



**TYPE APPROVAL CERTIFICATE**  
No. MAC091724XP

**This is to certify** that the product identified below is in compliance with the regulations herewith specified.

<i>Description</i>	<b>PUMP</b>
<i>Type</i>	<b>NDW150, NDW200 &amp; NDW250</b>
<i>Applicant</i>	<b>DESMI PUMPING TECHNOLOGY A/S Tagholm 1 DK 9400 Norresundby DENMARK</b>
<i>Manufacturer</i>	<b>DESMI PUMPING TECHNOLOGY (SUZHOU) CO., LTD.</b>
<i>Place of manufacture</i>	<b>No.108, Houndai Street SIP, Suzhou, Jiangsu CHINA 215121</b>
<i>Reference standards</i>	<b>IGC Code; Part E, Chapter 9, Section 5 of RINA Rules for the Classification of Ships</b>
<i>Reference documents</i>	<b>RINA TYPE APPROVAL SYSTEM</b>

*Issued in* **RINA Poland Plan Approval Centre** on **July 30, 2024**. *This Certificate is valid until* **July 29, 2029**

**RINA Services S.p.A.**  
**Jaroslaw Kondracki**

This certificate consists of this page and 1 enclosure



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**NDW150, NDW200 & NDW250****Product Description:**

The NDW150, NDW200 and NDW250 are multi-stage centrifugal deep-well (DW) pumps which consist of three major parts: head unit, stack and cylinder. The pumps are driven by electric motor installed outside the storage tank. The pumps are equipped with 2 mechanical shaft seals, arranged in a back-to-back position. The pumps are lubricated and cooled by pumping media. The surrounding chamber is filled with oil for lubrication and cooling of the sealing faces.

**Technical Characteristics:**

Type	NDW150	NDW200	NDW250
Volume rate of flow [m <sup>3</sup> /hr]	0-500	0-680	0-910
Max. cargo tank pressure [bar]	20	20	20
Max. pump differential pressure (head) [bar]	20	20	20
Max. pump discharge pressure [bar]	40	40	40
Min. / Max. temperature, [°C]	-165 / +45	-165 / +45	-165 / +45
Motor Size, [kW]	According to manufacturer specification		
Casing, shaft and impeller materials	Austenitic stainless steel (type 304 and type 316)		
Max torque shaft [Nm]	1200	1600	2100

**Reference Design Drawings filed for information under RINA dwg no. PLMC-11360:**

Drawing No.	Drawing Revision	Drawing Title
599260	A.3	Inducer
555940	A.2	Bell
555960	A.3	Bowl
599210	A.6	Impeller
551810	A.3	Motor Bracket
599500	A.3	Middle Bracket
599590	A.6	Pump Discharge
599280	A.4	Intermediate Bearing Support
599570	A.9	Sealing Chamber
119178	A.2	Top Shaft
119182	A.1	Pump Cylinder Shaft
119180	A.1	Intermediate Shaft
119171	A.1	Top Pipe
119167	A.1	Bottom Pipe
119176	A.1	Intermediate Pipe
460318	A.1	NDW150
461390	A.1	NDW150 with Motor
425721	A.4	Intermediate Pipe Unit
499681	A.5	Pump Head Unit
461394	A.1	Pump Bowl Unit



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**NDW150, NDW200 & NDW250**

**Documents Regarding Pump Testing** filed for information under RINA dwg no. **PLMC-11361**:

1. Cryogenic Test Report for NDW150 Pump dated 12 June 2024
2. Type Approval Test Protocol; Ver. 0
3. Pressure Test Report for NDW150 Pump - Form for use during pump testing
4. Capacity Test Report for NDW150 Pump - Form for use during pump testing

**Field of Application:**

The pump is intended for handling LPG, LNG, NH3, VCM, CO2, Chem gases and Chemicals on ships and other units certified by the RINA.

**Acceptance Conditions:**

All pumps are to be subjected to the unit production testing as per RINA Rules for the Classification of Ships Part E, Chapter 9 Section 5, Article 3.2.2.

**Remarks:**

1. Pumps are to be delivered with the relevant documentation for their maintenance and operation.
2. Pumps are to be marked with manufacturer's name or trademark and type number identification.

**RINA Poland Plan Approval Centre**  
**July 30, 2024**

