



# **TRANSNET ENGINEERING**

## **PRODUCT SYSTEMS DEVELOPMENT**

### **WAGONS**

**FOOT VALVE REQUIREMENT**

**FOR SXMR 3, 4 & 19 WAGONS**

**Revision: 00**

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**PD\_PEW\_NAT\_SPEC\_1214**

## SUMMARY OF REVISION

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The following revisions have been made in this revision:

Change	Description

## TABLE OF CONTENTS

<b>SUMMARY OF REVISION .....</b>	<b>2</b>
1.1 Scope of Specification .....	4
1.2 Design Standards .....	4
1.3 Foot Valve.....	4
1.4 Certification and Guarantee .....	5
1.5 Documentation.....	5
1.6 Test Certificate.....	5
1.7 Data Plate- Marking .....	6
1.8 Quality Assurance Provision .....	6
<b>DOCUMENT AUTHORITIES.....</b>	<b>7</b>

## 1.1 Scope of Specification

This specification covers the technical requirements for Foot Valve requirements for SXMR 3, 4 & 19 tank wagons for conveying Octene.

## 1.2 Design Standards

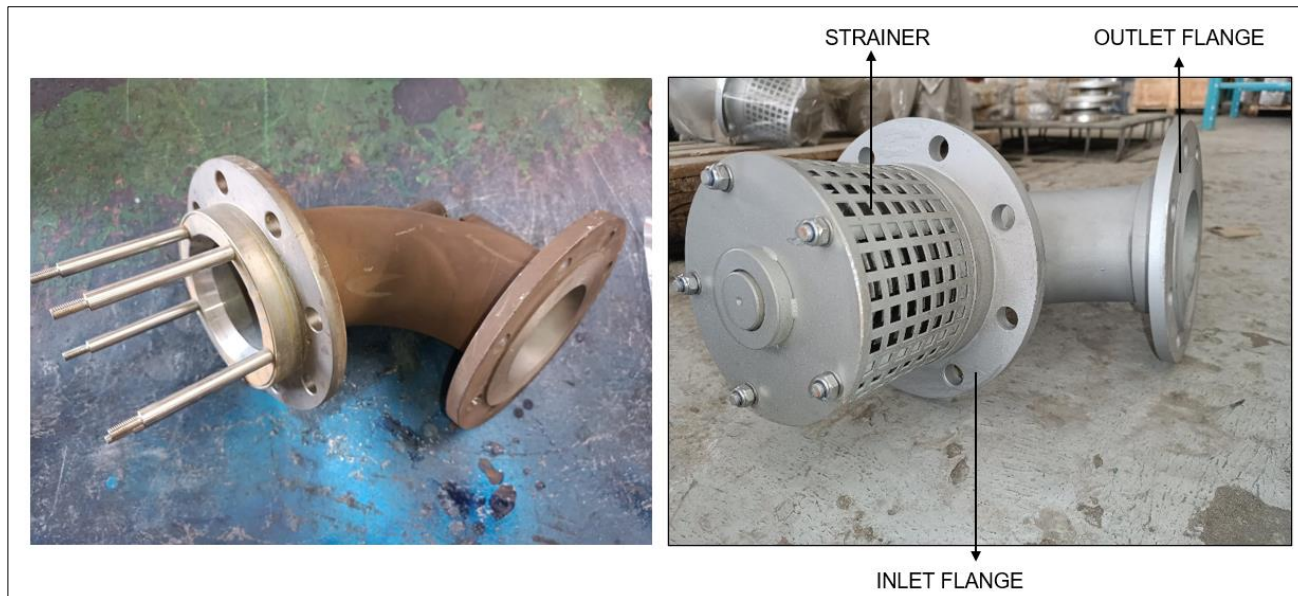
The valve shall meet requirement mentioned on Pressure Equipment Regulations (PER), latest, as issued by Department of Labour, Occupation Health and Safety Act, 1993. Where **no** PER apply or exist, the valve must meet all relevant International Railway Standards & European Norms which are:

- I. Association of American Railroads (AAR).
- II. American Society of Mechanical Engineers (ASME).
- III. American National Standards Institute (ANSI).
- IV. European standards (EN14433).
- V. British standards (BS).
- VI. International Standards Organisation (ISO).
- VII. International union of railways (UIC).
- VIII. Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)

## 1.3 Foot Valve

Nominal diameter	4" (100mm)
Temperature (Max)	46 °C
Temperature (Min)	0 °C
Overall Length	465 mm
Angel	90°
Outlet Flange Thickness	12 mm, 3 mm Raised Face with Serrated Surface Finish (See Figure 1)
Inlet Flange Thickness	16 mm Steel Sump flange (See Figure 1)
Inlet & Outlet Flange Size	8 holes x Ø19 with PCD of 260 mm (See Figure 1)
Maximum Allowable Working Pressure	500 kPa
Test Pressure	750 kPa
Valve Material	316L / 304L / CF8 Stainless Steel (Body, Stem & Trim)

Shear groove	Yes
Gasket & Seal Material	Ethylene Propylene Diene Monomer - EPDM
Specification example	Figure 1



**Figure 1: Foot Valve**

#### 1.4 Certification and Guarantee

- All components to be supplied with all relevant certificates as proof and guarantee.

#### 1.5 Documentation

The following documents are required for acceptance of the valve.

- Material specifications.
- ISO/SANS specifications for material and product compliance.
- Material and product compliance certificates (Test certificate).
- Data plate and serial number on the valve.

#### 1.6 Test Certificate

The test certificate must include the following information

- Name of Company
- Company Valve description/ Figure or Item No
- Test Pressure
- Maximum Allowable Working Pressure
- Flow Rate

- Test Date
- Seal Material
- Serial Number
- Design standards (refer to **Clause 1.2**)

### **1.7 Data Plate- Marking**

The data plate/marking must include the following information

- Company Name
- Material Type
- Seal Material
- Passed Test Date
- Serial Number

### **1.8 Quality Assurance Provision**

The supplier must be ISO accredited, however if that is not the case the supplier must have a proper quality management system that is in line with the principles in the policy on the supplier quality management framework Doc No: OPS\_CQ\_KLP\_PP\_0001.

## DOCUMENT AUTHORITIES

**Complier**

**Vicky Mashele**

**Signature**



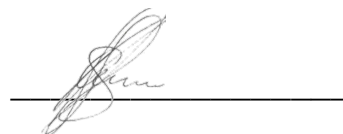
**Designation**

**Process Engineer (Wagons)**

**Reviewer**

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**Signature**



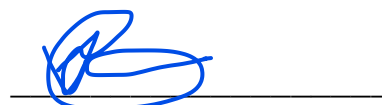
**Designation**

**Product Development (Wagons)**

**Approver**

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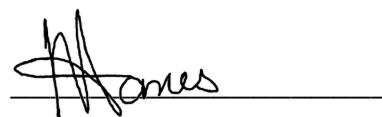
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