

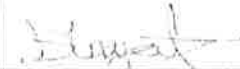

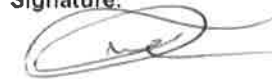
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TABLE OF CONTENTS

SCHEDULE OF AMENDMENTS 2

1. INTRODUCTION 3

2. PRODUCT DESCRIPTION 3

3. WAGON REQUIREMENTS 3

4. PAYLOAD DISTRIBUTION AND SAFETY LIMITS 3

5. SHUNTING OPERATIONS 4

6. CUSTOMER CO-OPERATION 5

7. AMENDMENT OF LOADING SPECIFICATION 5

SCHEDULE OF AMENDMENTS

Amendment number	Section amended	Summary of amendments	Date issued
1	3, 4 & 5	Wagon type added. Change and add information.	29 January 2010
2	1, 4 & 6	Clause 1 & 4 amended and clause 6 added	17 June 2010
3	4 & 8	Remove recommended column and delete clause 8.	23 February 2011
4	3	Clause 3 amended	24 July 2017
5	7	Amendment of Clause 7 to allow consultation with the customer.	23 March 2018

1. INTRODUCTION

This loading specification is for the loading of all types of ore on various types of open wagons. Please note that this specification replace specification RSE/TE/LPR/0023 of 3 December 2009.

This loading specification supersedes all previous loading instructions, letters, granted concessions and granted deviations. It is the responsibility of the recipient to destroy all old documents.

2. PRODUCT DESCRIPTION

Product	Density
Chrome	2.7 ton/m ³ to 2.95 ton/m ³
Ferrochrome	2.8 ton/m ³ to 3.9 ton/m ³
Carbon Ferromanganese	3.8 ton/m ³ to 4.7 ton/m ³
Silicon Manganese	3.3 ton/m ³ to 3.5 ton/m ³
Manganese ore	3.7 ton/m ³ to 4.6 ton/m ³
Lead ore	7.3 ton/m ³ to 7.6 ton/m ³
Iron ore	3.6 ton/m ³ to 5.4 ton/m ³
Copper ore	4.1 ton/m ³ to 4.3 ton/m ³
Zinc ore	3.9 ton/m ³ to 4.2 ton/m ³

3. WAGON REQUIREMENTS

- Before any ring-fenced wagon is loaded, the wagon must be clean and all foreign objects must be removed.
- Wagons used for transporting ore are A, AZD/J, BAL/J, CAR, CMR, CR, DGLJ, DJ and DZ type wagons.

4. PAYLOAD DISTRIBUTION AND SAFETY LIMITS

- The carrying capacity stencilled on the wagon shall not be exceeded.
- The wagon must be considered as consisting of two equal halves, left and right, when viewed from the side. The load placed on either half of the wagon must be as equal as possible. See Figure 1.
- End to end and side to side loading must be as even as possible to minimise derailment potential.
- Skew loading limits:
 - End to end: 5 ton
 - Side to side: 5 ton
- If the load protrudes above the sides of the wagon, the load against the sides must stop at least 100 mm below the top of the sides. Refer to Figure 2 and 3.
- If the load is too close to the top edge of the wagon side or end the excess mass must be moved away. This operation must **never** be performed whilst the wagon is standing underneath overhead wires.
- Ore loaded into a wagon with a front-end loader, must be levelled in order to ensure a better distributed load.

- Wagons not loaded according to this specification, will not be accepted for conveyance.
- See transport agreement for actions if wagons are not loaded correctly.

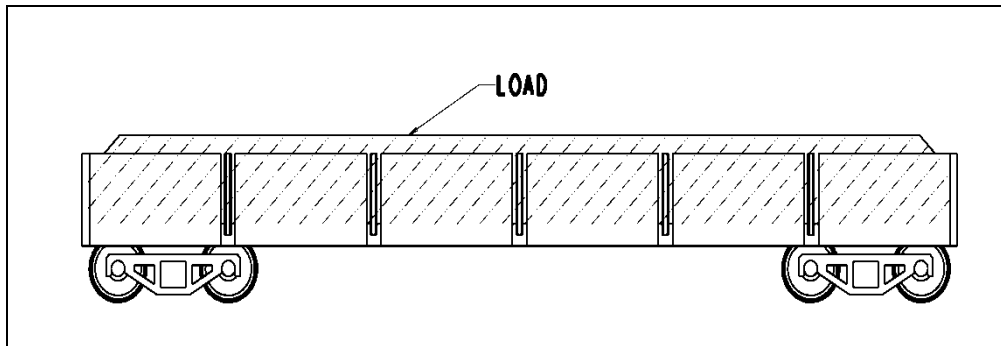


Figure 1 - Load uniformly distributed over the length of the wagon.

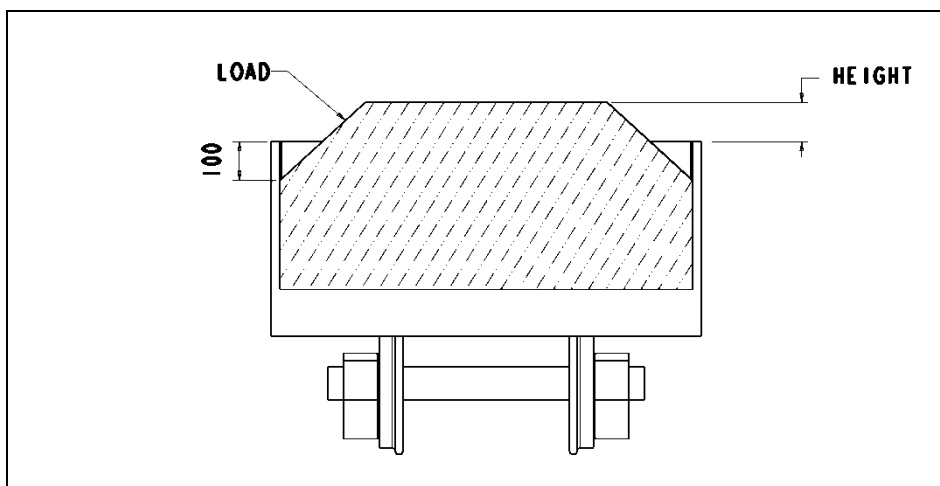


Figure 2 - Load centrally loaded across the width of the wagon.

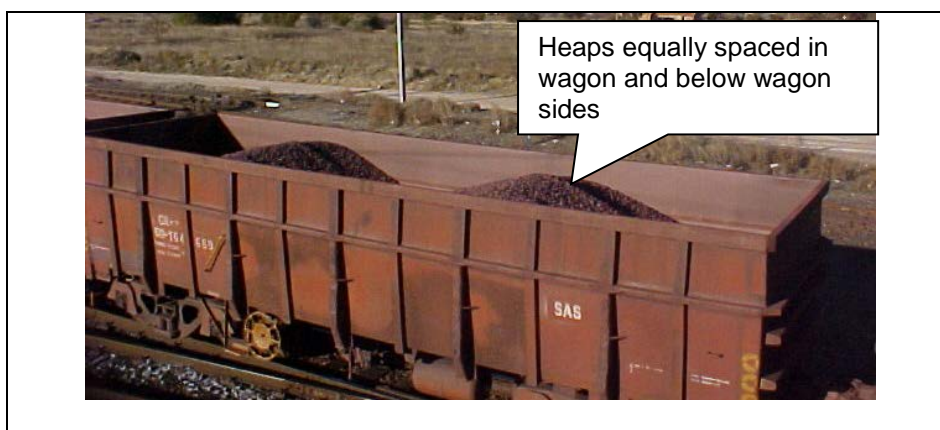


Figure 3 – Load below wagon sides

5. SHUNTING OPERATIONS

Wagons may under no circumstances be shunted by pulling them on their ends with a back actor or the scoop of a front end-loader. This is an illegal and uncontrolled shunting operation. See Transnet's Instruction CIR/OD/0280 entitled "Guidelines for the interface between non-rail bound vehicles used for shunting purposes and rail wagons during shunting operations".

6. CUSTOMER CO-OPERATION

The customer must adhere to the loading specification. Any deviations to the loading method must be requested in writing to the Account Manager.

 must be informed if the loading/off-loading methods and/or product have changed.

The customer may not perform any modification of any nature to wagons. If there is a need for modifications, the Technical Fleet Owner must approve the request and arrange for the necessary modifications.

7. AMENDMENT OF LOADING SPECIFICATION

This loading specification is subject to change if it either impacts on safety or if modifications/improvements are necessary. The customer shall be consulted prior to implementing any changes.