MINAS DE BENGA LIMITADA

COAL CHAIN

PROCUREMENT OF NEW LOCOMOTIVE GT26 MODEL @EMD ENGINE 16-645E3B

	RESPONSIBILITY	SIGNATURE	DATE
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TERMS OF REFERENCE

1. Background

MBL has a fleet of 15 locomotives, GT26C Model (EMD 16-645E3B) supplied by National Railway Equipment (NRE –US) in 2012. The loco consists in two parties with different brands, as follow: The above deck (Diesel Engine @16-645E3B, Main Alternator @AR10-D14, and the related components) are GM brand, and the second part which is below deck (bogies and traction motors) is GE brand, use 26L Air brake system, and as control system is using microprocessor designated as NForce.

Due to operations requirement, MBL intend to increase the fleet by procuring more two new locomotives with equal or greater tractive effort than of the current locos which has 3300 HP as gross horsepower, and 3000HP as net horsepower.

2. Scope of works

The scope of work will be to supply two New Locomotives GT26C Model, turbocharged diesel engine EMD **16-645E3B type**, 3300/3000 Hp, with technical specifications as indicated below. The supplier must ensure the locos to be supplied should new and manufactured according to AAR Standards. Should provide also the test certificates and all documents related to Parts Catalogue, Maintenance Instructions, Operation manual and other relevant documents. The cabin design should ensure enough and comfortable space to accommodate two members Crew, and all descriptions inside the cabin should be in Portuguese and English

2.1 Technical Specifications

Description detail	Specification
Locomotive Model	GT26C
Diesel engine	EMD 16-645E3B Turbocharged
Main Alternator, Auxiliary	AR-10/ D-14
Gross horsepower	3300 HP

Net horsepower	3000 HP
Gauge	1067 mm
Number of Axles	Six
Bogie	Atchison 5650
Weight per Axle	20 tones
Total weight	120 tones
Length over end plates	19500 mm
Maximum width	2819 mm
Maximum height	4105 mm
Minimum radius curve	24 degrees
Traction Motor	GE 761A23
Air Compressor	Gardner Denver
Air Brake system	Electro-pneumatic CCB2
Dynamic Braking	Yes
Multiple Unit, MU (AAR)	Yes
Gear Ratio	94:17
Wheel diameter	36”
Microprocessor	Yes. NForce
Fuel tank capacity	6000 liters
Wheel slip control	*Required*
Vigilance alerter (Dead man)	*Required*
Event Recorder	*Required*
Axle bearings	Timken
Speed indicator (in metric units)	*Required*
Control stand	Right side
Air conditioner	*Required*
Hot plate	*Required*
Small fridge inside the Cab	*Required*

2.2 Quantity

SN	***Description***	***Quantity***
01	New Locomotive GT26C Model, Diesel Engine EMD 16-645E3B type, 16 cylinders, 3300/3000 Hp; turbocharged engine, Electro-pneumatic Air Brake System – CCB2, NForce microprocessor	02

4. Experience

The Supplier should have an expertise and recognized experience on manufacturing locomotives as per AAR standards, or a reputed locomotives supplier who has experience in selling/trading of locomotives or license on supply agreement with manufacturer.

5. Period for deliver

The period for deliver the new locos should be within twelve months.

5.1 Delivery Place: Beira Port (ICVL Workshop), Mozambique.