Certificate No: LR25347261LNG
Issue Date: 05/11/2025
Expiry Date: 02/08/2030

Certificate of General Approval for LNG Containment System Component

This certificate is issued to the company below to certify that the undernoted LNG system components have been examined for conformity with Lloyd's Register's "Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk", together with the relevant Gaz Transport & Technigaz (GTT) specifications and has been found to be acceptable.

Manufacturer	**Hankuk Carbon Co., Ltd.**
Address	85, Chunhwa-ro, Bubuk-myeon, Miryang-si, Gyeongnam, 50403, South Korea
Product Name	**HRT-2001 (RSB) [coating Lines C and E speed up for current press Lines D and L and new press Line M]**
Product Type	Secondary Barrier - Rigid
Approval Documentation	• Comparative Study RSB HRT-2001 vs RSB «New Press Line» - STRCTR-PST-001384, 25/03/2020 • Hankuk Carbon Compatibility Test Reports After Immersion with LNG and N2NH3 for HRT-2001 (New Press Line L), LR witnessed on 20/05/2020 and 03 & 17/06/2020 • HRTQA Report No. 160 Rev.0, Test Result for LR General Approval (DAD) for HRT-2001(RSB) Produced in New Coating & Molding Machine, 25/06/2020 • Approval Report for HRT-2001 (New Press Line L) - MAT-RPT-002642 R02, 01/07/2020 • Approval Report for RSB HRT-2001 Hankuk – 12RSB Study – DPress (Current Press) & LPress (New Press) According to Specification M3101 Rev. C - MAT-RPT-400395 R01, 04/02/2025 • Approval Report of Rigid Secondary Barrier Referenced HRT-2001 Produced by Press Line(D) and Coating Line (C) High Speed Supplied by Hankuk Carbon - According to Specification M3101 Rev. C – MAT-RPT-400559 R01, 26/08/2025 • Approval of Rigid Secondary Barrier Referenced HRT-2001 Produced by Press Line (L) and Coating Line (E) High Speed Supplied by Hankuk Carbon - According to Specification M3101 Rev. C – MAT-RPT-400560 R01, 27/08/2025 • Approval of Rigid Secondary Barrier Referenced HRT-2001 Produced by Press Line (M) and Coating Line (C) High Speed Supplied by Hankuk Carbon -

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Ship Structure - Lead Specialist to Lloyd's Register EMEA
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Certificate of General Approval for LNG Containment System Component

According to Specification M3101 Rev. C – MAT-RPT-400573 R01, 27/08/2025
• Approval of Rigid Secondary Barrier Referenced HRT-2001 Produced by Press Line (M) with Coating Line (E) High Speed Supplied by Hankuk Carbon - According to Specification M3101 Rev. C – MAT-RPT-400574 R01, 27/08/2025
• HRTQA Report No. 204-1 (Rev.0) – Test Report for LR Approval on RSB Coating Line Speed up, 18/09/2025, LR witnessed
• HRTQA Report No. 206-1 (Rev.0) – Test Report for LR Approval on RSB New Press (M), 18/09/2025, LR witnessed

Reference Documentation

Secondary Barrier
GTT Specification M3101, Rev. C (Feb 2010)

Application

The product listed above may be used with XPU18411 A3n/B (Bostik) and XPU18045 An/B (Bostik) as indicated on approved drawings for vessels classed with Lloyd's Register in GTT Mark III membrane LNG containment system.
If either the GTT reference documentation mentioned above is altered to a later version, or if the product listed above changes in design or composition, this certificate becomes invalid.

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