IU

Interunit Technical Committee

Unaccompanied Combined Transport

Guide on Coding and Certification

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Combined transport

1.Preamble

In combined transport, the higher sections of most ITUs (**I**ntermodal **T**ransport **U**nits) foul the loading gauge in various European countries when the units are loaded on wagons or bogies. Their carriage must therefore be covered by the procedure for exceptional consignments as per UIC Leaflet 502 (International Union of Railways). The cumbersome nature of the procedure has made it necessary to make the rules less strict.

In order to facilitate and speed up transport in a reliable manner, a coding system for various elements of combined transport was established. The system ensures safe operation of ITUs, indicates their loading gauges and ensures the owner is identified.
UIC Leaflet 596-6 sets out the prescriptions for this system regarding ITUs, carrier wagons and lines. The system, which ensures safe operations, has been applied for several decades by various companies in the combined transport chain. Those who do not wish to apply the UIC 596-6 procedure are obliged to take organisational measures which ensure the same level of reliability.

In this context UIRR (the International Union of combined Road-Rail transport companies), in its capacity as representative and promoter of CT (**C**ombined **T**ransport) and at the initiative of its Interunit Technical Committee working in cooperation with UIC, is publishing the present guide to be used as a reference by all stakeholders in the sector.

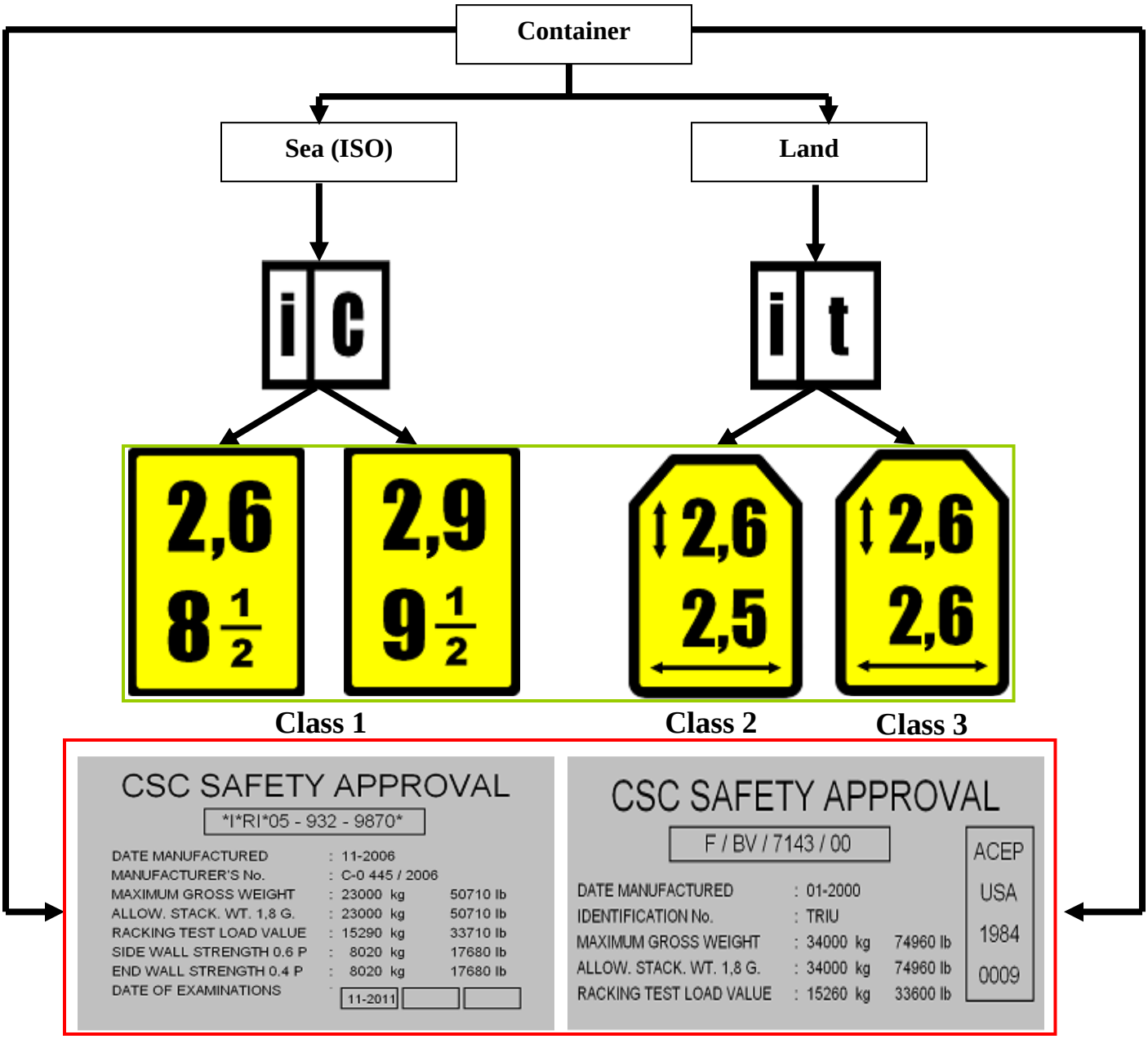
The present document is a reflection of the current situation. Some UIC leaflets are being revised and the content of others is being transferred into CEN standards.

2.List of ITUs

2.1.Containers

A container is a unit with standardised dimensions used in sea and land transport. Their marking and identification must comply with ISO 6346 (**I**nternational **S**tandard **O**rganisation) for sea containers and UIC Leaflet 592 for land containers.

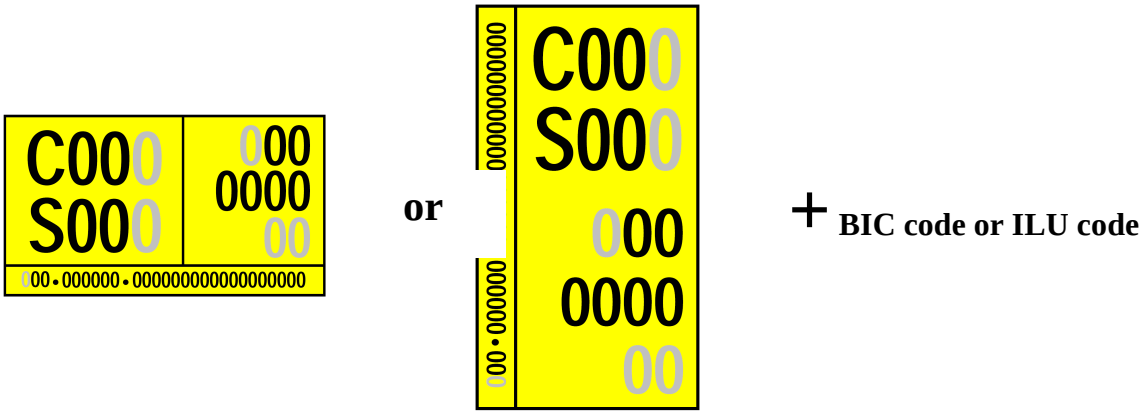
Identification of loading gauge and approval - examples of markings



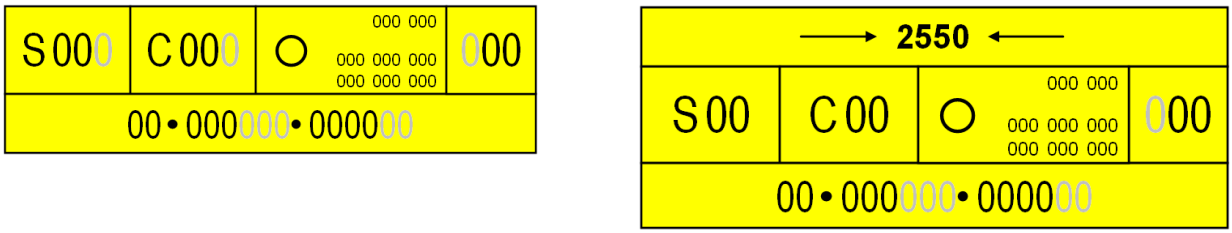
2.2.Swap bodies

A swap body is a road vehicle structure with dimensions and certain devices that are **standardised**. These bodies, approved for international traffic, must include a coding plate on each side wall comprising black markings on a yellow background according to the templates presented below (source: UIC Leaflet 596-6 and EN13044).

New plate format in force as of 1-7-2011



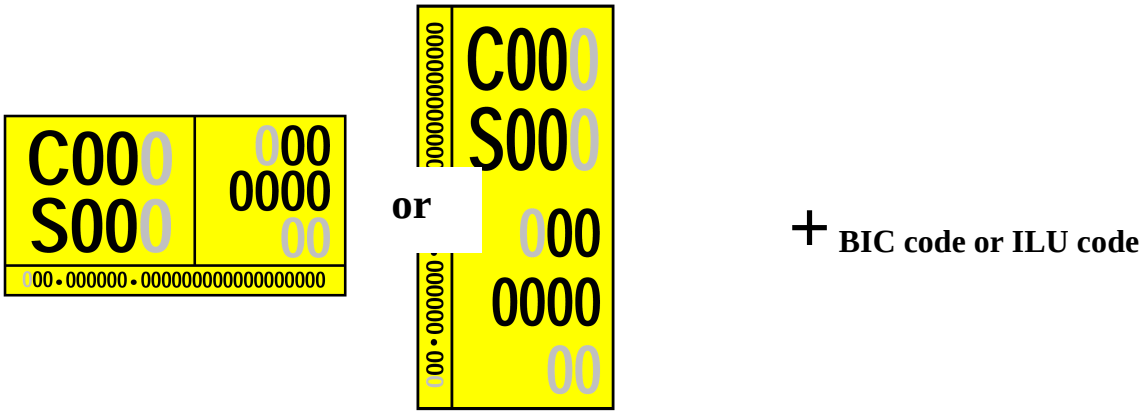
Existing plate format expiring on 1-7-2019



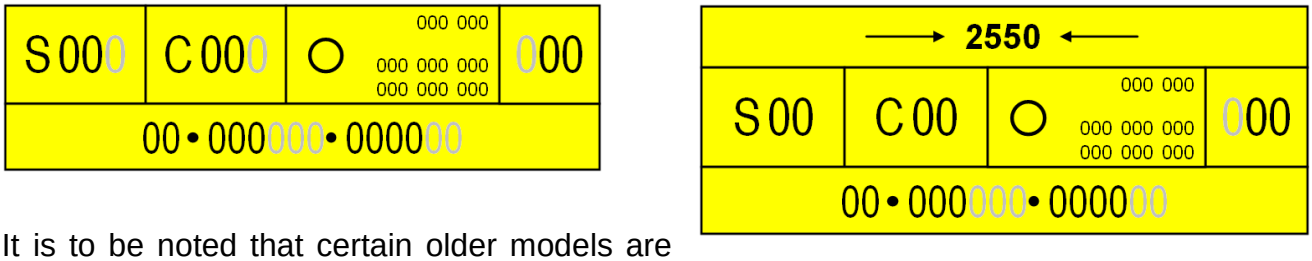
2.3.Hybrid units

A hybrid unit is a structure with **non-standardised** dimensions (length, width and/or weight). These units are a hybrid between land containers and swap bodies, are approved for international traffic and must include a coding plate on each side wall comprising black markings on a yellow background according to the templates presented below (source: UIC Leaflet 596-6 et EN13044).

New plate format in force as of 1-7-2011



Existing plate format expiring on 1-7-2019



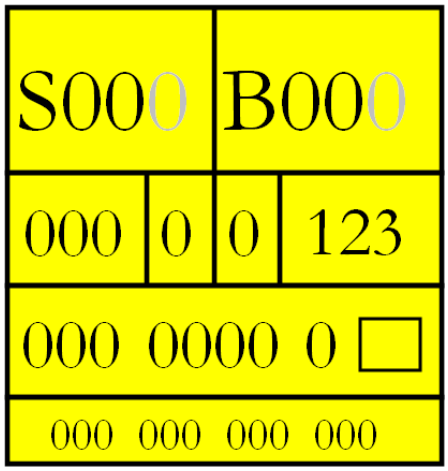
It is to be noted that certain older models are still not fitted with coding plates; however most of them bear markings according to the following table.

X, XX	Y, YY	
	≤ 2550	≤ 2600
	C/S	C/S
2455	00	330
2555	10	340
2605	15	345
2625	17	347
2650	20	350
2675	22	352
2700	25	355
2740	29	359
2755	30	360
2905	45	375
2970	52	382
3005	55	385
3050	60	390

2.4.Demountable bodies

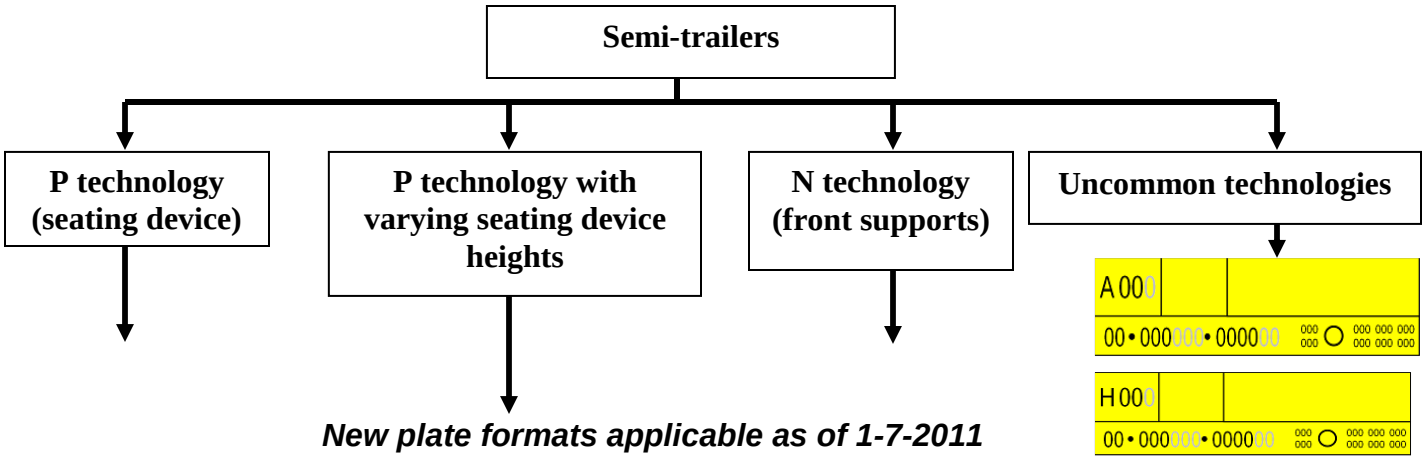
A demountable body for road transport has dimensions and certain devices that are standardised, and is loaded through horizontal transhipment.

These bodies are approved as per UIC Leaflet 591, suitable for international traffic and must include a coding plate on each side wall comprising black markings on a yellow background according to the template presented below (source: UIC Leaflet 596-6).

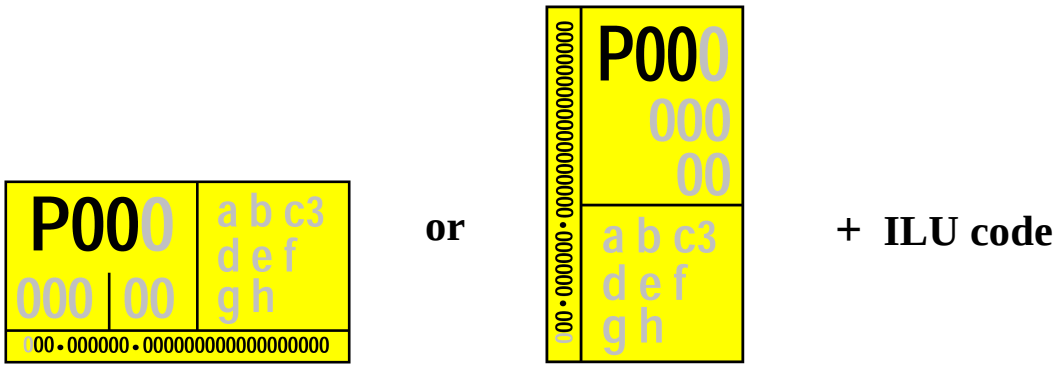


2.5.Semi-trailers

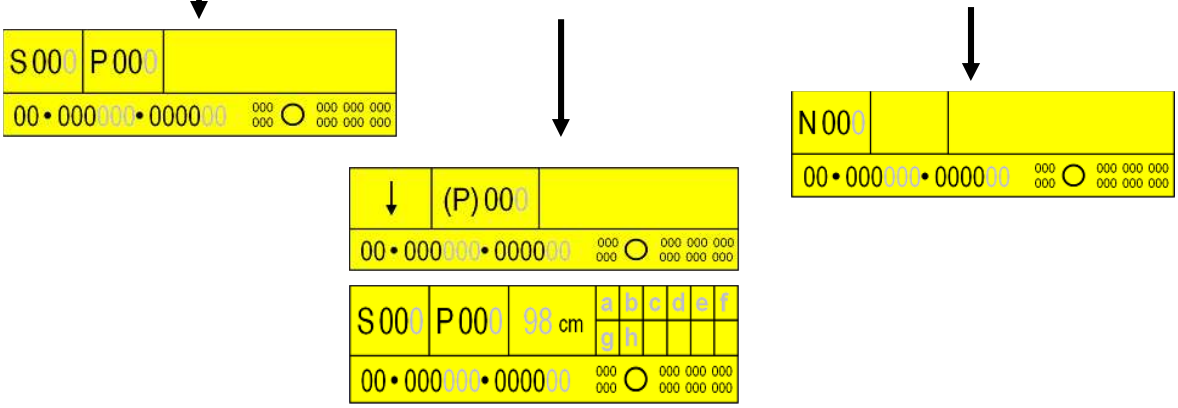
A semi-trailer may be transported separately from the tractor unit on suitable wagons if it is fitted with specific devices and a strengthened structure. These approved units, suitable for international traffic, must include on each side wall a coding plate comprising markings in black on a yellow background according to one of the templates presented below (source: UIC leaflets 596-5 and 596-6 and EN13044).



New plate formats applicable as of 1-7-2011



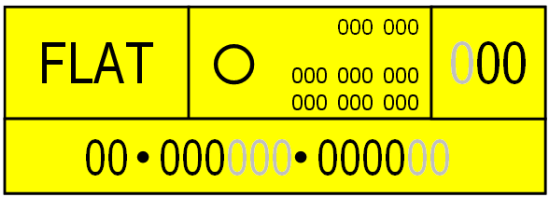
Existing plate format expiring on 1-7-2019



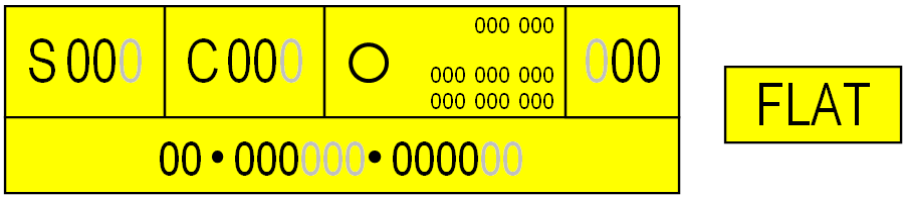
2.6.Flat units

Flat units have the structure of a road vehicle and are uniform in terms of dimensions and certain devices. They may be fitted with collapsible end walls and transported in stacks when empty. These approved units, suitable for international traffic, must include on each side wall a coding plate comprising markings in black on a yellow background according to the templates presented below (source: UIC Leaflet 592).

Units without end walls



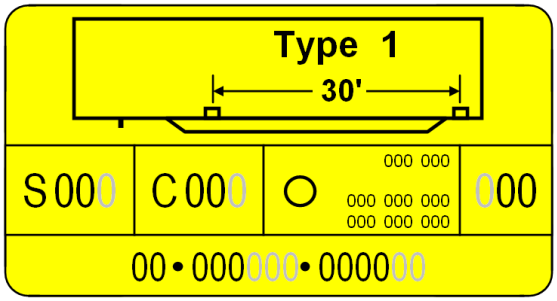
Units with end walls

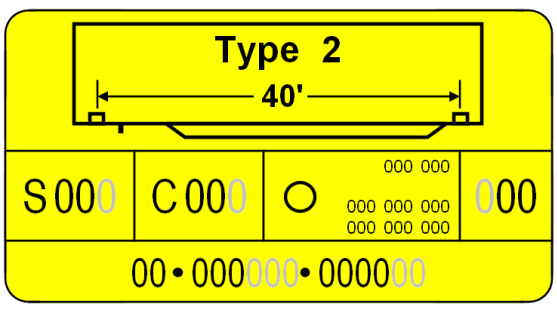


2.7.Specialised units

2.7.1. ARCUS systems

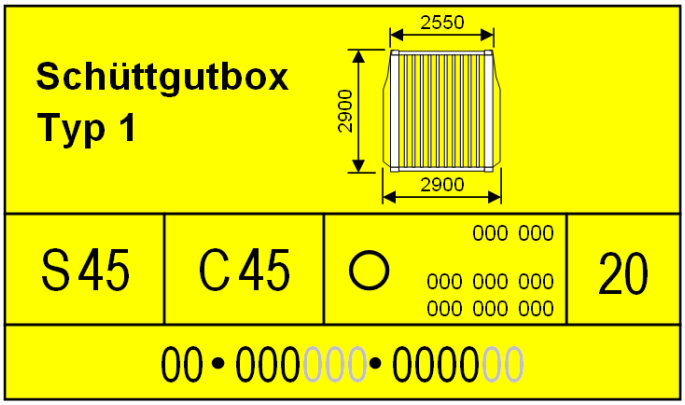
Specialised units have the structure of a road vehicle with a design that makes the use of specialised wagons necessary. These approved bodies, suitable for international traffic, must include on each side wall a coding plate comprising markings in black on a yellow background according to the templates presented below (source: UIC Leaflet 592).





2.7.2. Units with broad lower parts

These specialised units, which are broader in the lower part of the loading gauge, have an identical structure to containers. They are approved and suitable for international traffic, and must include on each side wall a coding plate comprising markings in black on a yellow background according to the templates presented below (source: UIC Leaflet 592).



3.List of wagons

3.1.Swap body, container and hybrid unit carrier

Suitable wagons with specific fittings capable of being operated in international traffic must comply with the prescriptions of UIC Leaflet 571-4.

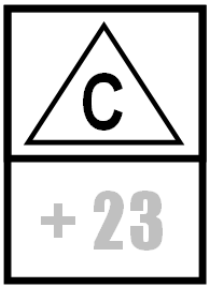
Each of their girders must include a marking in black on a yellow background according to the template below (source: UIC Leaflet 596-6 and the GCU – **G**eneral **C**ontract of **U**se for wagons, Appendix 11).

If necessary a corrective number takes into account any difference between the geometric characteristics of the carrier wagons and those of a standard wagon. It is determined as per UIC Leaflet 596-6.

Standard wagon

Wagon with unfavourable characteristics

Wagon with favourable characteristics



3.2.Demountable body carrier

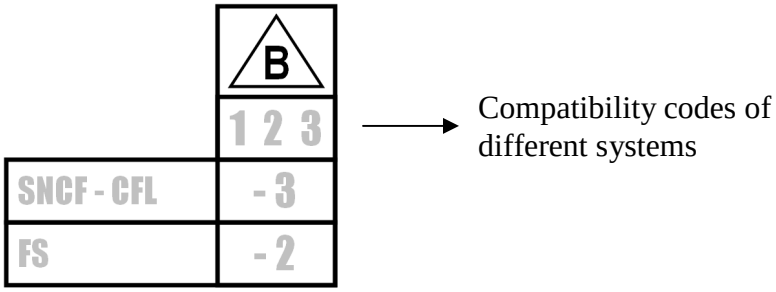
Suitable wagons with specific fittings capable of being operated in international traffic must comply with the prescriptions of UIC Leaflet 571-4.

Each of their girders must include a marking in black on a yellow background according to the template below (source: UIC Leaflet 596-6 and Appendix 11 to the GCU).

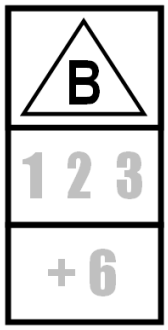
If necessary a corrective number takes into account any difference between the geometric characteristics of the carrier wagons and those of a standard wagon. It is determined as per UIC Leaflet 596-6.

Standard wagon

Wagon with unfavourable characteristics



Wagon with favourable characteristics



3.3.Semi-trailer carrier

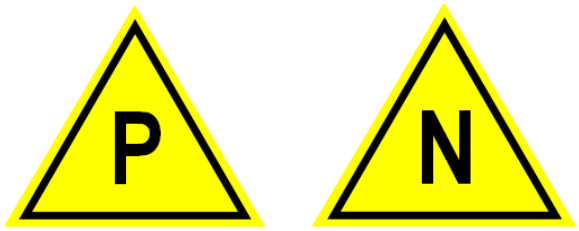
Suitable wagons with specific fittings capable of being operated in international traffic must comply with the prescriptions of UIC Leaflet 571-4.

Each of their girders must include a marking in black on a yellow background according to the template below (source: UIC Leaflet 596-6).

The identification letter for pocket wagons with defined clearance envelopes (compatibility codes according to the height of the seating device) is determined according to the prescriptions of UIC Leaflet 596-5.

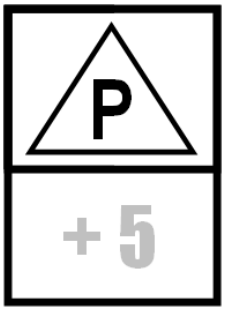
If necessary a corrective number takes into account any difference between the geometric characteristics of the carrier wagons and those of a standard wagon. It is determined as per UIC Leaflet 596-6.

Standard wagon



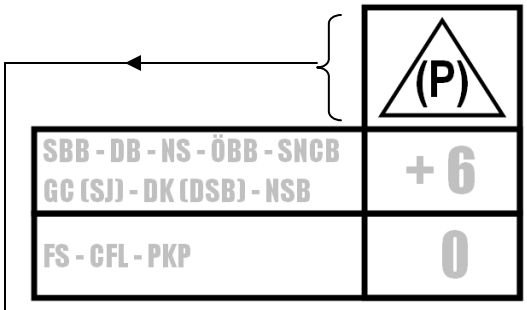
Wagon with unfavourable characteristics

Wagon with favourable characteristics

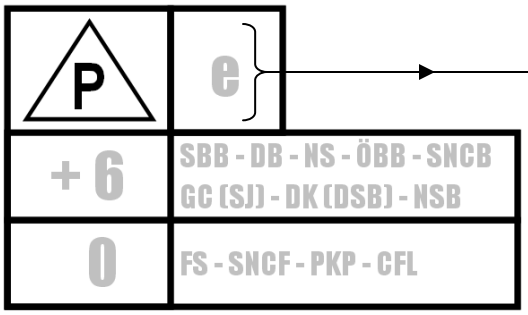


Wagon with a defined envelope

Former marking



New marking

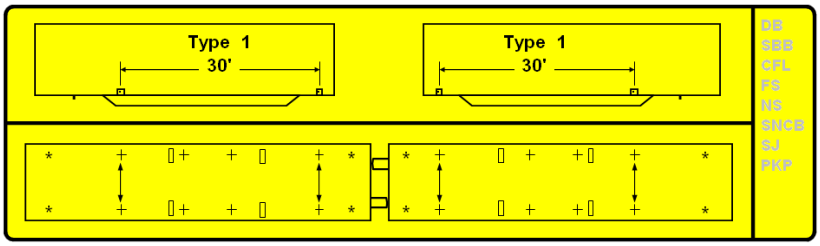


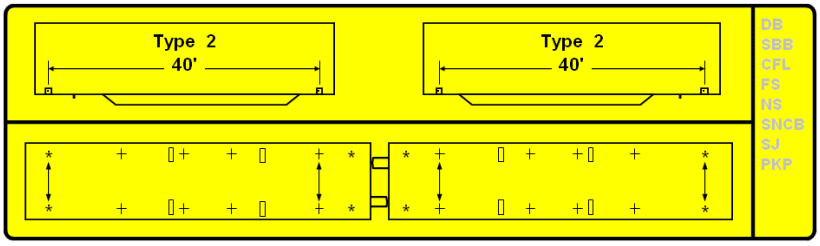
		Wagon type	Seating device height		
		Pocket wagon 1a, 1b	113 cm	⇦	P
(P)	⇨	Pocket wagon 4	113 / 98 cm	⇦	P a
(P)	⇨	Pocket wagon 739 / 744	113 / 98 cm	⇦	P b
		Pocket wagon 2000	113 / 98 cm	⇦	P c
(P)	⇨	Pocket wagon Mega 2	113 / 98 / 85 cm	⇦	P d
(P)	⇨	Pocket wagon 5	113 / 98 / 88 cm	⇦	P e
		Pocket wagon 3000	113 / 98 / 88 cm	⇦	P f
		Pocket wagon Twin	113 / 98 / 88 cm	⇦	P g
(P)	⇨	Pocket wagon 4.2	113 / 98 cm	⇦	P h

3.4.Specialised unit carrier

Suitable wagons with specific fittings capable of being operated in international traffic must comply with the prescriptions of UIC Leaflet 571-4.

Each of their girders must include a marking in black on a yellow background according to the templates below (source: UIC Leaflet 592).





4.Lines

4.1.Maximum line capacities

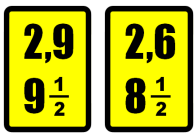
The coding of lines on the European network is drawn from the map published by the UIRR Interunit Technical Committee. The map is published on the following website: www.uirr.com.

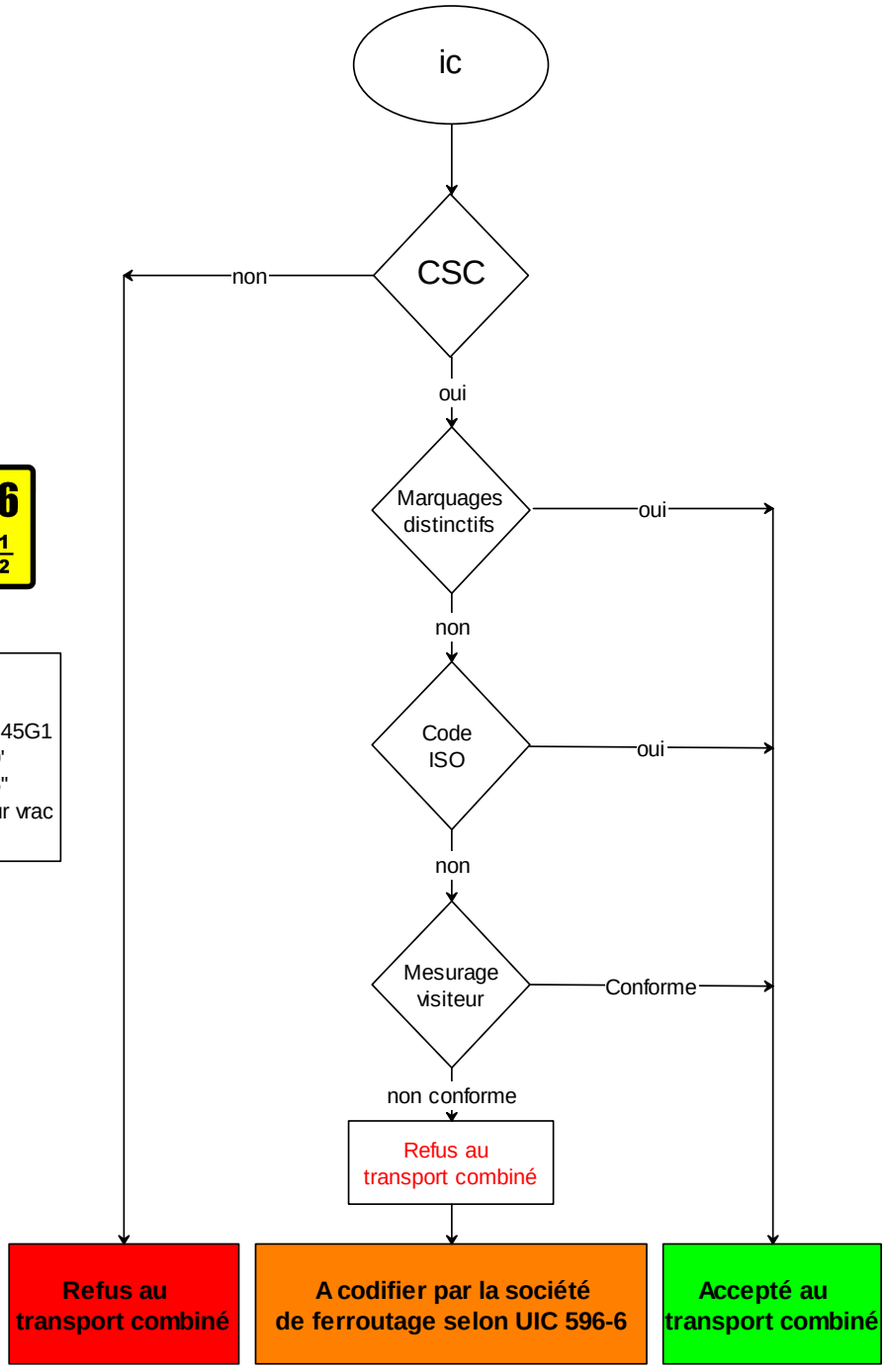
4.2.Restricted line capacities

The coding system for maximum admissible limits for ordinary consignments is set out in table 2, sheet 9.1 of Section 2 of the UIC Loading Guidelines currently in force. The sheet is available on the following website: www.uic.org.

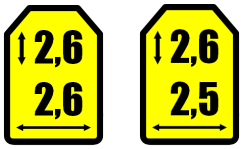
5.Procedures for identifying and accepting consignments

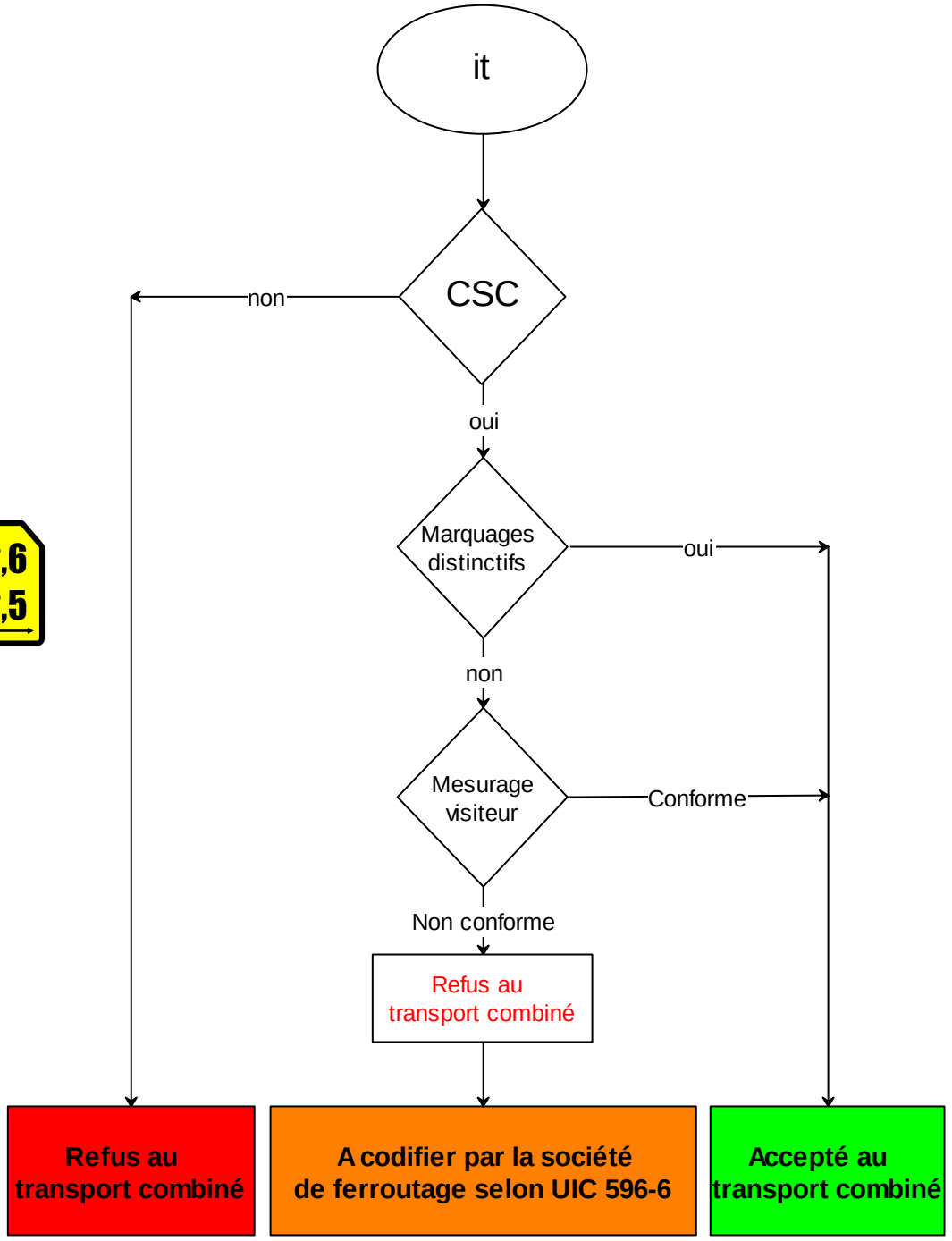
Reconnaissance et acceptation des conteneurs standardisés ISO (ic)

Identification	Classe I Largeur: 2438 mm
Conformité	
Marquage	
Code de dimensions ISO-6346	Exemple Identification : 45G1 4 = Ct 40' 5 = Ct 9'6" G1 = conteneur vrac
Contrôle dimensionnel	



Reconnaissance et acceptation des conteneurs terrestres (it)

Identification	Classe II: 2500 x 2600 Classe III: 2600 x 2600
Conformité	
Marquage	
Contrôle dimensionnel	

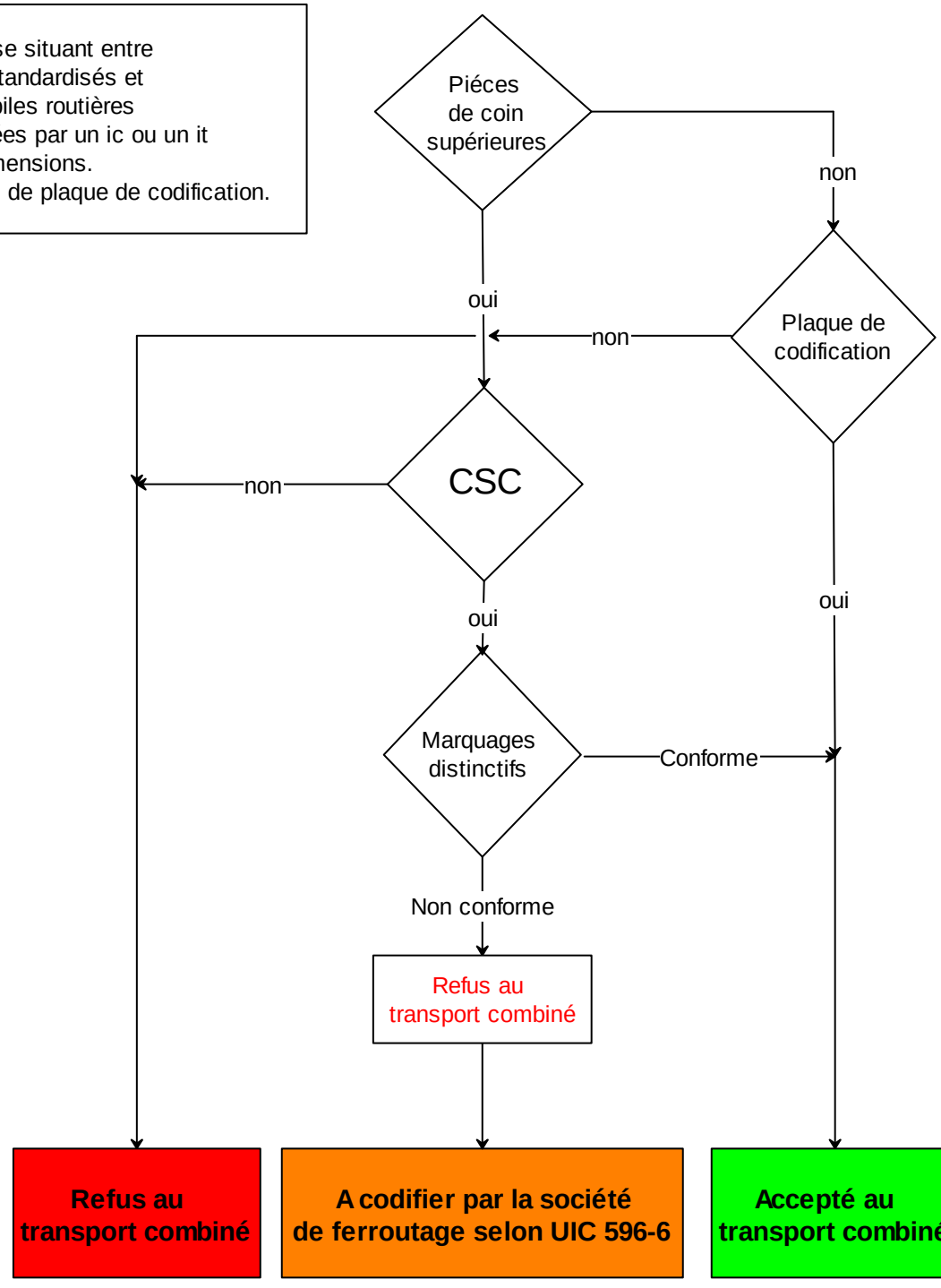


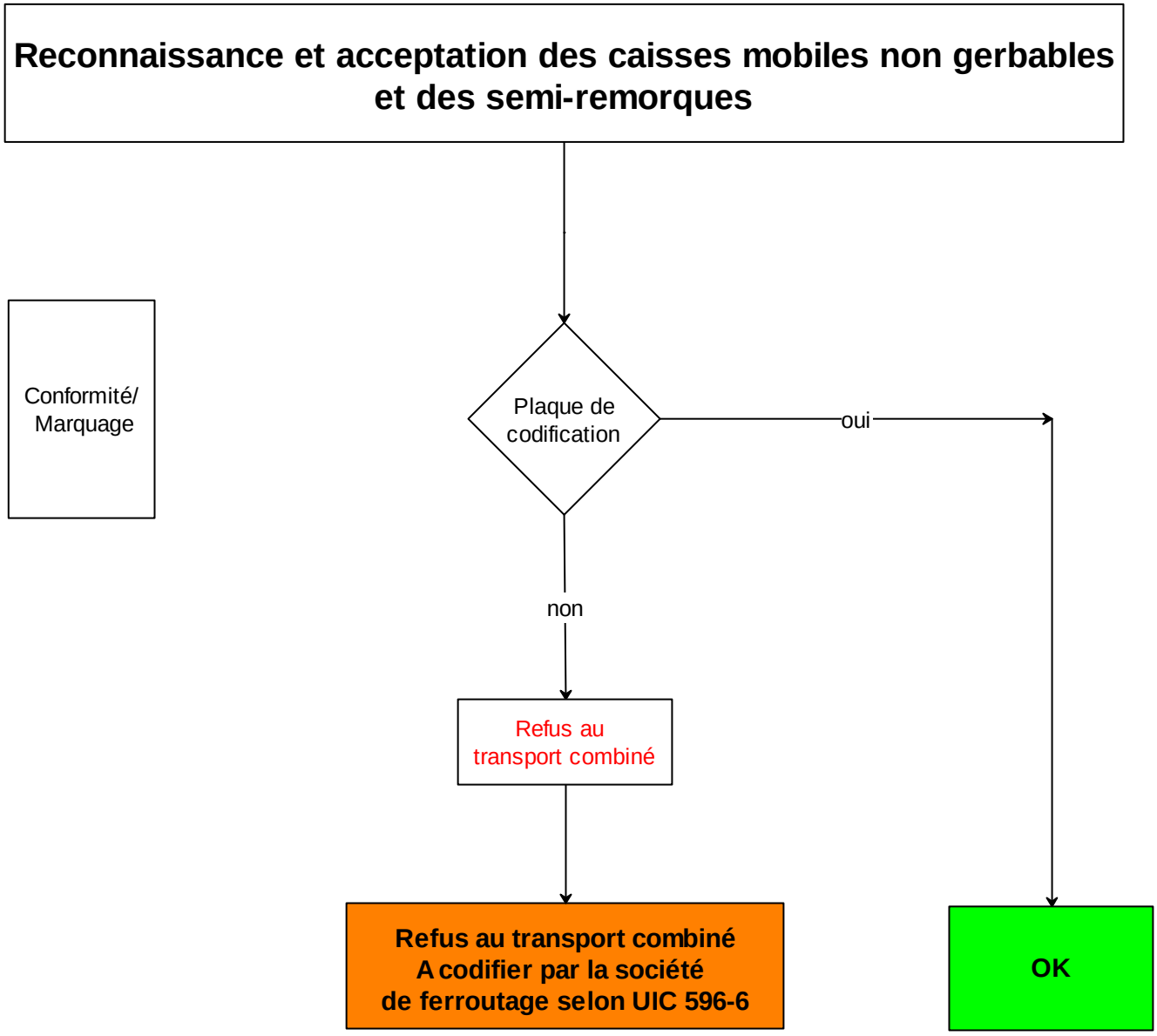
Reconnaissance et acceptation des unités hybrides

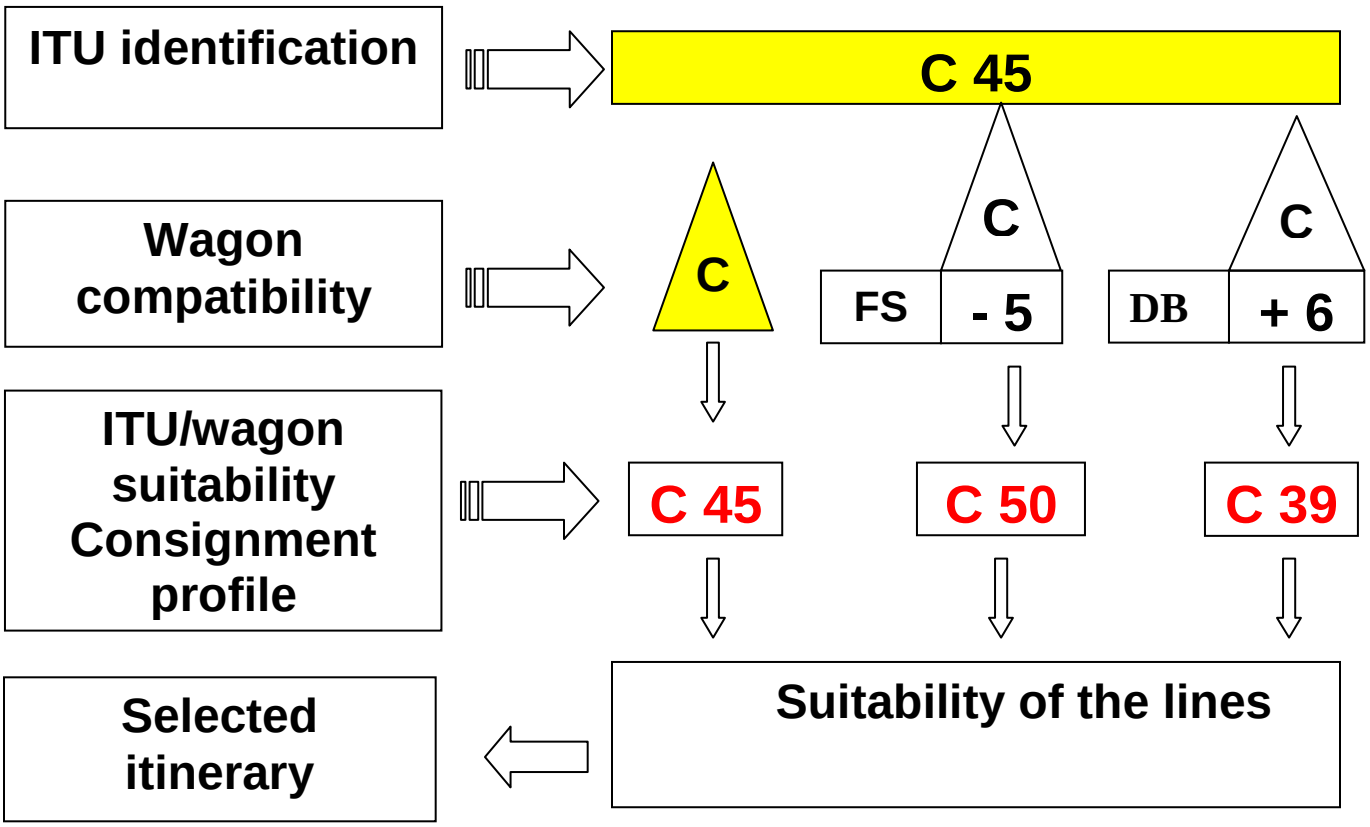
Unités hybrides se situant entre
les conteneurs standardisés et
les caisses mobiles routières
ne pouvant être identifiées par un ic ou un it
vu leurs dimensions.
Elles ne portent pas toujours de plaque de codification.

Conformité

Marquage

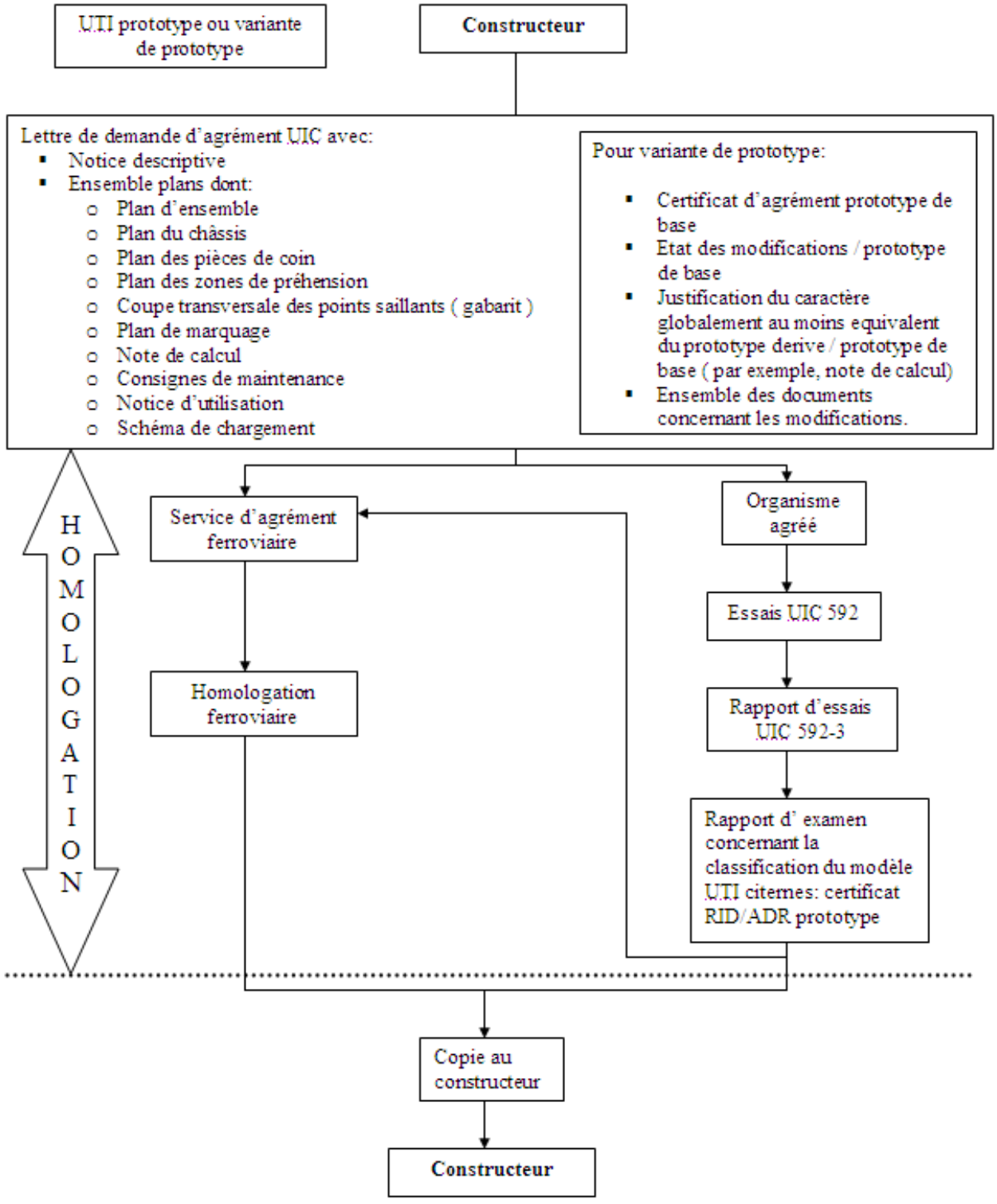



Reconnaissance et acceptation des caisses mobiles non gerbables et des semi-remorques
Conformité/ Marquage
Plaque de codification
oui
non
Refus au transport combiné
Refus au transport combiné
A codifier par la société
de ferroutage selon UIC 596-6
OK


ITU identification
C 45
Wagon compatibility
C
C
FS
- 5
C
DB
+ 6
ITU/wagon suitability Consignment profile
C 45
C 50
C 39
Selected itinerary
Suitability of the lines

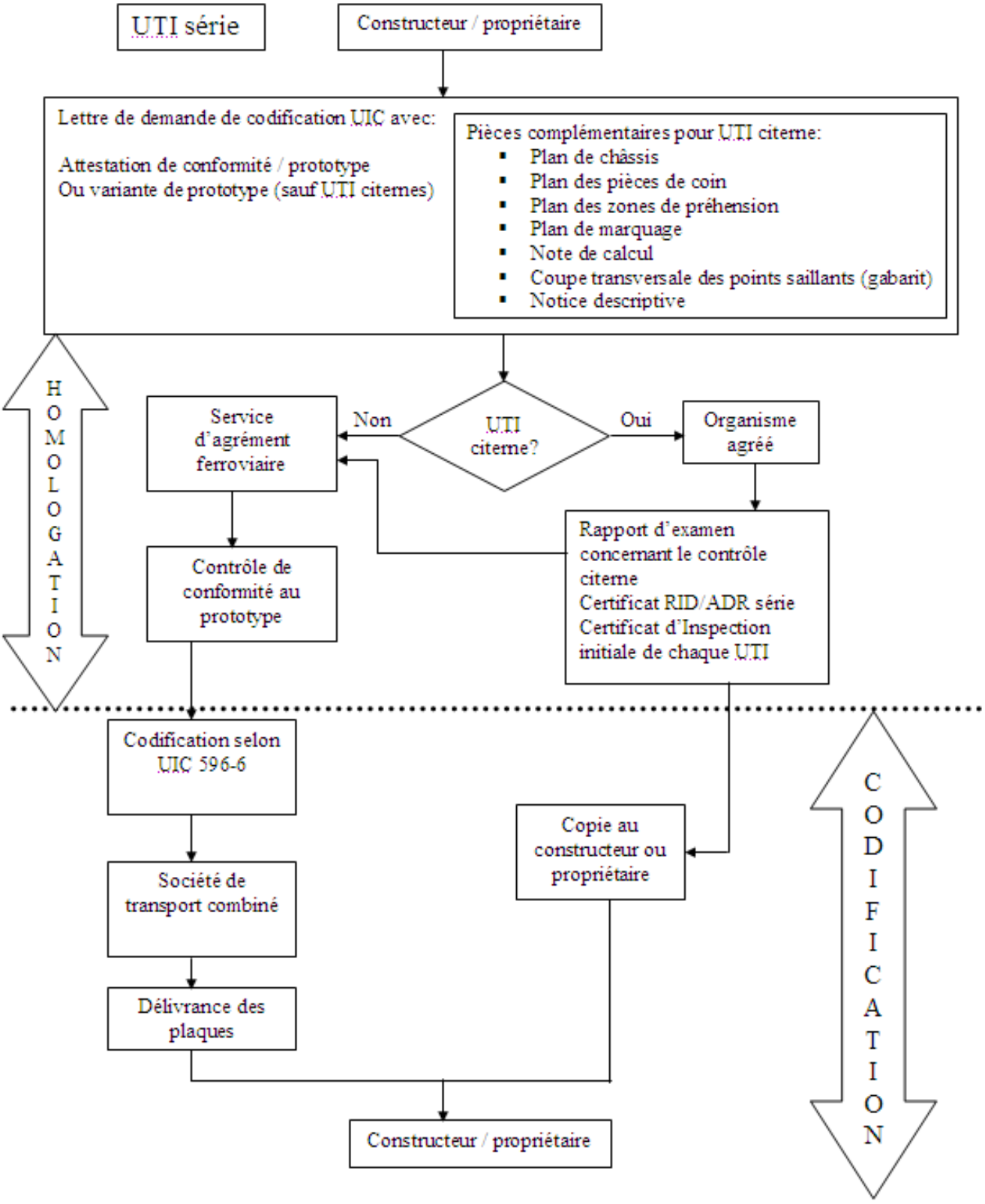
6.Approval and coding procedure for ITUs

6.1.Prototypes



RID: **R**egulation concerning **I**nternational transport of **D**angerous goods
ADR: European **A**greement on transport of **D**angerous goods by **R**oad

6.2.Series units



6.3.List of national bodies authorised to deliver certification and coding

Country	Approval	Coding	Delivery of the plate	Wagon rectification coefficient
Austria	ÖBB-Produktion GmbH	ÖBB-Produktion GmbH	ÖBB-Produktion GmbH	ÖBB-Produktion GmbH
Belgium	Infrabel	Infrabel	Combined company	Infrabel
Croatia				
Czech Republic	Schiffsregister	Schiffsregister	Hersteller	Rail Authority
France	SAMC (3)	SAMC (3)	NOVATRANS	N S A
Germany	DB AG	DB AG	DB AG	Not yet decided
Hungary				
Italy	VIS (1)	VIS (1)	CEMAT S.p.A.	ANSF(2)
Netherlands				
Poland				
Romania				
Slovakia				
Spain				
Sweden	Swedish Transport Administration	Swedish Transport Administration	Combined company	Not yet decided
Switzerland	-----	SBB/HUPAC	Combined company	SBB Infrastructure
United Kingdom				
…….				

(1) VIS = Independent Auditors of Safety - The VIS is a notified body similar to the ISA but responsible for compliance with national rules.

(currently: Burea Veritas Sciro S.p.A., Italcertifer, Rina S.p.A.)

(2) ANSF = Italian NSA. The ANSF manages the database of UCIs codified in Italy.
(3) SAMC = Service d'Agrément du Matériel Combiné (department for approval of combined transport equipment) at the Technicentre in Tergnier, Picardy, France.

6.4. Addresses of national bodies authorised to deliver certification and coding

Country	Body	Address
Germany		
Austria		
Belgium	**Infrabel**	Rue Bara , 110 BE – 1070 BRUXELLES
France	**S M A C**	Technicentre Picardie Boulevard Stephenson F – 02700 TERGNIER
Italy		
Switzerland	**HUPAC / SBB**	Ufficio codifica Viale Manzoni, 6 CH – 6830 CHIASSO

7.Procedures for checking the maintenance condition of the ITUs

The owner or keeper is responsible for ensuring its ITUs are in good condition and are maintained in good condition in order to ensure safety during handling and carriage. Maintenance and checking procedures are identical to those described in the CSC (**C**onvention on the **S**afety of **C**ontainers).

The owner or keeper may choose between a maintenance procedure based on periodic examination and one based on continuous examination. They may change the procedure at any time. The two procedures must ensure an equivalent level of safety.

The official reports on checks must clearly identify the ITU and the inspector, and state the date of the last examination. They must be kept by the owner or keeper, who must be able to make them available at any time at the request of the competent authority.

8.List of standards

8.1.ISO standards

- 668 Containers – classifications, dimensions and ratings
- 1496-1, 2, 3, 4,5 Specification and testing for various types of containers
- 3874 Containers – handling and securing
- 6346 Coding, identification and marking of containers

8.2.CEN standards

- EN 283 Swap bodies – Testing
- EN 284 Swap bodies of class C
- EN 452 Swap bodies of class A
- EN 1432 Swap bodies – operating conditions
- EN 12406 Thermal swap bodies of class C
- EN 12410 Thermal swap bodies of class A
- EN 12641-1 Swap bodies – tarpaulins
- EN 12641-2 Swap bodies – minimum requirements for curtainsiders
- EN 12642 Swap bodies – minimum requirements for the body structure
- EN 13044 Coding, identification and marking of swap bodies
- EN 13853 Stackable swap bodies C7.45
- EN 14993 Stackable swap bodies A13.71
- EN 15877-1 Railway applications – marking on railway vehicles – wagons

8.3.UIC leaflets

- UIC Leaflet 571-4 Characteristics of standard wagons
- UIC Leaflet 591 Roller units for horizontal transhipment
- UIC Leaflet 592-2 Land and sea containers
- UIC Leaflet 592-3 Standard report on acceptance tests
- UIC Leaflet 592-4 Swap bodies for grab handling
- UIC Leaflet 596-5 Semi-trailers for grab handling
- UIC Leaflet 596-6 Coding of ITUs and lines
- UIC Leaflet 597 Semi-trailers on bogies
- GCU Appendix 11 Point 3.2 Signs for combined transport wagons
- Appendix II to RIV, Section 2, sheet 9.1, loading guidelines for swap bodies and containers

8.4.Other

- CSC: Convention on the Safety of Containers
- ACEP: Acceptance Continuous Examination Program

8.5.Bibliography