

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

18 March 2024

Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods

Bern, 25-28 March 2024

Item 3 of the provisional agenda:

Standards

Publication of the 3rd edition of International Railway Solution (IRS) 50592

Transmitted by the International Union of Railways (UIC)

I. Proposal

1. RID/ADR:

6.11.4.1 Amend footnote 3 to read:

“³Third edition of IRS (International Railway Solution) applicable as from
1 December 2023.”

7.1.3 Amend footnote 2 to read:

“²Third edition of IRS (International Railway Solution) applicable as from
1 December 2023.”

II. Justification

2. The UIC IRS 50592 “Intermodal Loading Units (other than semi-trailers) for vertical transshipment and suitable for carriage on wagons – Minimum requirements” is referenced in the footnotes under 6.11.4.1 and in 7.1.3 of RID/ADR. This IRS was updated and published in a third edition in December 2023. The above proposal brings the reference to the IRS in line with this new edition.

3. The modifications presented in this document have been:

- proposed by the UIC Combined Transport Working Group (CTWG) that is composed of experts from railway undertakings, infrastructure managers, wagon keepers, manufacturers, combined transport operators and certification bodies,
- endorsed by the Sector Expert Team “Freight related items” (SET_03) that is composed of experts from railway undertakings, infrastructure managers, wagon keepers, manufacturers, combined transport operators and certification bodies,
- endorsed by the Rolling Stock Sector (RSS), and
- preliminarily adopted by the RID Committee of Experts’ standing working group (see report OTIF/RID/CE/GTP/2023-A).

4. The following modifications have been made:
 - chapter 4 updated,
 - points 6.2.1.1, 6.2.1.2 updated, and
 - appendices D, E, G and P updated.
5. For chapter 4, see annex 1 (changes to the text highlighted in yellow).

Added requirement to prevent interference in the grab handling grooves area, i.e., between the grab handlers and TIR fastening ropes.
6. For points 6.2.1.1 and 6.2.1.2, see annex 2 (text highlighted in yellow).

Point 6.2.1.1:

 - Title modified to improve understanding,
 - Modification of the text to make it compliant with the requirements of EN 283,
 - Extension of the ILUs for which the test under a test load of 2R is mandatory from length codes 40 to 53 and 81 to 98 to length codes 30 to 53 and 81 to 98.

Point 6.2.1.2:

Title modified in accordance with the modifications introduced in point 6.2.1.1.
7. For Appendix D, see figures in annex 3.

The drawings in Appendix D of the 2nd edition are obsolete. They have been replaced by a new drawing.
8. For Appendix E, see figure in annex 4 (text highlighted in yellow).

Marking (Fig. 23) modified in accordance with the modifications introduced in point 6.2.1.1.
9. For Appendix G, see annex 5 (text highlighted in yellow).

Title modified in accordance with the modifications introduced in point 6.2.1.1.
10. For Appendix P, see annex 6 (text highlighted in yellow).

Editorial modifications to the related marking (fig. 36).

Annexes from 1 to 6

4 Requirements for the ILU/transshipment devices interface

To enable handling by crane or other means of transshipment, all ILUs shall be fitted with:

- upper fittings in accordance with ISO 1161 (see References documents - page 5) or Appendix I - page 446 and/or
- grab-handling grooves in accordance with Appendix C, point C.2 - page 38 and EN 284 or EN 452 depending on the length of the ILU. To enable the grab handlers to be applied safely, these areas must be fully clear, thus preventing any interference with the grab handlers. For example, the presence of TIR fastening ropes is prohibited in this area.
- optionally, the bottom fittings may have openings for transshipment by rope slings. If the bottom fittings have such openings, these must comply with Appendix D - page 39 and have undergone testing against point 6.10 - page 24. Rope sling openings not tested for use in transshipment must be modified such that it is not possible to use them for this purpose.

6 – Strength tests

6.1 Strength tests of standard ILUs

ILUs are satisfactory so long as they meet the conditions of *ISO 1496-1 to 5*.

6.2 Tests of ILUs not compliant with *ISO 668* and not tested against *ISO 1496*

6.2.1 Railworthiness

The purpose of this test is to prove the ability of the ILU to withstand the vertical forces under the dynamic conditions encountered in railway operations when it is designed:

- to be carried on pocket wagons without intermediate supports or
- to be carried only on pocket wagons with intermediate supports.

The markings to apply to these ILUs are provided in the Point 8.7 of this IRS.

6.2.1.1 ILUs designed for transportation on pocket wagons without intermediate supports

The uniformly loaded ILU must be positioned on 4 rigid stands. During the test, the combined mass of swap body and test load must be 1.5 R.

The stands, which have approximately the same dimensions as the securing devices, must be on the same level and be located centrally under the securing devices.

The relevant position of the securing devices which are used for rail transport must be considered.

The ILU must be free to deflect during the test and must be able to accommodate this condition for at least 5 minutes.

After the test, the ILU must not show any permanent deformations or other changes that preclude its intended use.

The dimensions required for handling, securing and transshipment must be maintained.

The test procedure for ILUs with length codes 30 to 53 and 81 to 98 designed for transportation on pocket wagons without centre supports must be the same as required above except that, in this case, the combined mass of the ILU and test load shall be 2 R.

These ILUs must not be transported with intermediate support on pocket wagons and must be marked in accordance with [point 8.7.1](#) of this IRS.

The maximum elastic deflection of the ILU must not exceed 6 mm in the area below corner fittings for a total mass of 1R.

6.2.1.2 ILUs with length codes 30 to 53 and 81 to 98 designed for transportation on pocket wagons with intermediate supports

The test shall be carried out at 1.5 R. In addition, during a second test, stands for the intermediate supports shall be placed on either side of the unit, at the same height as those placed halfway along the unit. During the test, the force acting on either side of the intermediate supports shall not exceed the maximum value of 75 kN.

If it is not possible to conduct the test as explained above, the approving body shall be free to accept the manufacturer's own FEM calculations if these have been verified

Appendix D: Bottom fittings

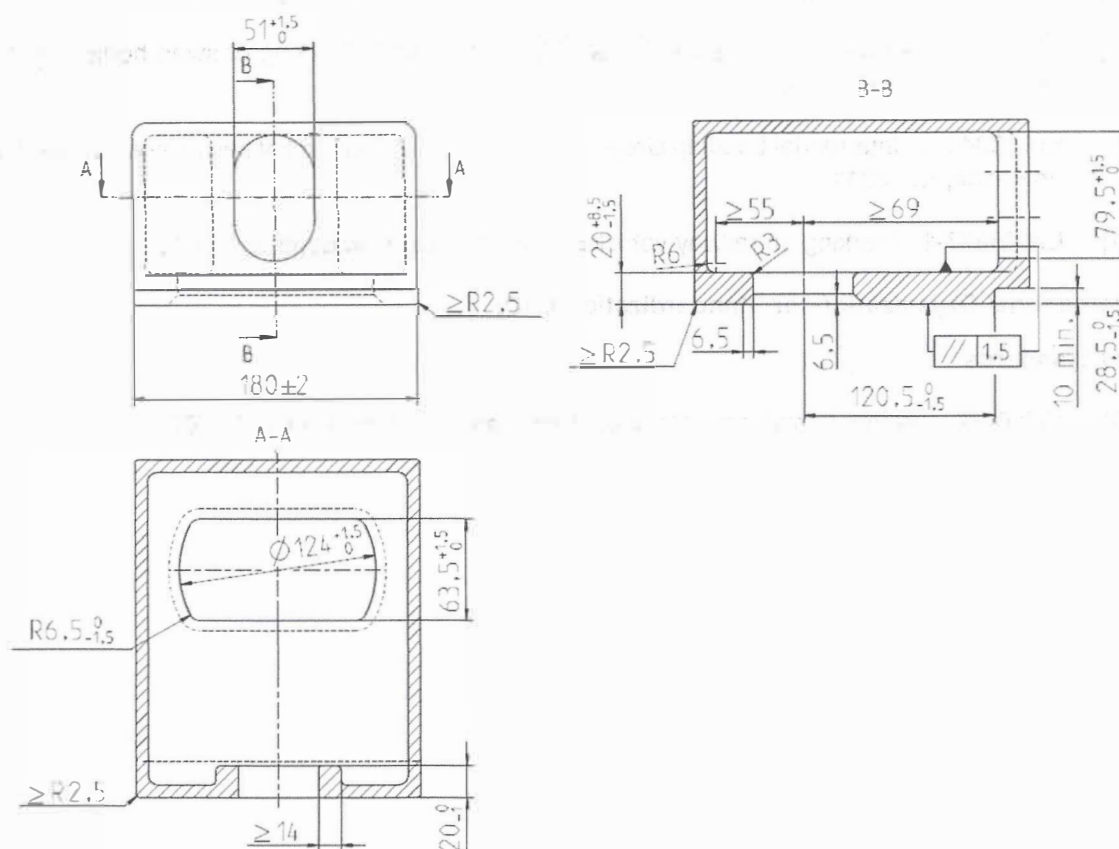


Fig. 20 - Bottom fittings

Note: The base plate of the bottom fittings must be the lowest point on the ILU in all cases.

Appendix E: Marking for ILUs suitable for the transport on pocket wagons

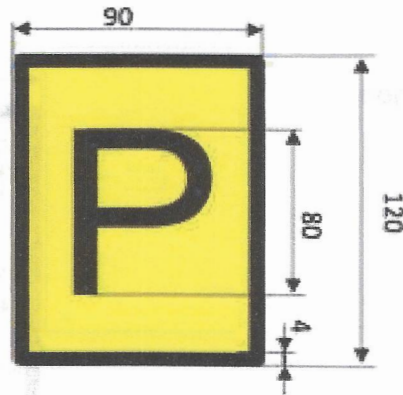


Fig. 21 – Marking for ILUs that are suitable for the transport on all types of pocket wagons (see point 8.7.1 – page 30)

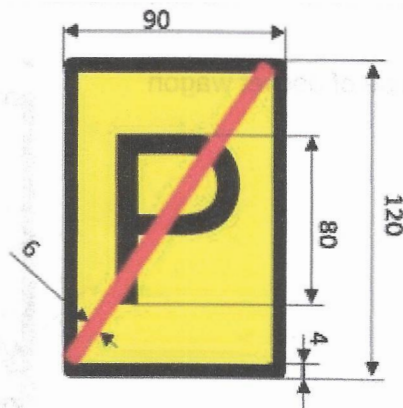


Fig. 22 - Marking for ILUs that are not suitable for the transport on any type of pocket wagons (see point 8.7.3 – page 30)

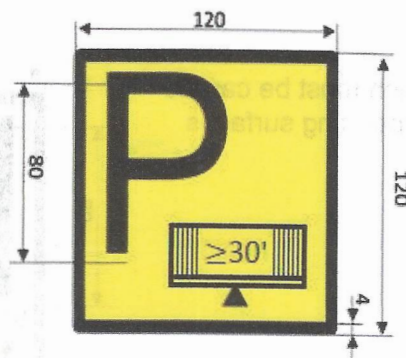
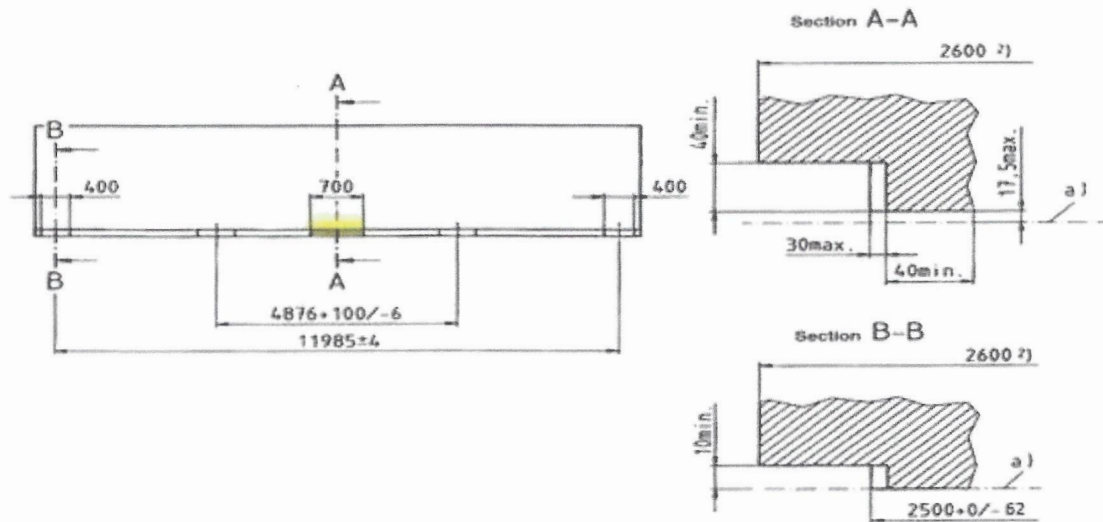


Fig. 23 - Marking for ILUs equal to or longer than 30 feet which must be transported on pocket wagons with intermediate supporting surfaces (see point 8.7.2 - page 30)

Appendix G: Intermediate support surfaces for ILUs with length code 30 to 53 and 81 to 98

The "Intermediate support surfaces" marking on ILU must be 700 mm wide and minimum 100 mm high. Mark using yellow or a contrasting colour.



1) This ILU width can be 2930 mm maximum for ILUs of point 1.11 (see also Appendix A)

Fig. 27 – Dimensions and location of the intermediate support surfaces

Appendix P: Marking for swap bodies with tarpaulins for securing the cargo

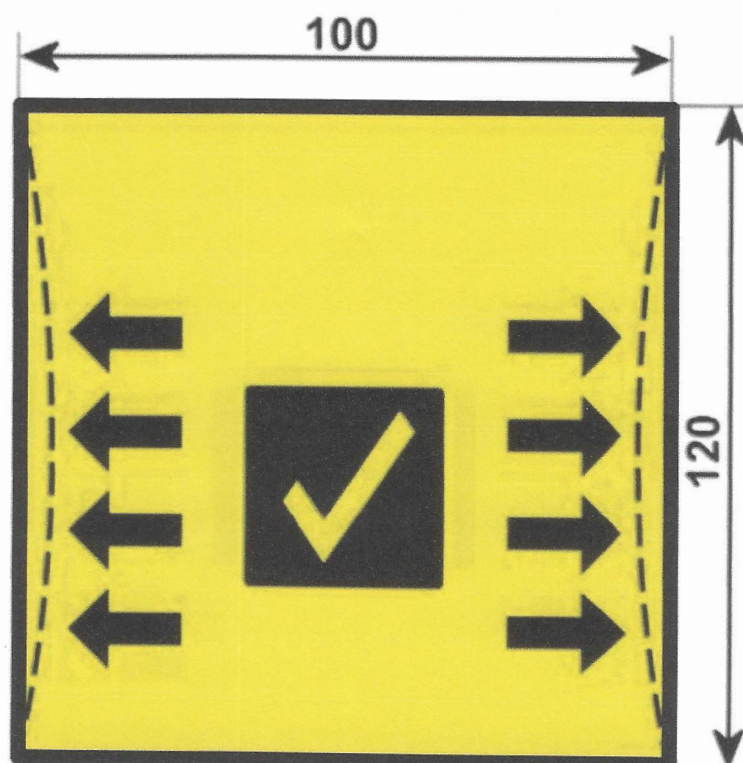


Fig. 36 - Marking for swap bodies with tarpaulins for securing the cargo