Written by: Henri Lagneau
Checked by: Jean-François Kremer
Project no: 9875
Customer: VA-KO

FINAL ASSESSMENT REPORT

AsBo Mission
Risk Assessment of a Sggmrs 90' Wagon from VA-KO following CSM

CONFIDENTIAL

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LIST OF SUCCESSIVE VERSIONS:

Version	Date	Changes
1	29/01/2022	Initial version

The latest version supersedes the previous.

VALIDATION:

	Signature
Name: Jean-François Kremer Function: Project Manager	

People who have written and checked this report (listed on the cover) approved it using secure electronic authorization, with CERTIFER's EDM software keeping a trace of it.

Table of Content

List of attached documents

EC_9875_0003_03 Workbook TSI-WAG 2019

EC_9875_0004_01 Workbook TSI-NOI 2019

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1. Context of the Project

1.1. General

CERTIFER's business is part of an assessment body's (AsBo) mission in the field of the Common Safety Method.

1.2. Identification of the product subject to conformity assessment

The purpose is to evaluate a new Sggmrs 90'-type flat wagon, designed and manufactured in Turkey by VA-KO.

1.3. Identification of reference documents

- Directive (EU) 2016/797 of 11 May 2016
- COMMISSION IMPLEMENTING REGULATION (EU) No 402/2013 of 30 April 2013 on the common safety method for risk evaluation and assessment and repealing Regulation (EC) No 352/2009
- Commission Implementing Regulation (EU) 2015/1136 of 13 July 2015
- COMMISSION IMPLEMENTING REGULATION (EU) 2018/545 of 4 April 2018 establishing practical arrangements for the railway vehicle authorisation and railway vehicle type authorisation process pursuant to Directive (EU) 2016/797 of the European Parliament and of the Council

1.4. Identification of Assessment Plan

DP_4254_0001 version 2 (06/08/2021)

1.5. Identification of the product designer or manufacturer

VAKO
Fatih Sultan Mah. 2368 Sok. No:6
Çamlıkpark , Etimesgut / Ankara

1.6. Name and function of stakeholders (including subcontractors) in charge of the assessment

Senior Project Manager	Jean-François Kremer
Junior Project Manager	Ömer Şimşek
Senior Lead Assessor	Henri Lagneau
Junior Lead Assessor	Burak Koç
Senior Brake Assessor	Gerrit Pluquet
Junior Brake Assessor	Mehmet Firat Aygen
Senior Mechanical engineering, Noise, CSM Assessor	Henri Lagneau
Junior Mechanical engineering, Noise, CSM Assessor	Burak Koç
Senior Type Inspector	Jean-Michel Perz
Junior Type Inspector	Mert Türkkan

1.7. Scope of the assessment described in this report

The assessment of conformity of the risk analysis with the method developed in the applicable CSM Regulation shall be conducted by the examination of the documents and analyses provided by the manufacturer of the wagon under assessment.

1.8. Restraints and assumptions related to the compliance assessment

NA

2. Description of the assessment work

2.1. Assessment methods

CERTIFER carries out the assessment with respect to its Quality Management System, which guarantees compliance with the following requirements:

- Assessment methodology,
- Technical Skills of the assessors,
- Impartiality,
- Confidentiality

For this AsBo mission CERTIFER is accredited under n°3-1213 by the "Industrial Products and service ***Inspection***" section of COFRAC (French Committee of Accreditation) according to **NF EN ISO CEI 17020:2012**. The scope is available on www.cofrac.fr.

The assessment is carried out by an Assessor in the Technical Field who is appointed by one of the Section Committees of CERTIFER.

The final report is edited by the Assessor, under the supervision of the Project Manager.

2.2. Measurements or tests

2.2.1.Measurements or tests performed by or on behalf of CERTIFER

NA

2.2.2.Measurements or tests accepted as input data

The tests carried out were all witnessed by a member of the evaluation team and are therefore trustful.

The results are trustfully acceptable.

2.3. Identification of the documents or products assessed

The general layout and design characteristics of the wagon are given in Document 101 Sggmrs 90' Project Drawings VK-90.00.00.00.00.

The documents describing the Sggmrs 90' wagon are those referred to in the tab "Documents" of the attached EC_9875_0003_03 Workbook TSI-WAG 2019.

The documents subject to assessment are:

Identification	Contents	Date
RPR.06 - LIST OF REQUIREMENTS	Capture of requirements	20.12.2021
RPR.05 - SYSTEM DEFINITION	Description of the Sggmrs freight wagon	13.12.2021
LST.18 Risk Evaluation and Risk Acceptance Matrix rev 8	Risk Evaluation and Risk Acceptance	06.12.2021
RPR.07 - SYNTHESIS of CSM RA	-	13.12.2021

2.4. Development process of the assessment work

The development of the assessment took place from 12/08/2021 until now.

An audit performed on design and production sites on 29/11/2021 concluded that the auditors have confidence in Va-Ko's ability to manufacture the Sggmrs 90' Articulated-Platform wagon in accordance with the applicable standards, directives and regulations. The audit is reported in EC9875_0030_1.

The assessment is carried out according to the Assessment Plan.

CERTIFER has not subcontracted any part of the work.

3. Results

3.1. Exchange between VAKO and CERTIFER

The exchanges between the applicant and CERTIFER are traced in the exchange of emails. All questions and requests for supporting documents have been satisfactorily answered and are closed.

The point is completely satisfying.

3.2. Capture of requirements

All of requirements considered by VAKO are documented in RPR.06 - LIST OF REQUIREMENTS and include the requirements applicable to this type of wagon.

The capture of requirements is acceptable.

3.3. Assessment of the system definition

The system definition is introduced in RPR.05 - SYSTEM DEFINITION.
The Sggmrs type wagon under review is designed and manufactured in accordance to the current requirements: TSI and EN standards. This type of Sggmrs wagon is not new.
The system is correctly defined.

The system definition is acceptable.

3.4. Assessment of Hazard identification and classification

The Hazard identification and classification is documented in LST.18 Risk Evaluation and Risk Acceptance Matrix rev 8.
The content of this document is correctly addressing the issue.

The Hazard identification and classification is acceptable.

3.5. Assessment of risk acceptance

The risk of introducing this new wagon Sggmrs is declared “acceptable” on the basis of compliance with code of practice applicable to this kind of sub-system: TSI, EN standards and UIC leaflets.
This is demonstrated in RPR.07 - SYNTHESIS of CSM RA.

The risk acceptance is acceptable.

3.1. Assessment of compliance with the safety requirements

This is demonstrated in RPR.07 - SYNTHESIS of CSM RA.
The compliance with the safety requirements identified at the design stage is guaranteed by the compliance with the contents of:

- 208 Operation Rules
- 212 System Protection Rules
- 213 Maintenance Description File
- 220 Sggmrs Safety and Health Guidelines

These are constraints exported to the owner/operator/maintainer of the wagon in order to comply with the safety requirements.

The compliance with the safety requirements is acceptable.

3.1. Assessment of conformity with Regulation 2018/545 article 13

3.1.1.Essential requirements for subsystem

The compliance with TSI-WAG and TSI-NOI validates the compliance with essential requirements.

3.1.2.Technical compatibility of the subsystems within the vehicle

The IC are operating within their domain of use.
The other equipment is designed and manufactured according the captured requirements and in particular the UIC leaflets.

3.1.3.Safe integration of the subsystems within the vehicle

The wagon design is based on a well-proven type of flat wagon and the different subsystems are assembled according to the code of practice including the applicable TSI and UIC leaflets.

3.1.4.Technical compatibility of the vehicle with the network in the area of use

The wagon is fully compatible with the TEN defined railway network where Rail inclination is 1:40.

The compliance with Regulation 2018/545 article 13 is acceptable.

Nota: these results relate exclusively to the elements of the service described in the paragraph 1 above.

4. Conclusion

The assessment team is of the opinion and testifies:

1) The capture of requirements is adequate,
2) All of the identified requirements have received an adequate answer and none is left open,
3) The implementation of the CSM to this project of wagon is acceptable, and
4) The introduction of this type of wagon on TEN defined routes where Rail inclination is 1:40 does not compromise the safety objectives of the European railway network.