Section 1: General Information

0. Identification of the type

0.1 0.2 0.4 Type ID:	51-380-0001-2-001-001
0.3 Date of record:	2020-11-18

1. General Information

1.1 Type name:	Stainless steel tank wagon 55 m3
1.2 Alternative type name:	Wagon citerne inox 55 m3

1.3 Manufacturer:

1.3.1 Manufacturer identification data:

1.3.1.1 Name of organisation:	INVEHO UFO
1.3.1.2 Registered business number:	FR 45 315 172 023
1.3.1.3 Organisation code:	

1.3.2 Manufacturer contact data:

1.3.2.1 Address of organisation, street and number:	Route de l'Ombrée
1.3.2.2 Town:	Orval
1.3.2.3 Country code:	
1.3.2.4 Post code:	18200
1.3.2.5 E-mail address:	

Registration Method:	New Type
Registered Vehicle Type:	
1.4 Category:	Freight Wagons
1.5 Subcategory:	Freight wagon
1.6 Platform:	Tank 55 m3

Section 2: Conformity with TSI

2.1 Conformity with TSI and Sections not complied with:

1435mm	**Noise (Regulation (EU) No 1304/2014 amended by Regulation (EU) 2019/774) WAG (Reg (EU) No 321/2013 amended by Reg (EU) No 1236/2013 amended by Reg (EU) 2015/924 amended by Reg (EU) 2019/776) + clause 7.1.2 + Appendix C totally [GE Wagon]**
1668mm	**Noise (Regulation (EU) No 1304/2014 amended by Regulation (EU) 2019/774) WAG (Reg (EU) No 321/2013 amended by Reg (EU) No 1236/2013 amended by Reg (EU) 2015/924 amended by Reg (EU) 2019/776) + clause 7.1.2 + Appendix C totally [GE Wagon]**

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	2681/2/SH1/2020/RST/FREN/001

Section 3: Authorisations

European Union

3.0 Area Of Use:	BG(Bulgaria), FI(Finland), FR(France), EL(Greece), IT(Italy), RO(Romania), SI(Slovenia), NL(The Netherlands)
3.1.1 Member state of authorisation:	Bulgaria(BG), Finland(FI), France(FR), Greece(EL), Italy(IT), Romania(RO), Slovenia(SI), The Netherlands(NL)
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

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 75

1.3 Speed restrictions in Km/h: 100 km/h loaded, 120 km/h empty

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.4 Gauge 1435

2.2 Wheelset gauge: 2.2.8 Gauge 1668

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone EN 50125-1:2014: 3.1.3 T3

1668mm

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 120

1.3 Speed restrictions in Km/h: 100 km/h loaded, 120 km/h empty

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.4 Gauge 1435

2.2 Wheelset gauge: 2.2.8 Gauge 1668

2.3 No CCS on board: True

3 Environmental restrictions

	3.1 Climatic zone EN 50125-1:2014: 3.1.3 T3
3.1.2.4 Non-coded conditions for use and other restrictions:	
	1435mm Use of the sub-system according to : - Notice d’utilisation ref. 4A86076 - Notice de maintenance ref. 4A86090 1668mm Use of the sub-system according to : - Notice d’utilisation ref. 4A86076 - Notice de maintenance ref. 4A86090
3.1.3.1.1 Date of the original authorisation:	2020-04-28

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:	INVEHO UFO
3.1.3.1.2.1.2 Registered business number:	FR45315175023
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:	Route de l’Ombrée BP 64
3.1.3.1.2.2.2 Town:	St Amand Montrond
3.1.3.1.2.2.3 Country code:	FR
3.1.3.1.2.2.4 Post code:	18200
3.1.3.1.2.2.5 E-mail address:	autorisation.railways@inveho.eu
3.1.3.1.3 Authorisation document reference:	EU8020200037
3.1.3.1.4 Certificate of verification : Reference of type examination or design examination type:	
	2681/2/SH1/2 020/RST/FREN /001
3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:	
	1435mm / BG - None 1668mm / BG - None 1435mm / FI - None 1668mm / FI

- None

1435mm / FR

- None

1668mm / FR

- None

1435mm / EL

- None

1668mm / EL

- None

1435mm / IT

- None

1668mm / IT

- None

1435mm / RO

- None

1668mm / RO

- None

1435mm / SI

- None

1668mm / SI

- None

1435mm / NL

- None

1668mm / NL

- None

3.1.3.1.6 Comments:

From the date of this authorisation until 16 June 2020: Area of use covers all networks of EU Member States, excluding the networks of those EU Member States that have notified the Agency and the Commission in accordance with Article 57(2) of Directive (EU) 2016/797 and that have not yet transposed that Directive and not brought into force its national transposition measures pursuant to Article 55 (5) of Commission Implementing regulation (EU) 2018/545. As of 16 June 2020, the area of use will cover the networks of all EU Member States. The type is compliant with the requirements of Chapter 7.1.2 of Commission Regulation (EU) No 321/2013 as amended by Regulations (EU) 1236/2013, 2015/924 and 2019/776. The type is compliant with CR Noise (Regulation (EU) No 1304/2014 amended by Regulation (EU) No 2019/774.

3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:	Cde 95 - Déclaration du demandeur – signée ERATV : 51-345-0001-5-001-001 Orval,

3.1.3.1 Initial Registration

3.1.2.3 Coded conditions for use and other restrictions:	**1435mm** 1 Technical restriction related to construction 1.1 Minimum curve radius in meters: 75 1.3 Speed restrictions in Km/h: 100 km/h loaded, 120 km/h empty 2 Geographical restriction 2.1 Kinematic gauge (coding WAG TSI): G1 2.2 Wheelset gauge: 2.2.4 Gauge 1435 2.2 Wheelset gauge: 2.2.8 Gauge 1668 2.3 No CCS on board: True 3 Environmental restrictions 3.1 Climatic zone EN 50125-1:2014: 3.1.3 T3 **1668mm** 1 Technical restriction related to construction 1.1 Minimum curve radius in meters: 120 1.3 Speed restrictions in Km/h: 100 km/h loaded, 120 km/h empty 2 Geographical restriction 2.1 Kinematic gauge (coding WAG TSI): G1 2.2 Wheelset gauge: 2.2.4 Gauge 1435 2.2 Wheelset gauge: 2.2.8 Gauge 1668 2.3 No CCS on board: True 3 Environmental restrictions 3.1 Climatic zone EN 50125-1:2014: 3.1.3 T3
3.1.2.4 Non-coded conditions for use and other restrictions:	1435mm Use of the sub-system according to : - Notice d’utilisation ref. 4A86076 - Notice de maintenance ref. 4A86090 1668mm Use of the sub-system according to : - Notice d’utilisation ref. 4A86076 - Notice de maintenance ref. 4A86090
3.1.3.1.1 Date of the original authorisation:	2020-04-28

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:	INVEHO UFO
3.1.3.1.2.1.2 Registered business number:	FR45315175023
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:	Route de l'Ombrée BP 64
3.1.3.1.2.2.2 Town:	St Amand Montrond
3.1.3.1.2.2.3 Country code:	FR
3.1.3.1.2.2.4 Post code:	18200
3.1.3.1.2.2.5 E-mail address:	autorisation.railways@inveho.eu

3.1.3.1.3 Authorisation document reference:	EU8020200037
3.1.3.1.4 Certificate of verification : Reference of type examination or design examination type:	2681/2/SH1/2020/RST/FREN/001
3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:	1435mm / BG - None 1668mm / BG - None 1435mm / FI - None 1668mm / FI - None 1435mm / FR - None 1668mm / FR - None 1435mm / EL - None 1668mm / EL - None 1435mm / IT

	- None 1668mm / IT - None 1435mm / RO - None 1668mm / RO - None 1435mm / SI - None 1668mm / SI - None 1435mm / NL - None 1668mm / NL - None
3.1.3.1.6 Comments:	From the date of this authorisation until 16 June 2020: Area of use covers all networks of EU Member States, excluding the networks of those EU Member States that have notified the Agency and the Commission in accordance with Article 57(2) of Directive (EU) 2016/797 and that have not yet transposed that Directive and not brought into force its national transposition measures pursuant to Article 55 (5) of Commission Implementing regulation (EU) 2018/545. As of 16 June 2020, the area of use will cover the networks of all EU Member States. The type is compliant with the requirements of Chapter 7.1.2 of Commission Regulation (EU) No 321/2013 as amended by Regulations (EU) 1236/2013, 2015/924 and 2019/776. The type is compliant with CR Noise (Regulation (EU) No 1304/2014 amended by Regulation (EU) No 2019/774.
3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:	Cde 95 - Déclaration du demandeur – signée ERATV : 51-345-0001-5-001-001 Orval,

Section 4: Technical Characteristics

4.1.3 Wheel set gauge RC	1435	mm
	1668	mm
4.1.11 Wheelset gauge Changeover facility RC	change of wheelsets at the border line	
4.1.12 Number of vehicles composing the fixed formation (for fixed formation only)	1	

4.1.2 Speed

4.1.2.1 Maximum design speed	1435mm	120	km/h
	1668mm	120	km/h
4.2.1 Reference profile RC		G1	
4.3.1 Temperature range		T3 (-25 to +45)	
4.3.3 Snow, ice and hail conditions		Nominal	
4.5.1 Permissible payload for different line categories RC	1435mm	A (42,4)	t
		B1 (44,9)	t
		B2 (50,4)	t
		C2 (60,4)	t
		C3 (60,4)	t
		C4 (60,4)	t
		D2 (63,5)	t
		D3 (68,4)	t
		D4 (68,4)	t
	1668mm	A (42,4)	t
		B1 (44,9)	t
		B2 (50,4)	t
		C2 (60,4)	t
		C3 (60,4)	t
		C4 (60,4)	t
		D2 (63,5)	t
		D3 (68,4)	t
		D4 (68,4)	t

4.5.2 Design mass

4.5.3 Static axle load

4.5.3.2 Static axle load under normal payload RC		22500	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 RC	1435mm	a: 0008,26 b: 0001,62 c: 0006,46	m
	1668mm	a: 0008,26 b: 0001,62 c: 0006,46	m

4.5.5 Total vehicle mass (for each vehicle of the unit) RC	1435mm	90000	kg		
	1668mm	90000	kg		
4.5.6 Mass per wheel RC	1435mm	11250	kg		
	1668mm	11250	kg		
4.6.4 Combination of maximum speed and maximum cant deficiency for which the vehicle was assessed RC	1435mm	0120,00	km/h	0130,00	mm
	1668mm	0120,00	km/h	0130,00	mm
4.6.5 Rail inclination RC	1435mm	1/20, 1/40			
	1668mm	1/20			

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	41.9	kJ		
	1668mm	41.9	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)		25	‰ (mm/m)		
4.7.3.4 Parking brake	1435mm	True			
	1668mm	True			
4.7.6 For general operation : Brake weight percentage (lambda) or Braked mass	1435mm	067,00	(%) or	00061,00	tonnes
	1668mm	067,00	(%) or	00061,00	tonnes
4.7.7 Service brake: At maximum service brake:	1435mm	0686,00	m	0000,61	m/s²
	1668mm	0686,00	m	0000,61	m/s²
Stopping distance, Maximum deceleration, for the load condition 'design mass under normal payload' at the design maximum speed.					
4.7.8 Wheel slide protection system	1435mm	False			
	1668mm	False			
4.8.1 Vehicle length		13.3	m		

4.8.2 Minimum in-service wheel diameter RC		840	mm
4.8.5 Minimum vertical convex curve radius capability		110	m
4.8.6 Minimum vertical concave curve radius capability		110	m
4.9.1 Type of end coupling	**Manual**		
4.9.2 Axle bearing condition monitoring (hot axles box detection) RC		Detectable by line side	
4.14.1 Type of train detection systems for which the vehicle has been designed and assessed RC		Track circuits Axle counters Loops	