

# **8 TON CRANE CONTRACT**

**Date: 5 May 2023**

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### 1) Background

Eskom Tower Test Station is situated in Rosherville, Johannesburg. The main function of the facility is to conduct full scale testing on transmission structures. An 8-ton rail mounted tower crane is available for the offloading, assembling, erecting and dismantling of towers. This on-site crane has been operating for 44 years and was utilized in over 300 projects since 1979.

Due to business financial constraints, a new crane cannot be purchased at the moment and that leaves us with no option but to continue maintaining and utilise the current crane. The contract will afford us an opportunity to perform statutory tests and maintenance on the crane which amongst others include load testing, inspection, and servicing.

This will ensure that the crane meets all safety and statutory requirements.

### 2) Motivation

For the facility to function reliably and effectively, regular and continuous maintenance of the 8 Ton Tower Crane is required.

The Tower Testing Station is an asset of strategic importance to Eskom. The Tower Test Station needs to be maintained in order to develop new power line structures, as well as the testing of modified structures.

Significant network performance improvements as well as reduced capital costs for structures are realised through development and testing of appropriate structures to suit new lines.

### 3) Benefits to Eskom

Maintenance of the 8 Ton Crane will help enhance the station's efficiency. Without the on-site crane, mobile cranes are hired to erect and dismantle towers.

This results in an increase in the initial cost estimate and impacts negatively on capital projects. Adequate maintenance of the crane will therefore result in a financial saving for Eskom. It will contribute to a more efficient and safe testing environment. Structures required for the new lines can be tested more proficiently and will avoid delays on capital projects.

### 4) Scope of work

- Quarterly inspection – refer to appendix A (inspection sheet)
- Annual load testing
- Mobile Crane (to reach height of about 70m)
- Change oil for slew gearboxes

### 5) Technical Evaluation Criteria

		Weight (%)	Returnable with the tender/RFQ
1	Supplier must provide evidence of tract record for previous tower crane maintenance work.	45	Provide three latest reference letters of tower crane maintenance  <b>Scoring:</b> No letter = 0% Submit one reference letter = 15% Submit two reference letters = 30% Submit three reference letters – 45%
2	Availability of Liebherr tower crane parts.	35	Provide letter from OEM stating their willingness and availability to provide technical support on the project should the bidder get the project  <b>Scoring:</b> No letter = 0% Submit one letter = 35%
3	Availability of tower crane technicians.	20	CV's of Technicians that will carry out the associated services, repairs, maintenance and load testing. Details of lifting machinery inspector and associated registration.  Scoring: No CV = 0% Submit once CV = 10% Submit two CV's = 20%

## 6) Pricing Schedule

Item	Description	Quantity	Unit Price	Total Price
1	Quarterly inspection – refer to appendix A (inspection sheet) <i>(All items on inspection sheet should be quoted for)</i>	8		
2	Annual load testing	2		
3	Mobile Crane hire (to reach height of about 70m)	12		
4	Change oil for slew gearboxes	2		
5	Technician Rate/hr	600		
6	Assistant technicians call out/hr	1200		
Total (excluding vat)				

## 7) Appendix A

### Inspection Sheet - Tower Crane

#### Rail Track

	Yes	No	Comment
Rail stops in good condition			
Limit switch ramps in good condition			
Earthing in good condition			

#### Crane Undercarriage and travelling Gear

	Yes	No	Comment
Brakes in good condition			
Motors & connections in good condition			
Drive gears in good condition			
Couplings in good conditions			
Limit switches working			

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### **Slewing Gear**

	Yes	No	Comment
Slew ring bolts secure			
Free slew device working			
Motor & connections in good condition			

### **Hoisting Gear**

	Yes	No	Comment
Hoist Brake in good condition			
3+ turns of rope at lowest position			
Hook up limit switch working			
Operation of retaining brake working			

### **Trolley Gear**

	Yes	No	Comment
Trolley rope in good condition			
Outer & inner limits switches working			
Slow down limited			
Trolley safety device working			

### **Brakes**

	Yes	No	Comment
Hoist linings in good condition			
Slew linings in good condition			
Trolley linings in good condition			
Long travel linings in good condition			

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### **Load Hook**

	Yes	No	Comment
Rotation of hook working			
Hook locking device working			
Safety catch in place			
Sheave condition in good condition			
Sheave bearing in good condition			

### **Ropes**

	Yes	No	Comment
Hoist rope in good condition			
Trolley rope in good condition			
Hand rail rope in place			

### **Electrical System** - Correct operation of all mechanisms according to design operating principles

	Yes	No	Comment
Hoist			
Slew			
Trolley			
Long Travel			

### **Main Jib**

	Yes	No	Comment
All connections secured			
Firm Seating, keepers/Locknut in place			
Trolley path cleared			
Any structural damage			

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### **Counter Jib**

	Yes	No	Comment
All connections secured			
Firm Seating, keepers/Locknut in place			
Ballast; Position – Retainers in place			

### **Rope Pulleys/Sheaves**

	Yes	No	Comment
Bearings free running			
Mountings in good conditions			
Grooves: Arc of support 120° - 150°			
Any structural damage			

### **Protective Covers**

	Yes	No	Comment
Protective covers for brakes and electrical equipment in place			

### **CAB**

	Yes	No	Comment
Slewing Brake Actuating Mechanism in place			
Jib Radius / Load Weighing Device in place			

**Is the Tower Crane safe to use?    YES .....    NO .....**

Name of competent person: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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Complied by:  
Neo Ramonyalioa  
Snr Technician



Date: 5 May 2023

Accepted by:  
Bertram Jordaan  
Middle Manager Testing Facilities



Date: 5 May 2023