

**TELANGANA STATE POWER
GENERATION CORPORATION
LIMITED (TSGENCO)**

**4X270 MW BHADRADRI
THERMAL POWER PROJECT**

**TECHNICAL SPECIFICATION
FOR
MOBILE PICK UP & CARRY CRANE**

SPECIFICATION NO.: PE-TS-411-563-A601



**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, INDIA**



TITLE

**4X270 MW BHADRADRI TPS
MOBILE PICK UP & CARRY CRANE
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SPECIFICATION NO. PE-TS-411-563-A601

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TITLE

4X270 MW BHADRADRI TPS

MOBILE PICK UP & CARRY CRANE

INTENT OF SPECIFICATION

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SECTION A

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SECTION-A

INTENT OF SPECIFICATION



TITLE

4X270 MW BHADRADRI TPS**MOBILE PICK UP & CARRY CRANE****INTENT OF SPECIFICATION**

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1.0 INTENT OF SPECIFICATION

- 1.1** The specification covers design, engineering, manufacture, supply / procurement, inspection and testing at vendor's / sub vendor's / manufacturer's works, painting, forwarding, proper packing and shipment and delivery at site on FOR site basis, of One no. 12T capacity **MOBILE PICK UP & CARRY CRANE** as per details in different sections / volumes of this specification for **4X270 MW BHADRADRI TPS** at Manuguru, Telangana.
- 1.2** The contractor shall be responsible for providing all material, equipment & services, which are required to fulfil the intent of ensuring operability, maintainability, reliability and complete safety of the complete work covered under this specification, irrespective of whether it has been specifically listed herein or not. Omission of specific reference to any component / accessory necessary for proper performance of the equipment shall not relieve the contractor of the responsibility of providing such facilities to complete the supply of **MOBILE PICK UP & CARRY CRANE**.
- 1.3** It is not the intent to specify herein all the details of design and manufacture. However, the equipment shall conform in all respects to high standards of design, engineering and workmanship and shall be capable of performing the required duties in a manner acceptable to purchaser who will interpret the meaning of drawings and specifications and shall be entitled to reject any work or material which in his judgement is not in full accordance herewith.
- 1.4** The extent of supply under the contract includes all items shown in the drawings, notwithstanding the fact that such items may have been omitted from the specification or schedules. Similarly, the extent of supply also includes all items mentioned in the specification and /or schedules, notwithstanding the fact that such items may have been omitted in the drawing.
- 1.5** The general term and conditions, instructions to tenderers and other attachment referred to elsewhere are made part of the tender specification. The equipment materials and works covered by this specification is subject to compliance to all attachments referred to in the specification. The bidder shall be responsible for and governed by all requirements stipulated herein.
- 1.6** While all efforts have been made to make the specification requirement complete & unambiguous, it shall be bidders' responsibility to ask for missing information, ensure completeness of specification, to bring out any contradictory / conflicting requirement in different sections of the specification and within a section itself to the notice of BHEL and to seek any clarification on specification requirement in the format enclosed under Vol-III of the specification **within 10 days of receipt of tender documents**. In absence of any such



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4X270 MW BHADRADRI TPS

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clarifications, in case of any contradictory requirement, the more stringent requirement as per interpretation of Purchaser / Customer shall prevail and shall be complied by the bidder without any commercial implication on account of the same. Further in case of any missing information in the specification not brought out by the prospective bidders as part of pre-bid clarification, the same shall be furnished by Purchaser/ Customer as and when brought to their notice either by the bidder or by purchaser/ customer themselves. However, such requirements shall be binding on the successful bidder without any commercial & delivery implication.

- 1.7 The bidder's offer shall not carry any sections like clarification, interpretations and /or assumptions.
- 1.8 Deviations, if any, should be very clearly brought out clause by clause along with cost of withdrawal in the enclosed schedule (in Vol – III); otherwise, it will be presumed that the vendor's offer is strictly in line with NIT specification. If no cost of withdrawal is given against the deviation, it will be presumed that deviation can be withdrawn without any cost to BHEL/its customer.
- 1.9 In the event of any conflict between the requirements of two clauses of this specification documents or requirements of different codes and standards specified, Section - C shall prevail over section – D, however more stringent requirement as per the interpretation of the owner shall apply.
- 1.10 In case all above requirements are not complied with, the offer may be considered as incomplete and would become liable for rejection.
- 1.11 For definition of word like Contractor, bidder, supplier, vendor, Customer/ Purchaser / Employer, consultant, please referred relevant clause(s) of GCC.



**TECHNICAL SPECIFICATION
4X270 MW BHADRADRI TPS
PROJECT INFORMATION**

SPECIFICATION NO. PE-TS-411-563-A601

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SECTION: B
PROJECT INFORMATION



PROJECT INFORMATION
FOR
4 X 270 MW BHADRADRI TPS

SPECIFICATION NO. PE-TS-411-563-A601

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PROJECT INFORMATION

INTRODUCTION

4x270 MW Bhadradi TPS is being set up by Telangana State Electricity Corporation Limited (TSGENCO) at Manuguru in the district of Khammam, Telangana, India.

The Bidder shall acquaint himself by a visit to the site, if felt necessary, with the conditions prevailing at site before submission of the bid. The information given here in under is for general guidance and shall not be contractually binding on BHEL/Owner. All relevant site data /information as may be necessary shall have to be obtained /collected by the Bidder.

APPROACH TO SITE

The distance from Manuguru to Major cities in state:

City	Km
Hyderabad	345
Warangal	180
Bhadrachalam	38
Kothagudem	70
Khammam	130
Vijayawada	195

District: KHAMMAM

State : TELANGANA

Nearest Airport: The nearest airport is Vijayawada Airport but the most used airport is the Hyderabad International Airport.

Nearest Railway Station: Manuguru railway station is 10KM from nearby town. However Warangal / Vijaywada railway Station is major railway station near to Manuguru.



PROJECT INFORMATION
FOR
4 X 270 MW BHADRADRI TPS

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1. Owner : TSGENCO
2. Project Title : 4X270 MW Bhadradri TPS
3. Location : 16 Km from Manuguru Railway station
4. Nearest Railway Stn. : Manuguru
5. Temperature
 - a. Mean daily minimum ambient temperature during oldest month of the year: 11.5 Deg.C
 - b. Mean daily minimum ambient temperature during hottest month of the year: 45.1 Deg.C
6. Rainfall: Intensity of rainfall @ 50 mm/hr considering heaviest fall in 24 hrs
7. Wind Data: Basic wind speed at 10m height : 44 m/sec
8. Wind pressure As per IS: 875 Part III- 1987
9. Seismic Zone: Zone III as defined in IS:1893 (part-1)-2002 according to Indian Standard Seismic Zoning Map

10	Power Supply : The power supplies for distribution and auxiliaries shall be as under:	
	a) In plant generation	16.5kV $\pm 5\%$, 3ph, 50Hz $\pm 5\%$, high resistance earthed.
	b) MV distribution	6.6kV $\pm 6\%$, 3ph, 3w , 50 Hz, + 5 % to - 5%, Non-effectively earthed
	c) LT distribution	415V $\pm 10\%$, 3ph, 4W, 50Hz + 5% to -5%, Effectively earthed
	d) Motor rated above 160kW	6.6kV $\pm 6\%$, 3 ph 50Hz +5% to -5%.
	e) Motor rated 160kW and below all motorized actuators.	415V $\pm 10\%$, 3 ph, 50Hz +5% to -5%.
	f) For motors equal and below 30kW winding heating	24V AC $\pm 10\%$, 50 Hz %, [to be generated in 415V switchgear by vendor]
	g) DC Motors	220V DC + 10% to - 15%, 2 wire ungrounded system
	h) Control supply for relay panel/ 6.6kV breakers/415V breakers and DC emergency lighting.	220V DC + 10% to - 15%, 2 wire ungrounded system
	i) UPS for instrumentation & Control system	240V AC $\pm 1\%$, 1 ph ,50Hz $\pm 0.5\%$ 2 Wire AC system
	j) Control supply for 415V Motor contactors/AC Control circuits [to be generated in MCC /panel by vendor]	110V AC $\pm 10\%$, 50Hz + 5% to -5%.
	k) Diesel Generator emergency supply	415V $\pm 10\%$, 3ph,3W, 50Hz +5%to -5%.
11	Fault levels	
	a) 400kV	40kA rms for 1 sec
	b) 6.6kV	40 kA rms for 1 sec.
	c) 415V	50 kA rms for 1 sec.
	d) DC Supply	25 kA

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SECTION – C 1
SCOPE OF WORK



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TECHNICAL SPECIFICATION MOBILE PICK UP AND CARRY CRANE 4X270 MW BHADRADRI TPP		

1.0.0. SCOPE OF WORK

1.1.0. SUPPLIES

1.1.1. Equipment and services to be furnished by the bidder for **12T Capacity Mobile Pick up and Carry Crane** with accessories as per the details given in data sheet A. Any equipment / accessories not specified in the specification but required to make the crane unit complete and efficient shall also be under the bidder's scope of work.

1.1.2. Maintenance Tools and Tackles

A complete unused new set of special purpose tools, tackles and accessories along with detailed instructions and maintenance manual shall be supplied. Each tool and wrench shall be stamped so as to be identified easy for its use. The tools shall be supplied in steel toolbox and with a copy of instruction manual. The items supplied shall be of the best quality and specially protected against rusting in tropical climate.

Note: - The crane shall be supplied with one set of tool and tackles with O&M manual in the toolbox separately.

1.2.0. Inspection and Testing

1.2.1. Inspection and testing at Manufacturer's works

A. Shop inspection and tests will be carried out at manufacturer's works.

Bidder shall submit detailed quality plan, indicating various test to be carried out at works at various stages along with final performance test procedure along with guaranteed parameters.

1.3.0. SURFACE PREPARATION, PAINTING & COLOUR SCHEME

1.3.1. Standard painting procedure furnished by vendor shall be subject to customer approval during detail engineering.

1.3.1.1 Necessary touch up paint of sufficient quantity for coating at site shall be provided by the vendor

1.3.1.2 All exposed surfaces should be made free from oil and grease before it is Sand Blasted.

NOTE: Bidder to refer Painting specification enclosed along with this Technical Specification.

1.3.2. Color Scheme

Color shade of the crane shall be project specific and shall be furnished to the bidder along with the NIT.

1.4.0. Drawing / design document for submission.

A. For Approval

- G.A. drawing / Manufacturer's catalogues of mobile crane showing all dimensions, materials of construction, lifts and hook approach and other parameters.
- Detailed Technical data sheet of Mobile Crane duly filled in format given by BHEL along with this Technical Specification.



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- c) Quality Plan/inspection check list
- d) Test certificates and reports on various shop tests.
- e) O.M. Manuals

2.0.0. Number of drawing and documents for submission

The number of prints / copies required for various drawing and documents are listed in Annexure –VI, section-C, volume II-B of this specification.

3.0.0. Deviations

If the proposal submitted has got any deviation from the technical stipulations in the tender document, bidder shall tabulate the same in the deviation format attached in Vol-III, furnishing full particular of such deviations. Deviations are to be furnished with mention to specific clause Number. Notes / comments etc. are not acceptable. If there are no deviations from the tender document, bidder shall indicate so. Reasons / explanations for such deviations shall be furnished

4.0.0. Performance/Demonstration test

Mobile crane along with its drives, controls and other accessories shall be demonstrated for the rated capacity against the rated speed of motions and for the service conditions specified

The bidder shall have the full responsibility for the safe and efficient operation of the crane with associated accessories as a single unit. If the shop/site performance tests indicate the failure of any of the components to achieve the guaranteed performance, the deficiency shall be made good at bidder's cost.

5.0.0. Make of Sub - Vendor items.

Bidder shall submit the 'List of Makes of Bought-out items' for review / approval. Rejection, if any, particular make of any sub vendor item by BHEL/Customer shall not have commercial/delivery implication

6.0.0. Drawing & Documents to be attached with Tender

6.1.0. No Deviation Certificate. Deviation, if any, will have to be clearly brought out in the Schedule of Deviations given in this Technical Specification

6.2.0. List of Maintenance Tools and Tackles, Commissioning Spares, if any,



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Sl no.	Description	Specification requirement
1	Cap.	12T
2	Quantity	1 no.
3	Turning radius	5-7M
4	Main Frame	Rigid construction box-type frame having high strength
5	Boom	Telescopic type boom with max. length 9.5M
6	Boom Telescope	Min three part telescopic boom with hydraulically operated extension jack.
7	Boom Angle	Maximum 50 deg., minimum 0 deg.
8	Hoist System	Driven by Hydraulic Motor/ Hydraulic winch type
9	Max crane speed	25-30 Kmph without load, with load 2-3 Kmph
10	Hoisting/lowering speed	As per manufacturing standard design
11	Steering	Hydraulic power assisted steering/ Articulated power steering/ as per manufacturer's design
12	Drive	As per manufacturer's standard design.
13	Brake	Service Brake should be pneumatically assisted hydraulic brake. Front and rear brakes to be applicable through a foot pedal. Parking brakes shall also be provided
14	Transmission	As per manufacturer std
15	Engine	Water cooled diesel engine providing sufficient power to properly run the mobile crane along with the rated load.
16	Hydraulic system	Vane/gear type hydraulic pump with control valve.
17	Fluid capacities	Fuel tank – As per mfr's std Hydraulic tank – As per mfr's std
18	Wheels	Front – total 4 no's, Rear – Total 2 no's
19	Electrical System	12 V Battery with negative earth
20	Safety Features	Audio overload warning Hose failure protection Safety brake on hoist Audio over hoisting warning
21	Gauges	Water temperature Engine Oil Pressure etc.
22	Accessories	Standard accessories as per list of manufacturers including the following- a) Front and rear work lights b) Reflectors c) Safety belt for the operator d) Front bumper e) Rear view mirror
23	Cabin	Rear/Front mounted as per proven design of manufacturer
24	Tool kit	Standard tool kit in a tool box
25	Painting	Manufacturer standard
26	Battery discharge indicator	Yes
27	Side indicator	Yes
28	Engine pollution norms	Shall conform to minimum BS-III or latest BS (or equiv. international emission norms) or latest version



TITLE

**1X800 MW KOTHAGUDEM TPS
MOBILE PICK UP & CARRY CRANE**

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Section **C-2**

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ANNEXURES

ANNEXURE-1

DISTRIBUTION SCHEDULE

S. No	Description	TSGENCO										Consultant		Equipment Vendor	Remarks
		Director Projects	Director Technical	CE/Civil Thermal Projects Hyd.	CE/ TPC-I, Hyd	CE/ O&M/	SE/ Civil	SE/E&M /	DE Constr.	HYD	BTPS				
A	Letter Of Intent or Contract Documents	1	1	1	S	1	2	2	1	1	1	1	2		
B	Vendor Drawings														
1.	Preliminary	1	1	1	2	1	1	2	2	12	1	-	S		
2.	Return preliminary with comments	-	-	1	2	1	1	1	1	S	1	-	1		
3.	Final and any revision thereof														
	a. Civil	1	1	6+1T	1	1	6+1T	1	1	2+1T	1	1	S		
	b. E&M	1	1	1	6+1T	1	1	6+1T	1	2+1T	1	1	S		
C.	Design Drawings														
1.	Preliminary														
	a. Civil	1	1	2	1	1	2	1	1	4	1	1	S		
	b. E&M	1	1	1	2	1	1	2	1	4	1	1	S		
2.	Released for construction														
	a. Civil	1	1	2	1	1	6	1	1	1	1	2	S		
	b. E&M	1	1	1	1	2	1	6	1	1	1	2	S		
3.	Return marked 'As built'														
	a. Civil	-	-	1	-	-	1	-	-	1	1	S	1		
	b. E&M	-	-	-	1	-	-	1	-	1	1	S	1		
4.	As built drawings														
	a. Civil	-	-	1+1T	-	2+1T	5+1T	-	1	1+1T	-	1	S		
	b. E&M	-	-	1	2+1T	2+1T	-	5+1T	1+1T	1+1T	-	1	S		

S. No	Description	TSGENCO										Consultant		Equipment Vendor	Remarks		
		Director Projects	Director Technical	CE/Civil Thermal Projects Hyd.	CE/ TPC-I, Hyd	CE/ O&M/	SE/ Civil	SE/E&M /	DE Constr.	HYD	BTPS						
D	Progress Report Monthly																
1.	Equipment vendor	1	1	1	2	1	1	2	1	1	1	1	1	1	S		
2.	Consultant	1	1	2	2	1	1	2	1	S	1	1	1	1	Nil		
E	Test & Inspection Reports																
1.	Equipment manufacturer																
a.	Civil	1	1	1	2	1	1	1	1	11	1	1	1	1	S		
b.	E&M	1	1	-	2	1	-	1	1	11	1	1	1	1	S		
2.	Consultant	1	1	-	2	1	-	1	1	S	-	1	1	1	-		
F	Instruction Manuals/Data Books																
1.	Equipment manufacturer																
a.	Civil	1	1	1+1T	1	1	1	6+1T	1	2+1T	1	1	1	1	S		
b.	E&M	1	1	-	3+1T	1	-	6+1T	2	3+1T	1	1	1	S			
2.	Consultant	1	1	-	10+1T	1	-	15+1T	-	S	1	1	1	Nil			
G	Consultant	1	1	1	8+1T	1	1	1	2	1	1	1	1	S			
H	Design Calculations	1	1	1	8+1T	1	1	1	2	1	1	1	1	S			
I	Final consulting Engineering Report	1	1	1	10	1	1	2	2	S	1	1	1	Nil			

S – Source, T – Transparency & Soft Copy on CD,

TSGENCO : Telangana State Power Generation Corporation Limited
 Director, Projects, Hyd : Director/ Projects, TSGENCO, Viduyut Soudha, Hyderabad – 500 082



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4X270 MW BHADRADRI
MOBILE CRANE**

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ANNEXURE-II

DRAWINGS/ DOCUMENTS TO BE SUBMITTED AFTER AWARD OF CONTRACT

The successful bidder shall submit the following drawings / documents during detail engineering for customer's approval /information:

Sl. No.	BHEL DRG.NO	DRAWING TITLE	Approval category	SUBMISSION SCHEDULE - WEEK NUMBER FROM DATE OF LOI
1	PE-V0-411-563-A601	Inspection Check List / Manufacturing Quality Plan of Mobile Pick and Carry Crane	A	2
2	PE-V0-411-563-A602	GA & Data sheet of Mobile Pick and Carry Crane with painting & packing details and Catalogue	A	2
3	PE-V0-411-563-A603	O & MANUAL	A	4

Notes:

- The above drawing list is tentative and shall be finalized with the successful bidder after placement of order. While some of the drawings indicated above may not be applicable, some additional drawings may also be required based on scope of work.
- Drawings shall be prepared in Auto-Cad latest edition. Required no. of hard and soft copies (editable) of the drawings shall be furnished as per requirement specified elsewhere in the specification.
- Only manual calculation with authentic supporting literature (e.g. extracts of hand Book/ standard/codes) shall be acceptable. All design calculations and drawings shall be in SI system only.
- Bidder to note that all values/dimensions/elevations etc. without supporting back up data adopted/assumed by the successful bidder (during contract stage) in the design calculation/drawings shall be taken by the customer/owner to be correct unless they are stipulated in the specification. Any problem arising later in this regard shall be made good by the successful bidder at his cost and no extension of time shall be granted for the same.
- All the drawings and documents including general arrangement drawing, data sheet, calculation etc. to be furnished to the customer during detailed engineering stage shall include / indicate the following details for clarity w.r.t. Inspection, construction, erection and maintenance etc.:
 - All drawings and documents shall indicate the list of all reference drawings including general arrangement.
 - All drawings shall include / show plan, elevation, side view, cross - section, skin section, blow - up view; all major self-manufactured and bought out items shall be labeled and included in BOQ / BOM in tabular form.
 - Painting schedule shall also be made as a part of general arrangement drawing of each equipment / items indicating at least 3 trade names.
 - All the drawings required to be furnished to customer during detailed engineering stage shall include technical parameters, details of paints and lubrication, hardness and BOQ / BOM in tabular form indicating all major components including bought out items and their quantity, material of construction indicating its applicable code / standard, weight, make etc.
 - Drawings/ documents to be submitted for purchasers review/ approval shall be under Revision A, B, C... etc. while drawings /documents to be submitted thereafter for customer's approval after purchaser's approval shall be under R-0, 1, 2, 3etc.
- Drawings and documents not covered above but required to check safety of machines/ system, shall be submitted during detailed engineering stage without any commercial implication.
- All drawings shall include "B.O.M" and indicate quantity, material of construction, make along with IS/BS No., Technical parameters, dimensions, hardness, machining symbol and tolerance, requirement of radiography and hydraulic tests, painting details, elevation, side view, plan, skin section and blow-up view for clarity.
- All drawings shall be prepared as per BHEL's title block and shall bear BHEL's drawing No.



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9. Schedule of drawings submissions, comment incorporations & approval shall be as stipulated in the specifications. The successful bidder shall depute his design personnel to BHEL's/ Customer's/ Consultant's office for across the table resolution of issues and to get documents approved in the stipulated time.
10. Bidder to follow the following the drawing submission schedule:
- 1st submission of drawings from date of LOI as per the submission schedule.
 - Every revised submission incorporating comments – within 7 days.
 - Bidder to submit revised drawings complete in all respects incorporating all comments. Any incomplete drawing submitted shall be treated as non-submission with delays attributable to bidder's account. For any clarification/ discussion required to complete the drawings, the bidder shall himself depute his personal to BHEL for across the table discussions/ finalizations/ submissions of drawings.

Document Management System _

Bidder to note that BHEL reserve the right for drg/doc submission through web based Document Management System. Bidder would be provided access to the DMS for drg/doc approval and adequate training for the same. Detailed methodology would be finalized during the kick-off meeting. Bidder to ensure following at their end.

Internet explorer version – Minimum Internet Explorer 7

Internet speed – 2 mbps (Minimum preferred)

Pop ups from our external DMS IP (124.124.36.198) should not be blocked. Vendor's Internal proxy setting should not block DMS application's link

(<http://124.124.36.198/wrenchwebaccess/login.aspx>)”.



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Section D

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SECTION – D

STANDARD TECHNICAL REQUIREMENTS



TECHNICAL SPECIFICATION FOR
MOBILE CRANE
4X270 MW BHADRADRI

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1.0. SCOPE

This specification covers the design, material, manufacture, assembly, inspection and testing at manufacturer works for Mobile Pick-up and Carry crane

2.0. CODES AND STANDARDS

The equipment to be supplied under this specification shall conform to **IS 4573 (latest revision) – Specification for Power Driven Mobile Cranes** (Type 3) unless otherwise specified hereinafter.

3.0 DESIGN REQUIREMENTS

3.1 Mass of hook, hook block, slings shackles, etc, except that of the hoist rope shall be considered part of the tipping load.

3.2 Rated loads at specified radii shall not exceed the limits given under IS 4573 - 2006

3.3 Maximum speeds for a crane handling its working load on a firm level surface shall be as per Appendix D of IS 4573 – 2006.

3.4 The breaking strength of all splicing, sockets, thimbles and rope anchorages shall be not less than 90 percent of the minimum breaking strength of the rope or ropes to which they are attached.

3.5 Rope drums shall be made of cast iron, cast steel or mild steel conforming to relevant Indian Standards.

3.6 When a safe load indicator is specified, certain duties may be modified to compensate for indicator characteristics. Sheaves shall be machine grooved to a depth of not less than 1.5 times diameter of rope. The grooves shall be finished smooth and shall be free from surface defects likely to injure the rope. The contour at the bottom of the groove shall be circular over an angle of 130° approximately.

3.7 Shafts and axles shall have ample strength and rigidity and adequate bearing surfaces for their purposes. They shall, where necessary, be finished smoothly

3.8 Bearings shall be generally of ball, roller or ring lubricated type. Bush bearings may be used for shafts running at 450 rev/min or below.

3.9 Road wheels shall be fitted with resilient tyres of a type to suit application. When pneumatic tyres are fitted the valves shall be brought to the outside of the wheels.

4.0 SPECIFICATIONS

Main Frame	Rigid construction box-type frame having high strength
Boom	Box type telescopic boom
Boom Angle	Maximum 50 deg., minimum 0 deg.
Hoist System	Driven by Hydraulic Motor employing 4 falls.
Brake	Service Brake should be pneumatically assisted hydraulic brake. Front and rear brakes to be applicable through a foot pedal. Parking brakes are compulsory.
Boom Telescope	Three part boom with hydraulically operated extension jack.
Transmission	Sliding mesh with minimum 6 forward and 2 reverse speeds and high low range selector
Clutch	Single dry friction clutch plate



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Engine	Water cooled diesel engine providing sufficient power to properly run the mobile crane along with the rated load.				
Steering	Articulated steering with double acting hydraulically operated jacks				
Hydraulic system	Main pump of intra-vane type driven from engine crank shaft pulley through propeller shaft, 4 spool control valve.				
Fluid capacities	<table border="0"> <tr> <td>Fuel tank –</td> <td rowspan="3">} As per Manufacturer's standard</td> </tr> <tr> <td>Hydraulic tank –</td> </tr> <tr> <td>Transmission –</td> </tr> </table>	Fuel tank –	} As per Manufacturer's standard	Hydraulic tank –	Transmission –
Fuel tank –	} As per Manufacturer's standard				
Hydraulic tank –					
Transmission –					
Wheels	Front – total 4 nos Rear – Total 2 nos				
Electrical System	12 V Battery with around 35 amp alternator				
Safety Features	Audio overload warning Hose failure protection Safety brake on hoist (Fail-safe) Audio over hoisting warning				
Gauges	Water temperature Engine Oil Pressure etc.				
Tool kit	Standard tool kit in a tool box				



TITLE

**4X270 MW KOTHAGUDEM TPS
MOBILE PICK UP & CARRY CRANE**

SPECIFICATION NO. PE-TS-411-563-A601

VOLUME: III

REV 00

15.06.2015

VOLUME - III



TITLE:
**4X270 MW BHADRADRI TPS
TECHNICAL SPECIFICATION FOR
MOBILE PICK UP & CARRY CRANE
COMPLIANCE CUM CONFIRMATION
CERTIFICATE**

SPEC. NO.: PE-TS-411-563-A601
VOLUME: III
SECTION:
REV. NO. 00
SHEET 1 OF 2

COMPLIANCE CUM CONFIRMATION CERTIFICATE

The bidder shall confirm compliance with following by signing / stamping this compliance certificate (every sheet) and furnish same with the offer.

- a) The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusions, other than those mentioned under “exclusion and those resolved as per ‘Schedule of Deviations’, with regard to same.
- b) There are no other deviations w.r.t. specifications other than those furnished in the ‘Schedule of Deviations’. Any other deviation, stated or implied, taken elsewhere in the offer stands withdrawn unless specifically brought out in the ‘Schedule of Deviations’
- c) Bidder shall submit QP in the event of order based on the guidelines given in the specification & QP enclosed therein. QP will be subject to BHEL / CUSTOMER approval & customer hold points for inspection / testing shall be marked in the QP at the contract stage. Inspection / testing shall be witnessed as per same apart from review of various test certificates/ Inspection records etc. This is within the contracted price without any extra implications to BHEL after award of the contract.
- d) All drawings/ data-sheets / calculations etc. submitted along with the offer shall not be taken cognizance off.
- e) The offered materials shall be either equivalent or superior to those specified in the specification & shall meet the specified / intended duty requirements. In case the material specified in the specifications is not compatible for intended duty requirements then same shall be resolved by the bidder with BHEL during the pre-bid discussions, otherwise BHEL / Customer’s decision shall be binding on the bidder whenever the deficiency is pointed out.

For components where materials are not specified, same shall be suitable for intended duty, all materials shall be subject to approval in the event of order.

- f) The commissioning spares shall be supplied on ‘As Required Basis’ & prices for same included in the base price itself.
- g) All sub vendors shall be subject to BHEL / CUSTOMER approval in the event of order.
- h) Guarantee for plant/equipment shall be as per relevant clause of GCC / SCC / Other Commercial Terms & Conditions
- i) In the event of order, all the material required for completing the job at site shall be supplied by the bidder within the ordered price even if the same are additional to approved billing break up, approved drawing or approved Bill of quantities within the scope of work as tender specification. This clause will apply in case during site



TITLE:
**4X270 MW BHADRADRI TPS
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SPEC. NO.: PE-TS-411-563-A601
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SHEET 2 OF 2

commissioning, additional requirements emerges due to customer and / or consultant's comments. No extra claims shall be put on this account

- j) Schedule of drawings submissions, comment incorporations & approval shall be as stipulated in the specifications. The successful bidder shall depute his design personnel to BHEL's / Customer's / Consultant's office for across the table resolution of issues and to get documents approved in the stipulated time.
- k) As built drawings shall be submitted as and when required during the project execution.
- l) The bidder has not tempered with this compliance cum confirmation certificate and if at any stage any tempering in the signed copy of this document is noticed then same shall be treated as breach of contract and suitable actions shall be taken against the bidder.
- m) Successful bidder shall furnish detailed erection manual for each of the equipment supplied under this contract at least 3 months before the scheduled erection of the concerned equipment / component or along with supply of concerned equipment / component whichever is earlier.
- n) Document approval by customer under Approval category or information category shall not absolve the vendor of their contractual obligations of completing the work as per specification requirement. Any deviation from specified requirement shall be reported by the vendor in writing and require written approval. Unless any change in specified requirement has been brought out by the vendor during detail engineering in writing while submitting the document to customer for approval, approved document (with implicit deviation) will not be cited as a reason for not following the specification requirement.
- o) In case vendor submits revised drawing after approval of the corresponding drawing, any delay in approval of revised drawing shall be to vendor's account and shall not be used as a reason for extension in contract completion.



PROJECT:- 4X270 MW BHADRADRI

PACKAGE:- MOBILE CRANE

TENDER ENQUIRY REFERENCE:-

NAME OF VENDOR:-

SL NO	VOLUME/SECTION	PAGE NO.	CLAUSE NO.	TECHNICAL SPECIFICATION/ TENDER DOCUMENT	COMPLETE DESCRIPTION OF DEVIATION	COST OF WITHDRAWAL OF DEVIATION	REFERENCE OF PRICE SCHEDULE ON WHICH COST OF WITHDRAWAL OF DEVIATION IS APPLICABLE	NATURE OF COST OF WITHDRAWAL OF DEVIATION (POSITIVE/ NEGATIVE)	REASON FOR QUOTING DEVIATION
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TECHNICAL DEVIATIONS

COMMERCIAL DEVIATIONS

PARTICULARS OF BIDDERS/ AUTHORISED REPRESENTATIVE

NAME	DESIGNATIONS	SIGN & DATE

NOTES:

- For self manufactured items of bidder, cost of withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.
- For directly dispatchable items, cost of withdrawal of deviation will be applicable on the basic price including taxes, duties & freight.
- All the bidders have to list out all their Technical & Commercial Deviations (if any) in detail in the above format.
- Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.
- Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawal of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable.
- Bidder shall furnish price copy of above format along with price bid.
- The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
- Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.
- For deviations w.r.t. Payment terms, Liquidated damages, Firm prices and submission of E1/ E2 forms before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII of GCC. Rev-06 will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy
- Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be accepted.
- All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.
- Cost of withdrawal is to be given separately for each deviation. In no event bidder should club cost of withdrawal of more than one deviation else cost of withdrawal of such deviations which have been clubbed together shall be considered as NIL.
- In case nature of cost of withdrawal (positive/negative) is not specified it shall be assumed as positive.
- In case of discrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.

VENDOR HAS TO SUBMIT ONLY FOLLOWING DOCUMENTS ALONG WITH THE OFFER, FOR TECHNICAL EVALUATION OF THE BID:-

- 1.0 Deviation schedule with reference to specific clauses of the specification along with reason for such deviation or No deviation in the format given under Vol.-III
- 2.0 Unpriced format, duly mentioned 'Quoted' against each Sl.no.below each column.
- 3.0 Duly signed and stamped Compliance cum Confirmation form.
- 4.0 Duly signed pre-bid clarifications

Note1:- Any other standard document/ details furnished by the bidder i.e. Data sheet / Crane clearance diagram/ GA Drawing/ QAP etc. shall not be taken in to consideration for evaluation.

Note 2:- Bidder to note that if the bidder does not submit the documents mentioned in Sl. No. 1.0, 2.0, and 3.0 along with their offer then their offer is liable to be rejected.