PRODUCT DEVELOPMENT FOUNDRY

Prepared By: Mukovhe Mashawana (Engineer)

Signature: .....

Date: 17/09/2018

Authorised By: Maje Phasha (Principal Engineer)

Signature: .....

Date: 17/09/2018

TRANSNET ENGINEERING: PRODUCT DEVELOPMENT FOUNDRY

REFRACTORY LINING FOR INDUCTION FURNACE GUIDELINES

TRANSNET
engineering

1. Introduction

1.1 This document will be used to guide a new supplier for supplying the refractory lining kit.

2. Application

2.1 It is a lining material used on induction melting furnaces to melt steel at approximately 1700 degree Celsius. The furnace size is 9 Tons.

3. Material Requirements

3.1 The lining kit usually consists of the following:

- Furnace body – e.g. Kellundite 85RAS 25 KG (136 bags)
- Capping material – e.g. Kellundite 85 Hot Topping 25 KG (10 bags)
- Repair and protection material – e.g. Duracrete 85 PC buckets 15 KG (40 buckets)
- Slip plane 50m roll using 12 Meters per furnace

4. Test Sample Requirements

4.1 The supplier will supply Transnet Engineering foundry with a full lining kit.

4.2 The lining kit must be able to produce minimum of 30 heats/melts before it's broken out. Should the lining not last the stipulated amount of melts, then the Foundry business will only pay for the fraction of successful melts, i.e. $(\frac{x}{30})$.

4.3 The supplier will also be required to line the furnace (Installation).

4.4 The supplier will be required to monitor the furnace during patching process on a daily basis until the testing is complete (30 heats).