

Section 1: General Information

0. Identification of the type

0.1 0.2 0.4 Type ID: 73-010-0004-3-001-001

0.3 Date of record: 2021-11-29

1. General Information

1.1 Type name: Rincalzatrice 08-475 1270

1.2 Alternative type name: Rincalzatrice 08-475 1270 Italia

1.3 Manufacturer:

1.3.1 Manufacturer identification data:

1.3.1.1 Name of organisation: Plasser & Theurer

1.3.1.2 Registered business number:

1.3.1.3 Organisation code:

1.3.2 Manufacturer contact data:

1.3.2.1 Address of organisation, street and number:

1.3.2.2 Town:

1.3.2.3 Country code:

1.3.2.4 Post code:

1.3.2.5 E-mail address:

Registration Method: New Type

Registered Vehicle Type:

1.4 Category: Special Vehicles

1.5 Subcategory: Hauled special vehicle

1.6 Platform: UNIMAT

Section 2: Conformity with TSI

2.1 Conformity with TSI and Sections not complied with:

1435mm / None (for hauled passenger vehicles and special vehicles)

Not conform to any TSI

2.3 Applicable specific cases (specific cases conformity with which has been assessed)

2.2 Reference of 'EC type examination certificates'

Reference of 'EC type examination certificates' - if module SB applied - and/or 'design verification certificate' - if module SH1 applied

Not applicable (module SG applied)

Section 3: Authorisations

Italy

| | |
|--|--|
| 3.0 Area Of Use: | IT(Rete Ferroviaria Italiana (RFI)) |
| 3.1.1 Member state of authorisation: | Italy(IT) |
| 3.1.2.1 Status: | Valid |
| 3.1.2.2 Validity of Authorisation (until): | |
| 3.1.2.3 Coded conditions for use and other restrictions: | 1435mm / None (for hauled passenger vehicles and special vehicles) 1 Technical restriction related to construction 1.1 Minimum curve radius in meters: 150 1.3 Speed restrictions in Km/h: 60 1.4 Use in multiple operation (maximum number of trainsets authorised to be coupled together to operate as a single train): non consentito 2 Geographical restriction 2.1 Kinematic gauge (coding WAG TSI): G1 2.2 Wheelset gauge: 2.2.4 Gauge 1435 3 Environmental restrictions 3.1 Climatic zone: 3.1.1 T1 |
| 3.1.2.4 Non-coded conditions for use and other restrictions: | 1435mm / None (for hauled passenger vehicles and special vehicles) - Circolazione solo a rimorchio - Posizionamento in coda assoluta - Obbligo di controllo manuale della temperatura delle boccole da parte del personale a bordo del mezzo di trazione durante i trasferimenti con percorrenza superiore ai 250 km - Per la sola circolazione a rimorchio in trasferimento, i seguenti documenti devono restare disponibili in cabina: scheda istruzioni per il personale di scorta (doc. 19-20.SI.001 Rev.00), manuale d'emergenza e recupero (doc. 19-20.1.ME Rev.02), scheda di condizionamento delle parti mobili in assetto di trasferimento (doc. 19-20.ST.001 Rev.00) |
| 3.1.3.1.1 Date of the original authorisation: | 2021-10-29 |
| 3.1.3.1.2 Authorisation holder: | |
| 3.1.3.1.2.1 Authorisation holder identification data: | |
| 3.1.3.1.2.1.1 Name of organisation: | Ing. De Aloe Costruzioni S.r.l. |

3.1.3.1.2.1.2 Registered business number: 03395290178

3.1.3.1.2.1.3 Organisation code:

3.1.3.1.2.2 Authorisation holder contact data:

3.1.3.1.2.2.1 Address of organisation, street and number: via Chiesanuova n. 49

3.1.3.1.2.2.2 Town: Brescia

3.1.3.1.2.2.3 Country code: +39

3.1.3.1.2.2.4 Post code: 25125

3.1.3.1.2.2.5 E-mail address: amministrazione@pec.ingdealoeostruzioni.it

3.1.3.1.3 Authorisation document reference: IT8020210186

3.1.3.1.4 Certificate of verification : Reference of type examination or design examination type:

CERT/6/SG/2021/RST/IT/5563-0001/V02 del 11/10/2021

3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:

1435mm / None (for hauled passenger vehicles and special vehicles)

2015/2299/EU

1.1 General documentation

1.2 Maintenance instructions and requirements

1.2.1 Maintenance instructions

1.2.2 The maintenance design justification file

1.3 Instructions and documentation for operation

1.3.1 Instructions for operation in normal and degraded modes of the vehicle

1.4 National requirement for testing

2.1 Vehicle structure

2.1.1 Strength and integrity

2.1.2 Load capability

2.1.2.1 Load conditions and weighed mass

2.1.2.2 Axle load and wheel load

2.1.3 Joining technology

2.1.4 Lifting and jacking

2.1.5 Fixing of devices to car body structure

2.1.6 Connections used between different parts of the vehicle

2.2 Couplers / coupling systems

2.2.3 Conventional screw coupling and other non-automatic coupling systems

- 2.2.4 Buffing
- 2.2.5 Gangways
- 2.3 Passive safety
- 3.1 Vehicle gauge
- 3.2 Vehicle dynamics
 - 3.2.1 Running safety and dynamics
 - 3.2.2 Equivalent conicity
 - 3.2.3 Wheel profile and limits
 - 3.2.4 Track loading compatibility parameters
 - 3.2.5 Minimum horizontal curve radius, vertical concave curve radius, convex curve radius
- 3.3 Bogies / running gear
 - 3.3.1 Bogies
 - 3.3.2 Wheelset (complete)
 - 3.3.3 Wheel
 - 3.3.6 Bearings on the wheelset
 - 3.3.7 Axle shaft
 - 3.3.8 Axle bearing condition monitoring
- 3.4 Limit of maximum longitudinal positive and negative acceleration
- 4.1 Functional requirements for braking at train level
- 4.2 Safety requirements for braking at train level
 - 4.2.1 Reliability of main brake system functionality
 - 4.2.3 Reliability of stopping distance
 - 4.2.4 Reliability of parking brake
- 4.3 Brake system - Recognised architecture and associated standards
- 4.4 Brake command
 - 4.4.5 Parking braking command
- 4.5 Brake performance
 - 4.5.1 Emergency braking performance
 - 4.5.2 Service braking performance
 - 4.5.3 Calculations related to thermal capacity
 - 4.5.4 Parking brake performance
 - 4.5.5 Brake performance calculation
- 4.6 Braking adhesion management
 - 4.6.1 Limit of wheel rail adhesion profile
- 4.7 Braking force production
 - 4.7.1 Friction brake components

- 4.7.1.1 Brake blocks
- 4.8 Brake state and fault indication
- 4.9 Brake requirements for rescue purposes
- 6.1 Impact of the environment on the vehicle
 - 6.1.1 Environmental conditions impacting on the vehicle
 - 6.1.1.1 Altitude
 - 6.1.1.2 Temperature
 - 6.1.1.3 Humidity
 - 6.1.1.4 Rain
 - 6.1.1.5 Snow, ice and hail
 - 6.1.1.6 Solar radiation
 - 6.2.1.3 Chemical and particulate emission
 - 6.2.2.3 Pass-by noise impact
- 7.2.1 Vehicle marking
- 7.2.4 Brackets
- 8.3.4 Earthing
- 8.5 Protection against electrical hazards
- 8.6 Diesel and other thermal traction system requirements
- 8.7.2 Pressure vessel systems/pressure equipment
- 8.7.5 Hydraulic/pneumatic supply and control systems
- 9.5.1.1 Staff access for coupling/uncoupling
- 9.5.1.2 External steps and handrails for shunting staff
- 10.1 Fire protection concept and protection measures
- 10.2.2 Rescue services' information, equipment and access
- 12.2.4 Compatibility of rolling stock with CCS Trackside
 - 12.2.4.1 Minimum axle distance
 - 12.2.4.2 Minimum wheel diameter
 - 12.2.4.3 Metal and inductive components-free space between wheels
 - 12.2.4.4 Metal mass of a vehicle
 - 12.2.4.5 Compatibility with fixed installations of CCS
- 13.2 Ferry transport

3.1.3.1.6 Comments:

3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:

08-475-DR-2021-02 del 11/10/2021

3.1.3.1 Initial Registration

3.1.2.3 Coded conditions for use and other restrictions:

1435mm / None (for hauled passenger vehicles and special vehicles)

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 150

1.3 Speed restrictions in Km/h: 60

1.4 Use in multiple operation (maximum number of trainsets authorised to be coupled together to operate as a single train): non consentito

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.4 Gauge 1435

3 Environmental restrictions

3.1 Climatic zone: 3.1.1 T1

3.1.2.4 Non-coded conditions for use and other restrictions:

1435mm / None (for hauled passenger vehicles and special vehicles)

- Circolazione solo a rimorchio

- Posizionamento in coda assoluta

- Obbligo di controllo manuale della temperatura delle boccole da parte del personale a bordo del mezzo di trazione durante i trasferimenti con percorrenza superiore ai 250 km

- Per la sola circolazione a rimorchio in trasferimento, i seguenti documenti devono restare disponibili in cabina: scheda istruzioni per il personale di scorta (doc. 19-20.SI.001 Rev.00), manuale d'emergenza e recupero (doc. 19-20.1.ME Rev.02), scheda di condizionamento delle parti mobili in assetto di trasferimento (doc. 19-20.ST.001 Rev.00)

3.1.3.1.1 Date of the original authorisation:

2021-10-29

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3.1.3.1.2.1.1 Name of organisation:

Ing. De Aloe Costruzioni S.r.l.

3.1.3.1.2.1.2 Registered business number:

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3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:

08-475-DR-2021-02 del 11/10/2021

Section 4: Technical Characteristics

4.1.3 Wheel set gauge RC 1435 mm

4.1.12 Number of vehicles composing the fixed formation (for fixed formation only)

2

4.10.1 Energy supply system (voltage and frequency) RC

None (for hauled passenger vehicles and special vehicles)

4.1.2 Speed

4.1.2.1 Maximum design speed 1435mm / None (for hauled passenger vehicles and special vehicles)

60

km/h

4.2.1 Reference profile RC

G1

GI2 (Specific case Spain – lower parts)

4.3.1 Temperature range

T1 (-25 to +40)

4.3.3 Snow, ice and hail conditions

Nominal

4.4.1 Fire safety category RC

OTM

4.5.2 Design mass

4.5.2.1 Design mass in working order

88100

kg

4.5.2.2 Design mass under normal payload

91100

kg

4.5.2.3 Design mass under exceptional payload RC

91100

kg

4.5.3 Static axle load

4.5.3.1 Static axle load in working order

14900

kg

4.5.3.2 Static axle load under normal payload

14900

kg

4.5.3.3 Static axle load under exceptional payload RC

14900

kg

| | | | | | |
|---|--|--|--|---------|----|
| 4.5.3.4 Position of the axles along the unit (axle spacing) : a: Distance between axles b: Distance from end axle to the end of the nearest coupling plane c: distance between two inside axles | 1435mm / None (for hauled passenger vehicles and special vehicles) | a: 0011,50 m b: 0003,07 m c: 0001,50 m | Explanations: Vehicle 1 (5 axles vehicle) a: 0007,00 m b: 0003,12 m c: 0007,00 m Explanations: Vehicle 2 (2 axles vehicle) | | |
| 4.5.5 Total vehicle mass (for each vehicle of the unit) | 1435mm / None (for hauled passenger vehicles and special vehicles) | 65000 | kg | | |
| 4.5.6 Mass per wheel | 1435mm / None (for hauled passenger vehicles and special vehicles) | 7700 | kg | | |
| 4.6.4 Combination of maximum speed and maximum cant deficiency for which the vehicle was assessed RC | 1435mm / None (for hauled passenger vehicles and special vehicles) | 0000,00 | km/h | 0000,00 | mm |
| 4.6.5 Rail inclination RC | 1435mm / None (for hauled passenger vehicles and special vehicles) | 1/20 | | | |
| 4.7.1 Maximum average deceleration | | 1 | m/s ² | | |
| 4.7.2.1 Brake performance on steep gradients with normal payload | | | | | |
| 4.7.2.1.1 Reference case of TSI | | Reference case (60 km/h, 21‰ (mm/m), 45 min) | | | |
| 4.7.2.1.6 Maximum brake thermal energy capacity | 1435mm / None (for hauled passenger vehicles and special vehicles) | 0 | kJ | | |
| 4.7.3 Parking brake | | | | | |
| 4.7.3.3 Maximum gradient on which the unit is kept immobilized by the parking brake alone (if the vehicle is fitted with it) | | 51 | ‰ (mm/m) | | |
| 4.7.4.1 Eddy current brake | | | | | |
| 4.7.4.1.1 Eddy current track brake fitted RC | | False | | | |
| 4.7.4.2 Magnetic brake | | | | | |

| | | | | | |
|--|--|------------|--------|----------|------------------|
| 4.7.4.2.1 Magnetic track brake fitted RC | | False | | | |
| 4.7.4.3 Regenerative brake (only for vehicles with electrical traction) | | | | | |
| 4.7.4.3.1 Regenerative brake fitted RC | | False | | | |
| 4.7.5 Emergency brake : Stopping distance and deceleration profile for each load condition per design maximum speed | 1435mm / None (for hauled passenger vehicles and special vehicles) | a: 0329,00 | m | 0000,75 | m/s ² |
| a: Load condition: working order | | b: 0348,00 | m | 0000,71 | m/s ² |
| b: Load condition: normal payload | | c: 0000,00 | m | 0000,00 | m/s ² |
| c: Load condition: exceptional payload | | | | | |
| 4.7.6 For general operation : Brake weight percentage (lambda) or Braked mass | 1435mm / None (for hauled passenger vehicles and special vehicles) | 092,10 | (%) or | 00077,00 | tonnes |
| 4.7.7 Service brake: At maximum service brake: Stopping distance, Maximum deceleration, for the load condition 'design mass under normal payload' at the design maximum speed. | 1435mm / None (for hauled passenger vehicles and special vehicles) | 0348,00 | m | 0000,71 | m/s ² |
| 4.7.8 Wheel slide protection system | 1435mm / None (for hauled passenger vehicles and special vehicles) | False | | | |
| 4.8.1 Vehicle length | | 33190 | m | | |
| 4.8.2 Minimum in-service wheel diameter RC | | 690 | mm | | |
| 4.8.4 Minimum horizontal curve radius capability RC | | 150 | m | | |
| 4.8.5 Minimum vertical convex curve radius capability | | 1000 | m | | |
| 4.8.6 Minimum vertical concave curve radius capability | | 1000 | m | | |
| 4.9.1 Type of end coupling | Manual | | | | |

4.9.2 Axle bearing
condition monitoring
(hot axles box detection)
RC

Manually
detected with
specific
procedure

4.14.1 Type of train
detection systems for
which the vehicle has
been designed and
assessed RC

Track circuits
Axle counters