



TECHNICAL SPECIFICATIONS
CRYOGENIC LNG ROAD TANKER
40 Tn - 53 m³ - MLI ISOLATION



Client **"WTRANS" PRZEDSIĘBIORSTWO TRANSPORTOWOSPEDYCYJNE**
Country **Poland**
Att. to **Mr. Sławomir Wajdzik**
Offer n° **231103603**
Date **31/01/2024**





1. TECHNICAL DESCRIPTION

1.1. PRINCIPAL CHARACTERISTICS

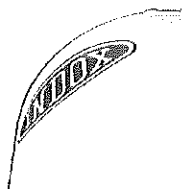
Vehicle type	Semitrailer
Control cabinet	Located at the rear of the semi-trailer
Optimised for transport of	LNG
Maximum working Pressure (bar)	7
Design transport	ADR / TPED
Geometric Capacity (lts)	53.000 lts
Net Capacity (95%)	50.350 lts
Isolation Type	MLI Super-Insulation + Vacuum
Tare Weight (kg +/-2%)	12.800 kg's
Weight Truck Considered (kg)	6.400 kg's
Pay Load (*)	20.800 kg's
Gross Weight (Tn)	40.000 kg's
Maximum Semitrailer length	14.000 mm
Maximum Width (mm)	2.550 mm
King pin height (mm)	1.250 mm
Natural Evaporation Rate (NER, %)	0,15%/day

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1.2. INNER VESSEL

Material	Stainless Steel 304
Inspection	Bureau Veritas Spain
Design code	ADR / TPED (CE) EN13530
Design temperature	- 196°C
Ry	100%
Inner Baffles	7 Baffles as specified in ADR
Piping between inner & outer vessel	Stainless steel type AISI 304
Security Valves	2+1 units

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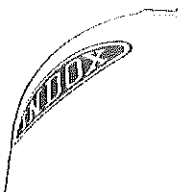
1.3. OUTER VESSEL

Design code	ADR / TPED (CE)
Isolation	MLI Super insulation + vacuum
Material	Stainless steel
Outer diameter	2.550 mm

1.4. PIPING / INSTRUMENTATION

Media pipes	Stainless steel
Instrument tubes	Stainless steel
Tank Safety RV	Herose (2 SRV x 1)
Safety line valves	Between the valves
Filling Trycock	2 units: 84% and 95% (ADR)
LNG loading line coupling	3" Flange / Type ASA 150 # SORF + 3" Blind flange / Type ASA 150 # SORF
Gas return line coupling	2" Flange / Type ASA 150 # SORF + 2" Blind flange / Type ASA 150 # SORF
Valves (liquid loading & unloading)	According: 97/23/CE Directive
Valves of drain and security	Conduction to vapour lines
Tanker pressure manometer	1 ut / 0-10 bar
Level Gauge	1 ut. / Samson Media 5
Vacuum sensor	Teledyne
Emergency buttons	3 in total: 1 at front, 1 at rear, 1 in the cabinet
Dead man	1 unit – located in the cabinet
ESD additional safety system for Swinoujscie Terminal	Included
Supports for future installation of hose carrier	Included (on the right side, direction of travel)
Hose carrier and hose	Not included
Spare wheel carrier	Not included

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1.5. PUMPING SYSTEM

Pumping System	Centrifugal cryogenic pump / CRYOSTAR mod. CSH-185 / LNG Flow of 600 l/min / Hydraulic drive
PBU	Atmospheric vaporizer PBU for maintain pressure during pump unloading process
Flowmeter	Mass Flowmeter type EMERSON CMF-200 Printer is installed in the control cabinet. MID not included

Note: The truck must be prepared for hydraulic systems with correct oil pressure. We recommend having a refrigeration system of the hydraulic circuit to avoid overhead of the oil. Indox Handbook.

1.6. HYDRAULIC CONNEXIONS

Type (Located at front left side)	1" – M for pressure line – TIPO: ISO 16028/350 bar – FLAT FACE/STEEL" – H/M 1" for return line – ISO 16028/350 bar – FLAT FACE/STEEL-H/M 1/2" – H for draining oil from hydraulic motor seals – ISO 16028/350 bar – FLAT FACE/STEEL-H/M
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1.7. TRAILER / BOOGIE SYSTEM / ACCESSORIES

Vehicle regulation	ADR / TPED
Axles / pneumatic system	3 axles (maximum load on tridem: 24 tons) SAF axles, (9 Tn x 3) with Discs Brakes (Optional 5: BPW axles) 1° lift axle, 2° fixed axle, 3° fixed axle
Tires	6 units 385/65 R22,50 Bridgestone
TPMS system	Included
Rims	6 units R22,50 aluminium (ALCOA)
Air vessel	Aluminium
Braking system	Line air braking with load sensing and EBS WABCO RSS (2S/2M)
King pin	162,4 KN- 2 inch Carbon Steel
Electrical wires and boxes	IP65 EN 60529; one front, one rear 15 Pin connection ISO 7638



Plates	ADR Flow diagram inside
Cyclist protection	Included
Bumpers	Standard INDOX
Lights CE	According with ADR
PVC tool box	1 Unit
Wheel chocks	2 units type PVC
Earthing reel	1 Unit 15 m self-coiling
Earth point on chassis	2 units
Landing leg	JOST model CA1024 landing legs
Fire extinguisher	2 holders for extinguisher 12 kg including the extinguishers in plastic box placed on each side of the chassis to the rear of the unit.
IMO Hooks	8 units as per IMO certification
Plugs – Truck connections	15 Pin/ 24Volts
Air intake auxiliary connection	1 unit inside the cabinet 1 unit next to the vaporizer

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1.8. ESP/EBS DEVICES INSTALLATIONS

- Tractors equipped with an ESP/EBS type braking system to continuously guarantee the connection between the semi-trailer and the tractor through an ISO7638 type connection.
- Anti-tow away system included on the piping cabinet doors.
- Mudguard fitted placed above each tyre.
- Saddle plate carbon steel
- King pin can be easily disassembled.



1.9. PNEUMATIC INSTALLATION

The tractor equipped with a braking system using 2 independent connection lines with the following characteristics:

- Brake signal, by yellow line.
- Continuous supply of the air circuit for the semi-trailer, by means of a red line.

The connection for these lines will be through ISO DIN 1728 type connections.

For a good operation of the cistern. A minimum air pressure in the circuit of 7 bars is guaranteed.

1.10. CABINET

Material	Aluminium
Location	On REAR part of the tank
Door system	Upwards, self-supported coach
All P&ID diagram	Included

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1.11. PAINTING

Sand blasting treatment:	SAE 2,5
Preparation	Zinc enriched epoxy layer
Finished:	Two component acrylic paint, 2 layers Total thickness 120 μ
Tank:	White RAL 9016
Chassis:	RAL color to be Indicated – no metallized
Cabinet:	RAL color to be Indicated – no metallized
Reflective Marking places:	Included according to norm V-23. 3 holders for the orange plate fixed to the rear of the unit. 3 plates with orange marking 223/1972 are put in the holder. 3 holders for diamond plate placed included the relevant diamond plate.: 3 signs "2.1". P&ID diagram and a sealed box for storing semi-trailer documentation in the control cabinet.

Customer Logo: Not included

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1.12. SIGNS

- Holder plate at rear position
- 1 Support for product number
- 3 Diamond plates, 2 at each side, 1 in rear tank
- ADR Plate

1.13. TEST AND INSPECTION REQUIREMENTS AND APPROVALS

Our THIRD company inspection for our equipment is Bureau Veritas.
Inspection Plan and Schedule to be agreed between customer and Indox.
All certifications are in accordance with European regulation.
Vacuum test. Vacuum degree must be below 4 µm Hg (microns)
Operating test.
ADR.

1.14. DOCUMENTATION

P&ID.
Quality book (Certificates of testing, Certificates of conformity, Certificate of Registration, ADR certificate).
M& Operational Manual in English (Other Languages, under request)
All books 2 copies in paper and 1 electronic copy.
Electrical schemes.
Dimensional drawing.
Welding certifications.

1.14.1 DOCUMENTATION EXCLUDED FROM MANUFACTURER

TIMEX scope of supply

- 1- The registration costs of the semitrailer in the TDT Polish authority.
- 2- The cost of preparing the ADR document and registration in Polish Authority of Transportation.
- 3- Prepare the tank to work (couplings cost, coupling the tank before the first loading in Swinoujscie LNG Terminal, including the cost of Nitrogen for the cold-down).
- 4- Obtain permission to loading the semitrailer in the Swinoujscie LNG Terminal.



2. COMMERCIAL TERMS

2.1. ECONOMICAL OFFER

- Price EXW (as per incoterm 2020) ANGLESOLA (Spain) for one unit according to our technical description is:

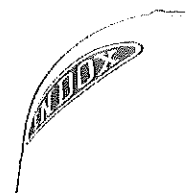
Item	Price (€/unit)
LNG Cistern 7 bar <i>Including pump + counter system</i>	299,720,00
Optional 1: Frame and unloading box zinc primer	610,00
Optional 2: Pump bypass to allow unloading in case of pump failure with a mass meter	1,320,00
Optional 3: Differential valves on the installation allowing the entry of excess pressure from the installation directly into the tank (after the end of discharge)	1,610,00
Optional 4: Three temperature meters in the pump instead of only one	2,100,00
Optional 5: BPW axles instead of SAF	650,00
TOTAL UNIT PRICE	306,000,00
Additional special discount	- 10.000,00
FINAL UNIT PRICE	296,000,00

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2.2. PAYMENT

- 30 % By Bank wire transfer: Advanced payment on order confirmation (starting from reception of payment).
- 65 % By Bank wire transfer once manufactured and always before delivery.
- 5% By Bank wire transfer After registrations of the semitrailer and start of the first loading/reloading. No later than 1 month (30 days) from that moment.

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2.3. DELIVERY TERMS

- This quotation is for the delivery of TWO (2) LNG Semitrailers
 - **First unit delivery in week 26 (June 2024)**
 - **Second unit delivery in week 30 (July 2024)**

**Delivery time could be modified in case Order confirmation and Reception of advanced payment is not done by the customer within week 05/2024.*

- Delivery conditions according to: FCA Anglesola 25218 (Spain) Incoterms® 2020.

2.4. WARRANTY

- One-year warranty by Indox standards. Check next page Warranty Conditions.
- We include 5 years vacuum warranty, as long as an annual vacuum review and inspection is carried out at Nexter Color facilities located in POLAND, the costs of which will be assumed by the client. To maintain this 5-year warranty, the customer is obliged to send a proof document to the manufacturer (Indox), confirming the annual inspection has been carried out.

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2.5. OFFER VALIDITY

- This offer is valid until 31st January 2024.

ANGLESOLA, January 31st, 2024

Signature:

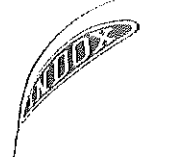
Jordi Segura Morancho
Sales Director Europe



CUSTOMER ACCEPTATION

Przedsiębiorstwo Transportowo-Speycyjne
"WTRANS"
Sławomir Wajdzik
Będargowo 9, 72-005 Przeclaw
NIP 852.100.76.70 REGON 810650159

Przedsiębiorstwo Transportowo-Speycyjne
"WTRANS"
WŁAŚCICIEŁ
Sławomir Wajdzik





WARRANTY CONDITIONS

01-Warranty period:

01-01- The warranty period of equipment manufactured by INDOX ENERGY SYSTEMS S.L., hereinafter referred to as INDOX, is twelve (12) months from the date stated on our delivery note to the first buyer. Unless other conditions have been established in writing in the body of the contract.

01-02- Under no circumstances shall the actions covered by the warranty have the effect of extending the warranty beyond the agreed terms

02- Scope of warranty:

02-01- This warranty covers only equipment manufactured by INDOX, covering labor and boiler materials. Equipment from outside suppliers to INDOX are excluded, and would be subject to the warranty criteria and conditions of the manufacturer of that item (e.g. axles, pumps, valves, etc.). Any delivery of materials that fall under the warranty will be covered under FCA conditions according to INCOTERMS 2020.

02-02- The warranty on parts not manufactured by INDOX will be applied exclusively to parts recognized as defective by the supplier's own technical support after all associated problems have been taken into account. The application of the warranty consists in delivering new parts to replace defective ones or repairing them, according to the supplier's own technical support. Replacement costs and/or repairs that arise are excluded from the scope of the warranty. To be accepted under warranty, the customer agrees to return the damaged or defective material via post at his/her own cost within fewer than 10 days of receipt of the new part for further analysis with the supplier; otherwise, an invoice will be issued for this material.

02-03- This warranty extends only to the first owner of the unit and cannot be transferred without the written consent of INDOX.

02-04- INDOX assumes no liability for damages and losses that may arise from defects found in parts or in the construction of equipment, even in cases where an accident has occurred, being limited only to the application of the warranty conditions. Under no circumstances will consideration be given to or liability or charges accepted for direct or indirect damage to third parties, consequential losses, loss of profits or interruption of business activity, or cases considered to be force majeure.

02-05- Items not covered by the warranty include: wear due to use, general checks and inspections, adjustments, accidents, overturning, vaporization of tanks and degasifications, staff travel, transportation to workshop, towing or the consequences of immobilizing the vehicle.

02-06- If the repair is to be carried out anywhere other than at our workshops, then travel, accommodation and meal-allowance costs incurred by our staff shall be borne by the customer.

02-07- Any damage caused by lack of cleaning, both internal and external, as well as that arising from misuse or negligent use of the equipment under conditions other than those specified during the sale are excluded from the scope of the warranty.

02-07- During the warranty period, the customer is required to cover the costs of the maintenance operations detailed in the manuals for each piece of equipment, in an authorized workshop or previously recognized official service provider in the area. INDOX reserves the right to decline the equipment warranty upon detection of a failure to maintain the equipment and its component parts.

03- Cancellation of warranty:

The warranty is considered cancelled and void automatically and in full when:

- The buyer-user has not made payments within the deadlines set down in the purchase order or sale contract.
- The buyer-user uses the equipment for a service other than the one for which it is intended.
- The buyer-user does not follow the instructions for use, cleaning, lubrication and maintenance specified for each piece of equipment, i.e. improper use.
- The buyer-user makes modifications to the equipment without the consent of INDOX.
- The buyer-user does not return the defective or damaged material to INDOX.

04-Application and processing of warranty:

04-01- Any defect that involves activating the warranty must be made known to INDOX.

04-02- To qualify for any actions under the warranty, the equipment should be necessarily serviced at the INDOX factory by a qualified technical support technician, or in an authorized workshop or recognized official service provider in the area. The request shall always be made by the customer in writing (fax, e-mail, post) by sending the duly completed warranty claim form, which should include any attached photographs and reports. Requests can be made by telephone only in the case of emergencies and must subsequently be ratified by one of the forms of communication stated above within 24 hours.

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