Certificate No: LR26103016TA
Issue Date: 13/01/2026
Expiry Date: 12/01/2031

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**Jiangsu Nanji Machinery Co .,Ltd**
Address	No. 118 East Wenchang Road, High-tech Industrial Park, Taixing, 225400, China
Type	Ballast Water Treatment Systems And Water Treatment Plants
Description	The Niballast BWMS mainly consists of Filter unit, Membrane separation unit, Nitrogen generation, and Control unit. The Niballast BWMS adopts filter unit and the membrane separation unit to remove coarse particles, microbes and bacteria; meanwhile feed with inert gas which is nitrogen to restrict growth and reproduction of microorganism. The ballast water may be discharged by ballast pump to overboard directly when de-ballasting.
Trade Name	NiBallast BWMS
Application	For Ballast Water Treatmenton-board
Specified Standard	LR Rules and Regulations for the Classification of Ships, July 2025
Ratings	NB50(Ex) MainComponents: Filter unit: NB-50(Ex)-F5, Membrane Separator Unit: NB-50(Ex)-MF, Nitrogen Generator Unit: PSA(NJ)-3/5 NB100(Ex) MainComponents: Filter unit: NB-100(Ex)-F5, Membrane Separator Unit: NB-100(Ex)-MF,

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Lei Zhang

Engineering Piping - Senior Specialist to Lloyd's Register Classification Society (China) Co., Ltd.

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Nitrogen Generator Unit: PSA(NJ)-5/5
NB200(Ex)
MainComponents: Filter unit: NB-200(Ex)-F5, Membrane Separator Unit: NB-200(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-10/10
NB-300(Ex)
MainComponents: Filter unit: NB-300(Ex)-F5, Membrane Separator Unit: NB-300(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-10/15
NB-400(Ex)
MainComponents: Filter unit: NB-400(Ex)-F5, Membrane Separator Unit: NB-400(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-15/17
NB-500(Ex)
MainComponents: Filter unit: NB-500(Ex)-F5, Membrane Separator Unit: NB-500(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-17/20
NB-600(Ex)
MainComponents: Filter unit: NB-600(Ex)-F5, Membrane Separator Unit: NB-600(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-20/25
NB-800(Ex)
MainComponents: Filter unit: NB-800(Ex)-F5, Membrane Separator Unit: NB-800(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-25/35
NB-1000(Ex)
MainComponents: Filter unit: NB-1000(Ex)-F5, Membrane Separator Unit:NB-1000(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-35/40
NB-1200(Ex)
MainComponents: Filter unit: NB-1200(Ex)-F5, Membrane Separator Unit:NB-1200(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-40/50
NB-1500(Ex)
MainComponents: Filter unit: NB-1500(Ex)-F5, Membrane Separator Unit:NB-1500(Ex)-MF,

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Type Approval Certificate

Nitrogen Generator Unit: PSA(NJ)-50/60
NB-1800(Ex)
MainComponents: Filter unit: NB-1800(Ex)-F5, Membrane Separator Unit:NB-1800(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-60/70
NB-2000(Ex)
MainComponents: Filter unit: NB-2000(Ex)-F5, Membrane Separator Unit:NB-2000(Ex)-MF,
Nitrogen Generator Unit:PSA(NJ)-65/80
NB-2500(Ex)
Main Components: Filter unit: NB-2500(Ex)-F5,Membrane Separator Unit: NB-2500(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-80/100
NB-3000(Ex)
Main Components: Filter unit: NB-3000(Ex)-F5,Membrane Separator Unit: NB-3000(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-95/120
NB-4000(Ex)
Main Components: Filter unit: NB-4000(Ex)-F5,Membrane Separator Unit: NB-4000(Ex)-MF,
Nitrogen Generator Unit: PSA(NJ)-125/155
Power supply: AC380/440V, 50/60Hz, 3ϕ; AC220V,50/60Hz, 3ϕ (nitrogen generator).
Power supply:AC380/440V, 50/60Hz, 3ϕ; AC220V, 50/60Hz, 3ϕ (nitrogen generator).

Other Conditions

For application on a LR classed vessel, the following conditions to be complied with: - Details of the location of the Ballast water management system, and its integration into the ships ballast system and electrical power distribution system are to be shown on the relevant plans and those are to be submitted for consideration in accordance with the applicable LR rules prior to installation. - Installation survey and commissioning is to be conducted for each installation on-board ship in accordance with Lloyd's Register specific survey requirements and with reference to IMO Res.

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MEPC.300 (72) on a case-by-case basis. - Pressure vessel within BWTS is to meet the requirements of Part 5, Chapter 11. -Valves and other components intended for installation in pressure piping systems having working pressures exceeding 7 bar are to be surveyed at the manufacturer's works, LR Rules Part 5, Chapter 1 and Chapter 12 refers. - Valves which are provided with remote control are to be arranged for local manual operation, independent of the remote operating mechanism. - Materials of Class III piping systems as defined in Part 5, Chapter 12, Section 1.5 including mechanical joints, valves, flanges, steel pipes are to be manufactured and tested in accordance with the requirements of recognized National or International standards. - Materials used in the construction of machinery and its installation are not to contain asbestos, LR Rules Part 5, Chapter 1, Section 2.2.2 refers. - Nitrogen generators shall be of an approved type accepted by Administration. This certificate is not valid for equipment, the design, ratings or operating parameters of which have varied from the specimen tested. The manufacturer should notify Lloyd's Register Classification Society (China) Co Ltd obtain modification or changes to the equipment in order to obtain a valid Certificate.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Classification Society (China) Co., Ltd. of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: 16-80104(E1)-03

The Design Appraisal Document STS/TA/LZX/WHZ/PRJ111005088893/O-TSO/25-052233D and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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