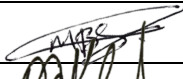
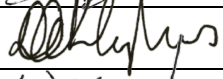
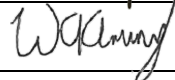


ELC_NAT_SPEC_2012

Description: Specification for the supply of a battery chargers to charge electric locomotive batteries.				
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Recommended By:	D.C. Kleynhans		Date:	01/10/2025
Approved by:	W.K. Klingenberg		Date:	01/10/2025
Local Business:	PD (Product Development): Locomotives			
Location:	Bay 9 Koedoespoort Depot			

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1. Scope of Work

This specification requirement covers all the requirements that will be needed to inform the supplier/vendor/manufacture to carry out what is expected from him/her:

This specification states the minimum requirements relating to the battery chargers to be supplied and in no way absolves the contractor from responsibility for sound engineering practice.

The supplier shall supply a battery charger. The electric locomotives batteries are 110V.

2. Site Inspection

Not applicable for this tender.

3. Information Required

Tenderers shall confirm that the items that they are offering comply at a standard not less than the minimum required requirement asked for in the specifications. Tenderers must comply with these specifications, but alternative offers may, in addition, also be submitted. Such alternative offers must be fully motivated and substantiated.

4. Technical Requirements:

All equipment whether detailed in this specification or not shall comply with the requirements of the Occupational Health and Safety Act 85 of 1993 as amended. Sudden power losses will not have an adverse effect on equipment and shall not unduly delay return to operation after power is restored.

5. Codes of Practice, Regulations & Standards:

The tenderer shall specify which statutory, or industry rules will be applied for the equipment to be working successfully and safely and shall indicate the designed life span.

6. Operational Parameters:

The equipment will be required to operate in the climatic conditions of South Africa.

7. Testing:

The supplier must demonstrate the battery charger's functionality at any selected Transnet Engineering depot in South Africa and provide a short training to demonstrate all the abilities to charge a set of locomotive batteries.

8. Specific Requirements:

	REQUIRED	DETAILS OF OFFER Comply (Yes) / Do not comply (No)
	Specification for the supply of a battery chargers at a Maintenance Depot.	
1.	Scope of work:	
	Supply a battery charger with input and output cables	
2	Applications	
2.1	Output: 50 cells @ 110VDC. Battery Capacity 62-195Ah	
3	General Information	
3.1	Input Voltage: 90 to 265VAC	
3.3	Input Frequency Range:47Hz – 63Hz	
4	Application	
4.1	Railways. The chargers need to be mobile on caster wheels for shop floor usage	
5	Communication	
5.1	Isolated RS485 and CAN BUS	
6	Input output Interfaces	
6.1	The chargers require 1 input and two outputs to charge two sets of batteries on the same time.	



	REQUIRED	DETAILS OF OFFER Comply (Yes) / Do not comply (No)
7	Analog Interfaces and display	
7.1	The chargers require load voltage and current inputs	
7.2	Analog/Digital gauge indicators with LED	
8	Features	
8.1	Different electric locomotive batteries Flooded Lead-Acid, AGM, VRLA.	
8.2	Multi-Stage Charging	
8.3	Reverse Polarity/short Circuit/Over Voltage/Over Temperature Protection	
8.4	Earth fault protection	
8.5	Battery testing	
8.6	Boost Feature	
8.7	Data logging	
9	Enclosure	
9.1	3CR12 Powder coated with IP31 rating	
9.2	The charger must be clearly marked for Electric locomotive only	
10	Environmental Specifications	
10.1	Operating Temperature: -10°C to 50°C	
10.2	Operating Humidity: Non-Condensing ≤90% RH	
11	Software	
11.1	Software included with lifetime upgrades and licenses	
12	Warranty	
12.1	Supplier should provide a comprehensive warranty	



	REQUIRED	DETAILS OF OFFER Comply (Yes) / Do not comply (No)
13	Documents	
13.1	Supplier must supply an up-to-date calibration certificate together with the product upon delivery	
13.2	Supplier must supply a comprehension instruction to operate the battery charger	
13.3	Suppliers need to support and repair the charger after the warrant expire. A parts list must be supplied with the chargers	