROVED	Certificate No. COMP208-17 Issue Date: 20 Oct 2017 Expiry Date: 19 Oct 2022
	KOREA: Hankuk Carbon Co., Ltd. 2 nd Factory, 719-13, Sangnam-ro, Sangnam-Myeon Miryang-Si Kyungnam Korea	HRF-130_O HFC-245fa/HFO-1233zd blown 6CSM (190mm)	M3505, Rev 1	APPROVED	Certificate No. COMP168-15 Issue Date: 14 December 2015 Expiry Date: 13 December 2020
	KOREA: Hankuk Carbon Co., Ltd. 2 nd Factory, 719-13, Sangnam-ro, Sangnam-Myeon Miryang-Si Kyungnam Korea	HRF-130H HFC-245fa/365 mfc blown 7CSM (190mm)	M3505, Rev 1	APPROVED	Certificate No. COMP164-15 Issue Date: 07 September 2015 Expiry Date: 06 September 2020
	KOREA: DONGSUNG Finetec Co Ltd, 120, Hyeopdongdanji-gil, Miyang-Myeon, Ansung-shi, Gyeonggi-Do 456-843 Korea http://www.finetec.co.kr	Finefoam ECOF – 290 B/BB 9 CSM, 130Kg/M ³ HFC 245fa Blown , 290mm	M3505, Rev 1	APPROVED	Certificate No. COMP152-15 Issue Date: 07 January 2015 Expiry Date: 06 January 2020
	KOREA: DONGSUNG Finetec Co Ltd, Line A, 59, Hyeopdongdanji-gil, Miyang-Myeon, Ansung-shi, Gyeonggi-Do 456-843 Korea http://www.finetec.co.kr	Finefoam ECO-190A 7 CSM HFC 245 Blown , 190mm	M3505, Rev 1	Approved in the past. Certificate expired	Certificate No. COMP127-14 Issue Date: 8 April 2014 Expiry Date: 7 April 2019

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	KOREA: DONGSUNG Finetec Co Ltd, Line A, 59, Hyeopdongdanji-gil, Miyang-Myeon, Ansung-shi, Gyeonggi-Do 456-843 Korea http://www.finetec.co.kr	Finefoam-200F 7 CSM HFC 245 Blown , 190mm	M3505, Rev 1	Approved in the past. Certificate expired	Certificate No. COMP126-14 Issue Date: 8 April 2014 Expiry Date: 7 April 2019
SELF-LOCKED NUTS	FRANCE: SNEP S.A, Z.I. RTE DE BOEN 42600 Montbrison France	ESNSPEM8X125A2 and ESNSPEM10X150A2 self-locked nuts	M3507 Rev.02	APPROVED	Certificate No. COMP245-18 Comm. Date: 20 Sep 2018 Expiry Date: 19 Sep 2023
	FRANCE: BECK-CRESPEL, B.P. 69, 59427 Armeentieres Cedex, France	M8 & M10	378F	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP001-04 Issue Date: 2 March 2004 Expiry Date: 1 March 2009
LOAD BEARING MASTIC	KOREA: Unitech Co Ltd. Unitech Co Ltd, Danwon-gu, Ansan City, Gueonggi-do, Korea.	ULBM 527/627 (Includes application for coupler head chock also)	M3508 Rev. B	APPROVED	Certificate No. COMP187-16 Issue Date: 23 May 2016 Expiry Date: 22 May 2021
	CHINA: Sika Automotive Shanghai Co., Ltd No. 53, Taigu Road, Waigao Qiao Free Trade Zone, Shanghai, China	Fastik 14-(C)	M3508 Rev. B	APPROVED	Certificate No. COMP131-14a Comm.Date: 09 April 2019 Expiry Date: 31 Oct 2019
	UK: Huntsman Advanced Materials (ex Vantico Ltd, ex Plastics Division of Ciba-Geigy AG) Ickleton Road, Duxford,	Resin/Hardener XD 4460-2 / XD 4461-2	M3508 Rev. B	Approved in the past. Certificate expired	Certificate No. COMP141-14 Issue Date: 30 May 2014 Expiry Date: 29 May 2019

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	Cambridge, CB22 4XQ, United Kingdom				
	CHINA: Huntsman Advanced Materials (Guangdong) Co Ltd, Flying geese Mountain Industrial Park, Shilou Town, Panyu, Guangzhou, Guangdong, China	ARALDITE AV 4460-2 CI & HARDENER HW 4461-2 CI	M3508 Rev. B	Approved in the past. Certificate expired	Certificate No. COMP122-14 Issue Date: 31 Mar 2014 Expiry Date: 30 Mar 2019
	JAPAN: Chugoku Marine Paint, Ltd. 1-7 Meijishinkai Otake Hiroshima 739-0652 Japan (Manufacturing place: Sanyu-Gikou Co., Ltd. 1902-8 Shimodakiriyama Konan-shi Shiga 520-3201 Japan)	CMP LNG MASTIC TRV2001	402G	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP007-08 Issue Date: 01 May 2008 Expiry Date: 30 April 2013
LOAD BEARING EPOXY ADHESIVE PRODUCT FOR COUPLER HEAD CHOCKING	UK: Huntsman Advanced Materials (ex Vantico Ltd, ex Plastics Division of Ciba-Geigy AG) Ickleton Road, Duxford, Cambridge, CB22 4XQ, United Kingdom	ARALDITE 2015	EXT DOC No 979 M3508 Rev. B (specs for coupler head chock only)	Approved in the past. Certificate expired	Certificate No. COMP140-14 Issue Date: 30 May 2014 Expiry Date: 29 May 2019
GLUE	FRANCE: EMFI S.A.S 3, rue Ettore Bugatti B.P. 40030 67501 Haguenau Cedex France Tel +33 388 906 000 Fax +33 388 734 838	ISOLEMFI 5727/2 MONO	M3509 Rev. A	APPROVED	Certificate No. COMP209-17 Comm. Date: 27 November 2017 Expiry Date: 26 November 2022

Last update on: 16 July 2019

The certificates written in light blue are expired or not valid anymore due to superseded specifications

Reference:

GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	JAPAN: NICHIAS Corporation 3rd floor, SKF BLDG 1-9-1 Shibadaimon Minato-ku Tokyo 105-0012 Japan (Manufacturing place: Urethane Giken Industry Co., Ltd. 1-23 Amagasuka-shinmachi Yokkaichi-City Mie-Pref. 510-8002 Japan)	T/#9845-IB Elastbond IB (Lots of 250 kg and 500 kg)	463D	Approved in the past. Certificate expired and GTT spec superseded	Certificate No. COMP009-07 Issue Date: 03 December 2007 Expiry Date: 15 February 2012
SPRING WASHERS	CHINA: Yangzhou Sunzo Spring Ind. Co. Ltd. 8 Ind. Rd, Caomiao Industry Zone, Sihong, Suqian 223800, China.	Spring Washers (Type A & Type B – For application in NO96 type CCS)	M3510 Rev 03	APPROVED	Certificate No. COMP231-18a Issue Date: 29 June 2018 Expiry Date: 28 June 2023
	GERMANY: MUBEA Tellerfedern Im Kirdoff 34 57567 Daaden Germany Tel: +49 2743 806 225 (Robert Jung, Quality Dept, email robert.jung@mubea.com) Fax: +49 2743 806 125	Spring Washers 40.0x16.3x2.1 Lo=3.29 Type A 50.0x25.4x2.53 Lo=3.90 Type B	M3510 Rev B	APPROVED	Certificate No. COMP159-15 Issue Date: 12 March 2015 Expiry Date: 11 March 2020
NO96-L-03: FLAT WALL PANELS	KOREA: Hankuk Carbon Co., Ltd. 719-13, Sangnam-ro, Sangnam- Myun, Miryang-Si Gyeongnam, Korea 627-912	Flat Wall Panels (NO96 L-03)	M3511 Rev 02	APPROVED	Certificate No. COMP169-16 Issue Date: 05 January 2016 Expiry Date: 04 January 2021
NO96-L03+: FLAT WALL PANELS	CHINA: Jiangsu Yoke Technology Co., Ltd. North Jingxi Road, Yixing Economic Development Zone, Yixing, Wuxi, Jiangsu, China	Flat Wall Panels (NO96-L03+)	M3512 Rev 01	APPROVED	Certificate No. COMP216-18a Comm. Date: 02 Feb 2018 Expiry Date: 01 Feb 2023

Last update on: 16 July 2019

*The certificates written in light blue are expired
or not valid anymore due to superseded specifications*

Reference:

*GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM
MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]*

List of Lloyd's Register Approved Material / Components for GTT NO96 Membrane Containment System

NO96 COMPONENT	MANUFACTURER	PRODUCT	GTT DOCUMENT	STATUS	CERTIFICATE DETAILS & REMARKS
	KOREA: Hankuk Carbon Co., Ltd. 719-13, Sangnam-ro, Sangnam-Myun Miryang-Si Kyung Nam Korea	Flat Wall Panels (NO96-L03+)	M3512 Rev 01	APPROVED	Certificate No. COMP210-17 Comm. Date: 27 Oct 2017 Expiry Date: 26 Oct 2022
PLYWOOD CLEAT	FINLAND: Joensuu Mill, UPM-KYMMENE Wood Oy Niemenkatu 16 PL 203 - PO Box 203 FIN-15141 Lahti FINLAND	Plywood Cleat – 35, 37 & 42mm	M3513 Rev 01	APPROVED	Certificate No. COMP217-18 Issue Date: 07 Feb 2018 Expiry Date: 06 Feb 2023
	RUSSIA: NAO "SVEZA Ust – Izhora", Fanernaya ulitsa 5, Saint-Petersburg, pos. Pontonniy, 196643, Russia	Plywood Cleat – 35, 37 & 42mm	M3513 Rev 01	APPROVED	Certificate No. COMP214-18 Issue Date: 15 Jan 2018 Expiry Date: 14 Jan 2023

Last update on: 16 July 2019

*The certificates written in light blue are expired
or not valid anymore due to superseded specifications*

Reference:

*GTT Mk III, Mk V & NO96 MEMBRANE CONTAINMENT SYSTEM
MATERIAL / COMPONENT APPROVAL PROCEDURES [04/2019]*