Załącznik nr 5

Specyfikacja Techniczna (Technical Specification)

Postępowania nr EU/38/RT/ZZ/2025 o udzielenie zamówienia w trybie przetargu nieograniczonego na dostawę

21 sztuk Naczep Terminalowych

w ramach projektu pt:

„Wyposażenie terminalu intermodalnego BCT w nowoczesne urządzenia przeładunkowe „

w ramach inwestycji E2.1.3 „Projekty intermodalne" Krajowego

Planu Odbudowy i Zwiększania Odporności

Projekt nr KPOD.09.09-IW.02-0033/24

Signature Not Verified
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Data: 2025.08.26 21:16:51 CEST

Baltic Container Terminal Ltd.

Technical Specification for the supply of twenty one (21) Terminal Trailers

Approved by	Head of Engineering
Document date	August 2025
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Document status	Final
Address	Baltic Container Terminal Ltd. Kwiatkowskiego Str. 60, 81-127 Gdynia,

TERMINAL TRAILERS SPECIFICATION – OVERVIEW

PROJECT
Supply of the following equipment defined within the Technical Specification:

Twenty one (21) Terminal Trailers 45 ft

CAPACITY

Maximum load	70,000kg

SPEEDS

Maximum speed	30 km/h

ELECTRICAL SYSTEMS

Main Voltage	24V

FEATURES

Front “broken” landing legs with the security	drawing no 2
Front and rear corners covers made from tubing	drawing no 3
The design of the front and rear guide with "spacers" that allows insertion of the container without damaging the door	drawing no 2 and 4
Provide an inspection gap in the front and rear guide for checking the seals mounted on the container	drawing no 4
Retractable stops for container of 20 'and 40'	
Overlays reducing noise emission	

SITE CONDITIONS

Ambient Temperature	Range -25°C to +45°C
Humidity	Up to 95%
In Service Wind Sustained	22m/sec, Gust 25m/sec

DEFECT LIABILITY PERIODS (DLP)

Entire trailer & accessories after taking-over	2 Years
Structure	5 Years
Components repaired during DLP	1 Year or balance of DLP
Paint	5 Years
Galvanizing	5 Years

Contents

1 TERMINAL TRAILER TECHNICAL SPECIFICATION

REGULATIONS

1.1 LEGISLATION

The trailer defined under this specification shall comply with all applicable current Polish legislation applicable at the time the trailer is accepted by the Purchaser and will at least include:

i) Standards for design and installation of wiring, electrical systems and pneumatic equipment such as air brake tubing.
ii) Standard for Painting and dimensions of Freight Containers.
iii) RAL Standard for colour reference.
iv) DIN Standard for design and manufacture of King pin coupling.

1.1.1. The Vendor may propose alternative, equivalent Engineering Standard references providing the alternatives are supported with acceptable documentation's to be submitted with bid.

1.1.2. Special attention shall be given to access for operating and all maintenance functions.

1.1.3. BCT has an environmental policy that could preclude the use of certain substances.

2 GENERAL TECHNICAL SPECIFICATION

2.1. MATERIALS

2.2.1. Materials used in the trailer shall be of the best quality, suitable for the duty. Specification and material certifications will be required.

2.1.2. Materials shall be free from flaws. All castings shall be smooth, sharp and free from blowholes, with ample fillets, and correctly centralised cores. All structural sections and plate shall be free from scale.

2.1.3. Light alloy sections shall not be used unless authorised by the Engineer.

2.1.4. No plates, flat bars or angles used in load bearing structural members, including platform supports, shall be less than 8mm thick.

2.1.5. All fixings and fastenings, bolts, screws, nuts, washers, split pins U clamps and threaded components such as studs shall be protected from corrosion by way of heavy zinc or hot dip galvanized plating.

2.2 WORKMANSHIP

2.2.1. Workmanship shall be of the highest standard and will be constantly monitored by the Engineer or his approved representative. If in his opinion the work, rectification work, or methods used do not meet with his approval then that work will be stopped at the Contractor's expense until an approved method is adopted.

All plates, sections, etc. shall be straightened or curved as may be required by pressure and not by hammering. All abutting ends and edges shall butt truly over the full areas.

2.2.2. All holes in steelwork shall be drilled and where not found fair after assembly further drilled or reamed out to the size required. Drifting of holes is not permissible. Burrs on all material shall be removed before painting. Screw threads shall be accurately produced in accordance with designer's specification and classification.

2.3 QUALITY CONTROL AND INSPECTION

2.3.1. The manufacture shall submit evidence that a formal system of quality control approved by the Engineer is applied to all purchased materials and equipment.

2.3.2. Mill certificates for rolled steel sections shall be submitted and records shall be maintained to relate the Mill certificates to the material during manufacture.

2.3.3. The manufacturer shall submit evidence that all full penetration welds in structural members have been tested according to National and Local Standards, Statutory Orders, Regulations, Acts and Codes that apply.

2.3.4. Reasonable access shall be provided by the manufacturer to the Purchaser's inspecting authority which may be asked to attend the manufacturer's works, or works of the manufacturer's sub-contractors, during construction.

2.3.5. Acceptance and load test will be carried out prior to shipment. Notwithstanding the unit will again be visibly checked and will undergo a full operational check including proof load test on arrival at its destination.

3 MECHANICAL TECHNICAL SPECIFICATION

3.1. DESCRIPTION OF WORKS

This section covers the provision by the manufacturer of all labour and materials required:

3.1.1 to design, manufacture, ship and install the necessary mechanical materials, equipment and appurtenances.

34.1.2 to shop test as far as practicable and to field test the entire mechanical equipment of the trailer.

3.2. AREA OF USE

3.2.1 The trailer will be required to operate within the confines of the Port of Baltic Container Terminal, Poland and not on Public Highways.

3.3. GENERAL DESCRIPTION

3.3.1 The trailers supplied under this Agreement shall be designed as a container handling unit for heavy duty terminal applications. It shall be of the skeletal type but with steel protection in between cantilevered outriggers, mounted on heavy duty rims fitted with tires, have elevating landing legs and be suitable for towing by a Terminal Tractor unit fitted with an elevating fifth wheel table capable of withstanding an imposed load of 30 tons (30,480kgs).

3.3.2 The trailer shall be designed to facilitate the rapid location of a range of freight containers which will be lowered onto the trailer by crane operators who may be positioned at heights up to 40 metres (130 ft) above. The trailer shall be of a flatbed design and shall provide lateral and longitudinal restraint to the movement of those containers during the acceleration, turning and braking phases of transportation without the use of corner twistlocks or spigots.

3.3.3 The design of the trailer shall recognise that the unit will be subjected to an arduous duty cycle and will be working in an environment where protection against impact damage is important. Despite the need to provide this protection, however, it should not be at the complete expense of access to the basic components, which require regular maintenance. Particular attention shall be given to maintainability.

3.4. STRUCTURE

3.4.1 The trailer shall be constructed from standard hot-rolled steel sections. The steel grades shall be of weldable quality not requiring special temperature conditions for repair works.

3.4.2 The main longitudinal chassis structural members shall be continuous for the complete length of the trailer. The main structural cross members designed to support the containers shall be full width of the trailer and continuous through the main longitudinal members.

3.4.3 The structure shall be so designed that water pockets are not formed in any member or by the inter-section of members and be such that there shall be no unsealed blind areas where paint cannot be applied.

3.4.4 Adequate drainage holes shall be provided to discharge water clear of the structure in all cases where there is a tendency for water to collect. The structure throughout shall be so designed that vibration is minimised under all conditions of operation and particular attention shall be given to limiting vibration during the acceleration and deceleration periods.

3.4.5 An inspection platform shall be provided on the rear deck of the trailer manufactured from galvanized steel grating for the full width of the trailer and extending by a length of approx. 950mm to the rear stops as shown in the attached drawing. The platform shall be accessible via vertical ladders at each side of the trailer with a bottom rung no higher than 340mm from ground level. The purpose of the platform and ladders is to facilitate access by a checker to inspect container security seals.

3.5. LOAD CAPACITY

3.5.1 The load capacity of the Trailer shall be 70 Metric Tons (MT). It shall be designed to carry a combination of ISO Freight Containers located by means of pivot stop/guides.

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ISO designation *	Common Name	External dimensions			Minimum internal dimensions **			Maximum gross mass
		Length	Height	Width	Length	Height	Width	
1EEE ***	45 foot high cube	45 ft / 13.716 m	9' 6" / 2.896 m	8 ft / 2.438 m	13.542 m / 44' 5.15"	2.655 m / 8' 8.5"	2.330 m / 7' 7.73"	36,000 kg **** / 79,370 lbs
1EE ***	45 foot standard		8' 6" / 2.591 m			2.350 m / 7' 8.5"		
1AAA	40 foot high cube	40 ft / 12.192 m	9' 6" / 2.896 m	8 ft / 2.438 m	11.998 m / 39' 4.375"	2.655 m / 8' 8.5"	2.330 m / 7' 7.73"	36,000 kg **** / 79,370 lbs
1AA	40 foot standard		8' 6" / 2.591 m			2.350 m / 7' 8.5"		
1A	40 foot		8 ft / 2.438 m			2.197 m / 7' 2.5"		
1BBB	30 foot high cube	29' 11.25" / 9.125 m	9' 6" / 2.896 m		8.931 m / 29' 3.6"	2.655 m / 8' 8.5"		36,000 kg **** / 79,370 lbs
1BB	30 foot standard		8' 6" / 2.591 m			2.350 m / 7' 8.5"		
1B	30 foot		8 ft / 2.438 m			2.197 m / 7' 2.5"		
1CCC	20 foot high cube	19' 10.5" / 6.058 m	9' 6" / 2.896 m		5.867 m / 19' 3"	2.655 m / 8' 8.5"		
1CC	20 foot standard		8' 6" / 2.591 m			2.350 m / 7' 8.5"		
1C	20 foot		8 ft / 2.438 m			2.197 m / 7' 2.5"		

- One (1) 45 ft ISO Freight Container weighing 32,5MT
- One (1) 40 ft ISO Freight Container weighing 32,5MT
- One (1) 20 ft ISO Freight Container weighing 32,5MT
- Two (2) 20ft ISO Freight Containers weighting in total 65MT
- One (1) 40ft Flat Deck (ATD – Artificial Twin Deck) weighing in total 55MT

3.6. PHYSICAL DIMENSIONS

3.6.1 The container listed shall be considered to be ISO Series 1 Freight Containers in accordance with British Standards Specification Number 3951 – Freight Containers.

3.6.2 The trailer shall be designed to accommodate all container combinations specified in Clause 5.5 above ("Load Capacity") and in the following configurations:

- One 20ft container positioned 930 mm forward from the rear of the trailer.
- Two 20ft containers positioned 930mm forward from the rear of the trailer and with a 600mm gap between the containers.
- Two 20ft containers positioned 1535mm forward from the rear of the trailer and with an 80mm space between them for twin lift operation.
- One 40ft container positioned between 930mm/1535mm from the rear of the trailer.
- One 45ft container.

3.6.3 The trailer bed on which the containers locate shall have maximum internal dimensions of 13,730mm in length and 2,500mm in width.

3.6.4 The trailer bed shall have a maximum height of 1,500mm when laden.

3.7. CONTAINER POSITIONING STOPS

3.7.1 The position of the containers on the trailer bed shall be maintained by the mounting of retractable stops, which rise under a gravity pivot balance weight and depress with the downward pressure of a container, when that stop, in that position, is not required.

3.7.2 Pivot stop shall protrude 150mm from the trailer bed.
These stops shall be mounted for the following container positions:

- To maintain 80mm between the two 20ft containers for twin lift operations.
- To maintain 600mm between the two 20ft containers for normal operations.

3.8. GUIDES

3.8.1 Fully flush-sided and welded container guides (i.e.: not ribbed or bolt on) shall be mounted as follows: see Drawing no 1 - Sample guides arrangement

3.9. SPEED OF OPERATION

3.9.1 The trailer shall be designed to operate at road speeds up to 30 km/h (25 mph) under all laden and unladen conditions.

3.10. DUTY CYCLE

3.10.1 The trailer manufacturer shall recognise that the tractor/trailer unit will be required to perform frequent U-turns (with minimal diameter of 16m) during normal operations both in empty and fully laden conditions.

3.10.2 Continuous travel distances can be up to three miles per journey.

3.11. LANDING LEGS

3.11.1 The heavy duty landing leg shall be mounted on both main beams approximately 2,100mm back from the king pin.

3.11.2 The landing legs shall be “broken” (folded) type with security and be capable of supporting a fully loaded trailer when uncoupled from a trailer.

3.12. 5th WHEEL RUBBING PLATE

3.12.1 To be made from minimum 12mm thick steel plate.

3.13. KING PIN

3.13.1 The king pin is to be standard 2” (50.8mm) in accordance with DIN 74080. The king pin shall be bolted to a fixed capping plate to facilitate replacement. It shall be mounted approximately 800mm back from the front of the trailer.

3.13.2 The height to the underside of the trailer king pin plate shall be no less than 1,200mm above ground level.

3.14. AXLES AND SUSPENSION

3.14.1 The trailer shall be provided with 2 heavy duty rocker beam oscillating axle sets.

3.14.2 The units employed shall be designed to meet the various steady and transient loads as well as the total loading capacity of the trailer.

3.14.3 The axles assemblies shall be arranged to be easily demountable from the structure of the trailer without damage to either the axle assemblies or the trailer structure.

3.14.4 Particular attention shall be given for the changing of the wheel and assemblies.

3.14.5 Standard “button head” grease nipples shall be installed throughout the trailer as necessary.

3.15. TIRES

3.15.1 Suitable wheels and pneumatic Tires of standard type commonly available in Poland shall be selected for this application. Size will be prosed by the Vendor design accordingly to projected speed, load capacity and minimal U-turn diameter. Each terminal trailer will be delivered with one complete spare wheel.

3.16. BRAKING SYSTEM

3.16.1 A two (2) line heavy duty, spring type, air operated braking system shall be provided with remotely mounted, heavy duty couplings for the compressed air circuit. The couplings, palm type (glad hands) for the blue and red line, shall be mounted at the front of the trailer with centre to centre spacing of 200mm to facilitate connection and disconnection.

3.16.2 Bulkhead fittings shall be clearly identified with the appropriate colour to define the relevant braking circuit. Adequate protection shall be given to eliminate impact damage particularly when the trailer is not in use.

3.16.3 In line filter shall be incorporated into the system and mounted on trailer bulkhead.

3.16.4 The spring brake cylinders shall be type 30/30.

3.16.5 Air brake tubing of non-metallic type shall comply with SAE J844 May '97 (Imperial) or SAE J1394 April '91 (Metric).

3.17. MUDGUARDS

3.17.1 Mudguards shall be mounted above all wheels and rubber mud flaps shall be fitted to the rear of the mudguards. Height of mud flaps above ground shall be in accordance with relevant Dock Regulations.

3.18. REAR BUMPER BAR

3.18.1 A substantial heavy duty, structural steel section Bumper Bar shall be provided at the rear of the trailer. This shall be set at approximately 500mm above ground level and 1900mm wide.

3.19. ELECTRICAL WIRING

3.19.1 Wiring shall comply with SAE J1292 Oct '81 Automobile Truck, Truck-Tractor, Trailer and Motor Coach wiring.

3.19.2 Tail, braking and directional lights shall be provided to comply with standard regulations operating from a 24 volts DC source. The rear lighting units shall be of high quality and resistant to vibration readily available in local market and mounted on rubber strips. The electrical connection shall be mounted adjacent to the air couplings specified in Clause 3.16 and shall be compatible with the following:

ISO 1185 7-pin trailer connector 24N

3.19.2 The convention type N used for wiring of the electrical system coupling shall be as follows:

Pin 1	White	- Ground Circuit
Pin 2	Black	- Tail Lamp
Pin 3	Yellow	- Left Hand Turn Signal
Pin 4	Red	- Stop Lamp Circuit
Pin 5	Green	- Right Hand Turn Signal
Pin 6	Brown	- Spare
Pin 7	Blue	- Spare

3.20. REFLECTORS

3.20.1 All reflectors shall be secured to the main structure in positions designed to give all round vision and protection against impact damage.

3.20.2 A total of ten reflectors shall be provided with two (2) mounted at each end and three (3) on each side. The reflectors mounted on the rear shall be Red triangular type, the front White circular type and the remainder shall be Amber horizontally mounted rectangles.

4 PAINTING

4.1 PAINTING SYSTEM

4.1.1 During construction and after fabrication has been completed, the trailer shall be thoroughly cleaned and painted in a manner as specified using paint products approved by the Engineer and in accordance with paint manufacturer's instructions.

4.1.2 Painting system shall be suitable for “Exterior exposed polluted coastal atmosphere” and in accordance with the following standard or equivalent:

BS 5493 : 1977 Table 3. Part 3. SK3 – Blast clean surfaces to Sa 2.5

Typical time to first maintenance 10-20 years.

4.1.3 Colour

The colour scheme for the Trailers shall be:-

i) Chassis including bumpers and wheels

Traffic Orange, RAL 2009

ii) Side gather guides and Container Stops

Traffic White, RAL 9016

iii) Rear gather guide and rear top section of trailer

Traffic Yellow, RAL 1023

Refer to Appendix One for details of paint scheme, Purchaser logo and asset number location.

4.1.4 Logo and Identity Number

The Purchaser Logo shall be supplied and applied as defined in Appendix One.

Plant Asset Numbers to be provided by Vendor. Specification and location as defined in Appendix One.

Note: Exact location of logo and plant numbers may vary according to trailer design.

5 SAFETY, INSPECTION, DRAWINGS AND MAINT. MANUALS

5.1. SAFETY PROVISIONS

5.1.1 In the design and construction of the trailer all safety provisions called for in the various documents which are referred to in Section 3 of this Specification shall be observed.

5.2. INSPECTION

5.2.1 Contractor to submit “test schedule” 4 weeks prior to “in house” testing for Purchaser review.

5.2.2 The purchaser may carry out of inspections prior to and during manufacture at the Contractor's works either by one of his own inspectors or by an outside appointed inspector. The contractor shall allow access for the purpose of these inspections.

5.3. DRAWINGS

5.3.1 Contractor shall submit with bid two copies, of the following drawings:

GA drawing
Electrical schematic
Pneumatic Schematic

5.3.2 Following placement of the order, the contractor shall submit for review to the purchaser general arrangement, fully dimensioned detail drawings, and schematic diagrams covering every aspect on the trailer not already approved by previous supply.

5.3.3 The drawings and diagrams shall be checked by the purchaser so far as it is possible with the information in his possession.

5.3.5 However, approval of drawings, whilst made in good faith, does not remove from the contractor his responsibilities and does not carry with it responsibility for subsequent alterations which the contractor may find necessary as the work proceeds.

5.3.5 The contractor shall provide two copies of the above drawings as modified and approved immediately prior to commencement of Acceptance Testing.

5.3.6 On completion of the contract, a copy of 'as made' drawings shall be supplied in PDF format shall be supplied at the Contractor's expense to the purchaser within one month of Final Completion.

5.3.7 The drawings shall include such details as:

i) Circuit diagrams, wiring diagrams and schematic diagrams of all electrical equipment.

ii) Pneumatic schematics, piping diagrams.

iii) Fully dimensioned detail drawings of all major components and assemblies.

iv) General Arrangement of the trailer.

5.4. MAINTENANCE MANUALS

5.4.1 Four copies of good quality printed instruction manuals per order and electronic version in English and Polish language covering in detail the operation and maintenance of the trailer shall be provided immediately prior to Acceptance Testing. (Per Contract). A PDF copy of the maintenance manual shall also be provided separately.

5.4.2 The following should be included:

Index.

ii) Full technical specification and detailed description of the plant as a whole and of each item of machinery and equipment for guidance of the maintenance staff and management. Where the manufacturer's standard published literature is used, it must be suitably edited to delete irrelevant information.

iii) General arrangement and layout drawings in PDF format (minimum A2 Size), with appropriate cross-referencing to other drawings), schematic diagrams for power and control circuits whether electrical or hydraulic etc. The control sequence shall be fully described. General arrangement drawings should show all leading dimensions, and a visual chart of safe working loads.

iv) Performance characteristics, copies of Works and Site Test Certificates, recommended settings of adjustable features, necessary.

i) Detailed list of all "As-Fitted" drawings as called for under the contract and supplied separately.

ii) Recommended schedules and programme for inspection, lubrication and routine maintenance. Lubrication charts and specifications. Full technical details for operation, adjustment, maintenance and testing of equipment and control.

iii) A means shall be provided for systematic trouble shooting, to enable detection and analysis of faults, with recommendations as to dealing with different types of problems likely to arise. This would take the form of a compendium of cause/effect/solutions based upon experiences reported by users of the equipment split between electrical and mechanical systems.

iv) Dismantling, repair, assembly, setting up and testing procedures and instructions for the whole of the equipment being purchased, fully illustrated. These shall include exploded views of all main components with part numbers shown to assist in dismantling and re-assembling complicated items and for identifying replacement parts.

v) Spare parts lists, Contractor's part numbers and the actual source manufacturers (if applicable), part numbers, together with source manufacturer's address for ease of cross reference identification when ordering.

vi) Special tools and instruments required, if any, for testing, maintenance and repair work.

vii) Description of special safety features such as safety interlocks, limits, indication and warning devices, etc. Testing adjustment and maintenance procedures for such devices and circuits. Special hazards and precautions to be taken by maintenance staff.

6 TRAINING

6.1. Product Training

Vendor shall provide for detailed product training for four Baltic Container Terminal engineers at the Baltic Container Terminal Site for a period of one full working day.

6.1.1 The following should be included:

Training documentation and materials as required. A PDF copy of the training shall also be provided separately.

i)

ii) Certificate of Attendance for each attendee of approved manufacturers training completed.

iii) Details of course content to be submitted with bid.

7 APPENDIX ONE

OPC
Colour Scheme and Asset Number

Chassis: Traffic Orange RAL 2009

Side gather guides and Container Stops : Traffic White,

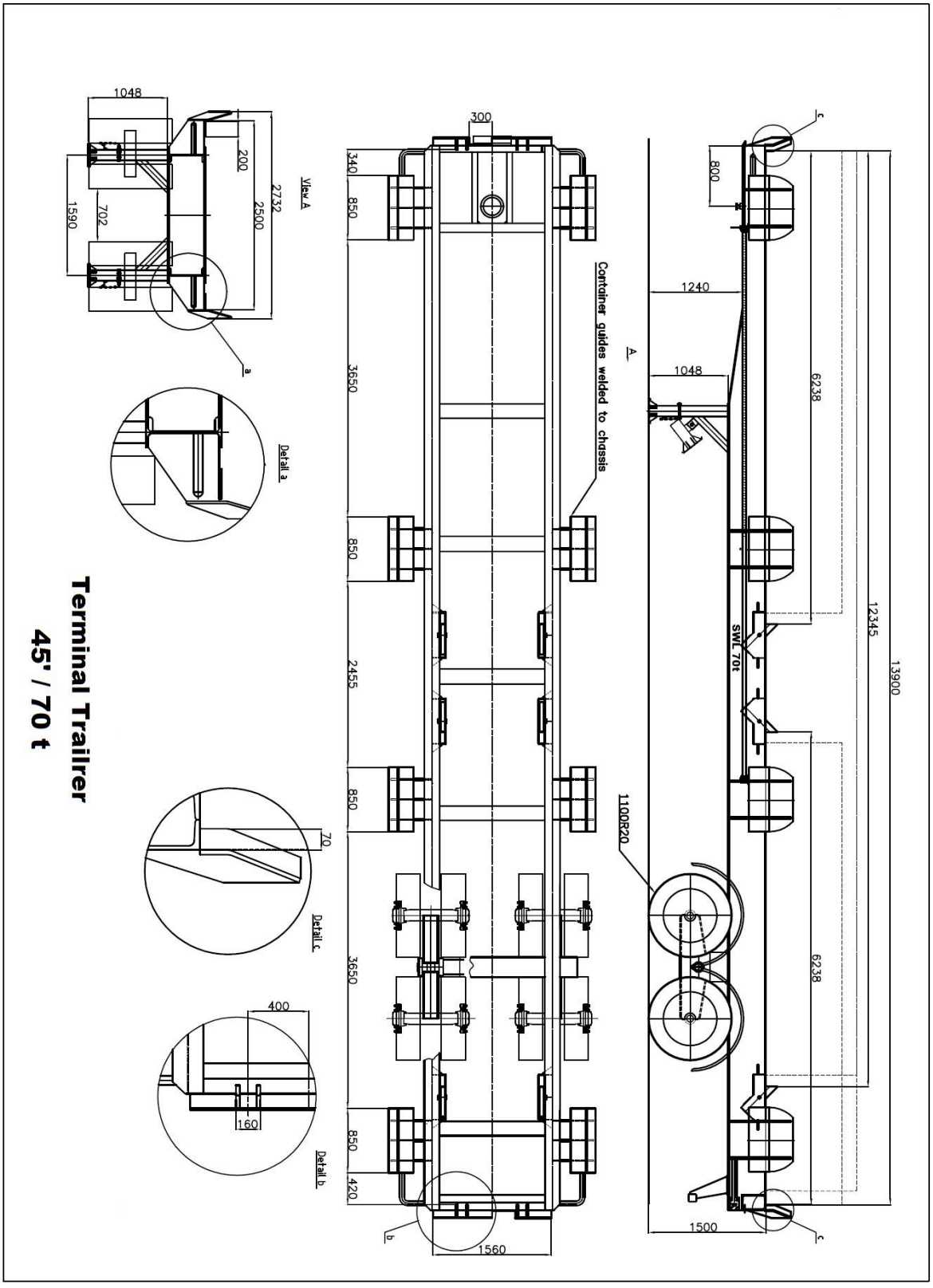
Rear gather guide and rear top section of trailer : Traffic Yellow, RAL 1023

	ASSET NO.
1st Terminal Trailer	TRxxx
2nd Terminal Trailer	
3rd Terminal Trailer	
4^{thj} Terminal Trailer	
5th Terminal Trailer	
6th Terminal Trailer	

Asset Number shall be Arial Bold Black x 400mm high

Drawing No 1

Sample guides arrangement



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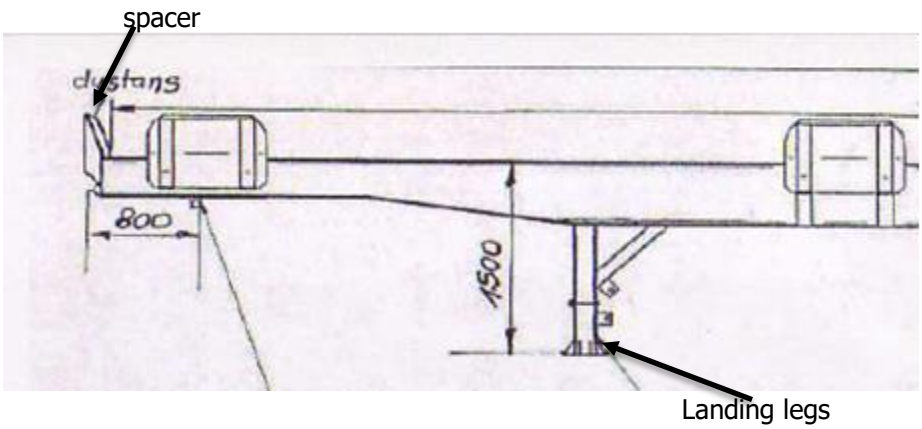

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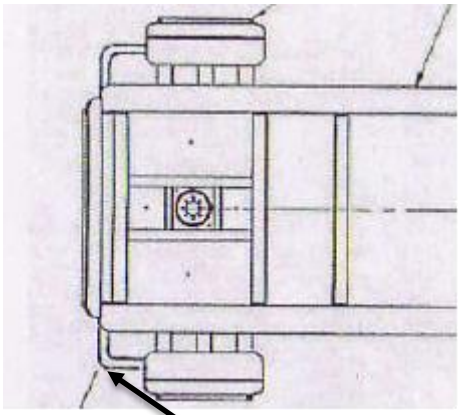

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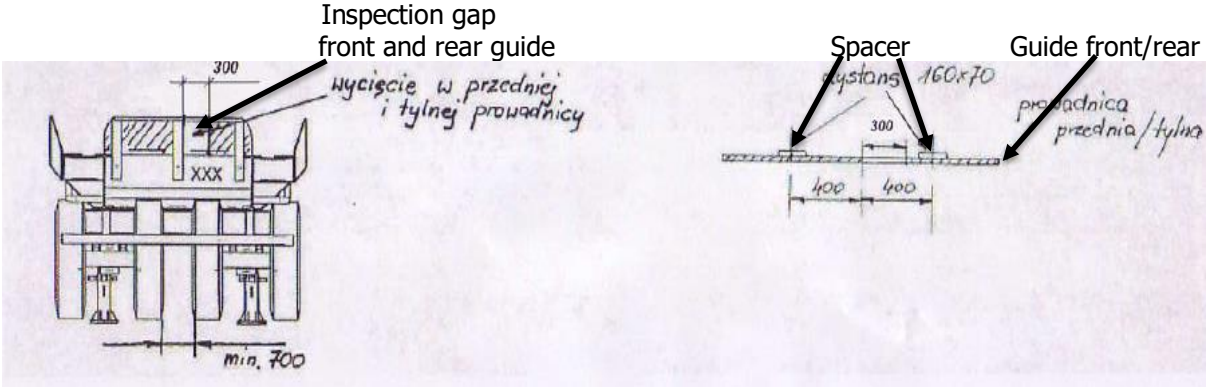

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