

Project Engineering
Management

Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)



Ref. No. PE/PG/TAN/E-5409/2016-01
Enquiry No.: PE/PG/TAN/E-5409/2016
Date: 27/12/2016

2X660 MW IB, BANHARPALLI UNITS 3 & 4
DOUBLE GIRDER EOT CRANE ABOVE 50T TO 150T

CORRIGENDA/ADDENDA-1

Dear Sirs,

1. Clause No. 3.11 of NIT may please be ignored.
2. W.r.t clause no. 3.22 of NIT, please note MSEs who submit registration certificate or register themselves after placement of PO shall also be given payment preference as per MSMED-Act 2006.
3. HSE clauses shall also form the part of tender terms & conditions. Same is enclosed herewith for your ready reference.

Thanking you,
Yours faithfully,
For and on behalf of BHEL

ROHIT JUNEJA
(Sr. Engineer/Project Group-II-1)

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POWERTEC ENGG. PVT.
LTD, CHENNAI

BHARAT HEAVY
ELECTRICALS LTD, PSSR,
CHENNAI

KARNATAKA POWER
CORPN LTD, STAGE II,
CHP

VOLUME - I

GCC, SCC &
INT. PACT

SECTION - 3

HSE

SECTION - 3: HSE REQUIREMENTS

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POWERTEC ENGG. PVT LTD, CHENNAI	BHARAT HEAVY ELECTRICALS LTD, PSSR, CHENNAI	KARNATAKA POWER CORPN LTD, STAGE II, CHP	VOLUME - I	GCC, SCC & INT. PACT
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A. HSE REQUIREMENTS

1.0 VENDOR TO ENSURE COMPLIANCE OF THE FOLLOWING HEALTH RELATED POINTS

- 01 Sub-Vendor to identify nearest hospital for health check up of his staff and workers and intimate BHEL site office & PSSR Hqrs including the telephone numbers.
- 02 Pre employment medical check up and fitness certificate of employees shall be produced
- 03 To arrange for occupational health check up / screening of Vendor's staff and Workers engaged in sub contracting activities. In this, Category of workmen such as welders, gas cutters, grinders, radiographers, crane operators are to be given exclusive attention in respect of health screening.
- 04 Sub-Vendor to arrange an ambulance vehicle or emergency vehicle on a continuous basis to meet any emergency situation arising at site work in which his staff and workers are engaged.
- 05 To provide appropriate facilities for prompt first aid treatment of injuries and illness at work. One first aider for each sub Vendor to be provided. First aider should undergo training on first aid from a recognized body.
- 06 To provide filtered drinking water at selected place in a clean container.
- 07 To comply with all applicable legislations /regulations in respect of health management and in line with HSE. Policy of PSSR (list of applicable legislation / regulations and HSE policy to be obtained from BHEL).

2.0 VENDOR TO ENSURE COMPLIANCE OF THE FOLLOWING SAFETY RELATED POINTS

- 01 **Personnel Protective Equipment (PPES):** required number of following PPES (confirming to relevant IS standards) to be made available to workmen at site and ensured that they are used
 - Helmet
 - Safety goggles and face shields
 - Welding face shields
 - Safety belts for working at heights
 - Safety shoes
 - Ear plugs and ear muffs
 - Rubber gloves and mats for LT / HT electrical works
 - Gum boots & aprons
 - Dust and fume masks
 - Other items as required by BHEL site
- 02 Sub Vendor to liaise with nearest fire station and get contact telephone number and Contact person to meet any emergency
- 03 To provide appropriate fire fighting equipment at designated work place and to provide fire fighting training to selected persons in his group of workmen to meet emergencies.

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04.	To provide adequate number of 24 V Power Supply points to work in a confined / constrained and enclosed space.
05	All Power Tapping points / Switch Boards / Power & Control Cabling should fulfil required electrical safety aspects as per relevant IS standard and Indian Electricity Rules.
06	ELCB's (Earth Leak Circuit Breakers) at all electrical distribution points to be provided and all the electrical appliances shall be connected to them.
07	Red and white caution tape of proper width (1.5 to 2 inch) to be used for cordoning unsafe area such as open trench, excavated area, temporary electrical installations etc.
08	To provide sub-vendors company logo on clothing to all staff and workers for identification including identity cards with photographs approved by BHEL Electrician shall possess required license and wear red helmet
09.	High pressure and structural welders to be identified with colour clothing and to display copy of welders certificate with photographs of welder at the work place. They also should be in possession of valid welding procedure.
10.	To display safe handling procedure for all chemicals such as lube oil, grease, sealing compound, kerosene, diesel etc. at stores & respective work place.
11.	Vendor should authorise a person at site to stop work if there is a unsafe work noticed as per his knowledge.
12.	Fitness for use of erected scaffolding to be certified by the Vendors approved scaffolder and the certificate should be displayed on the scaffolding itself. If the scaffolding is unsafe, the same will not be used. The certificate to be updated daily. The scaffolding to be made as per the relevant IS standard.
13	For making platform on the scaffolding, proper thickness and size of the plank of required quality wood to be used. The safe working load of the platform to be displayed on the scaffolding itself. Proper use of platform to be explained, to the user. Wherever fire hazard exists, use of wooden planks and coir ropes shall be avoided.
14.	All plant equipment should have inspection / test report before put in to use.
15.	All T&Ps should be of reputed brand and having quality and test certificates.
16.	All IMTE's should have valid calibration certificate from recommended authorized institutions / testing lab and these should be in place.
17	All lifting tackle and plant equipment should have safe working load certificate issued by competent person.

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18. The right worker should be deployed for right job and the resume of Site in charge, supervisors, and key workers to be submitted before commencement of work.
19. Sub-Vendor should submit Inspection / Testing Matrix of all T&Ps and to be approved by BHEL.
20. Sub-Vendor to display safety slogan, safety board, caution boards wherever required in consultation with BHEL
21. Sub-Vendor to provide gas detectors of reputed make at desired locations as per the directions of BHEL
22. Sub-Vendor to conduct emergency mock drills in respect of first aid / fire accident / artificial respiration / human being evacuation under emergency situations etc. One set of drill per 6 month to be conducted & and report submitted to BHEL
23. Safe handling and storing of all equipment / materials with adequate space to be ensured.
24. Sub Vendor should deploy a qualified safety officer till the completion of the project All safety officers and safety coordinators shall wear green helmet and green shirts.
25. Sub Vendor to comply the safety reporting procedure of BHEL:

This includes reporting of accidents / incidents, first aid injuries, property damages, man days lost due to lost time injury, fatal, non - fatal and computation of safety indices such as frequency rate, severity rate & incident rate. Sub Vendor also should follow additional safety requirements that may arise in future as a result of improvements in the safety management system
26. Sub Vendor to identify probable emergency situations such as electric shocks to workmen, caving in of shored earth, fall from height, collapse of scaffolding fire etc., and should have clear emergency action plan to overcome them. Sub Vendor to take required guidance from BHEL in this regard.
27. Sub Vendor to identify hazardous activities which he may carry out and should train his workmen in those activities with the relevant operation control procedures. Sub Vendor to take required guidance from BHEL in this regard
28. Safe, work permit system to be followed while working in confined space / near electric systems
29. To comply with all applicable legislations / regulations in respect of safety management and in line with HSE policy of PSSR (list to be obtained from BHEL)
30. While removal of existing arrangements, such as removal of hand rails and floor grills, there shall be prior approval / intimation from main plant Vendor / BHEL.
31. LPG gas cylinders should not be used for construction activities.

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3.0 VENDOR TO ENSURE COMPLIANCE OF THE FOLLOWING ENVIRONMENT RELATED POINTS

- Housekeeping - sub Vendor to carry out daily housekeeping of work areas / stores through a check list prepared in consultation with BHEL
- Sub Vendor shall adopt pollution prevention / reduce / control approach in all his site activities. This shall include.
 - Transporting of oil / chemical from stores to site safely without causing spillage. In case of any spillage, the area shall be cleaned and the remnant spilled oil disposed off to a safe place identified for such disposal.
 - To use required containers / cans / safety gadgets / appliances for transporting and for usage of oil / chemicals at site
 - To use required number of scrap / waste collection bins.
- Sub Vendor shall arrange for segregation / collection of scraps and dispose off to the identified place meant for scrap collection.
- Sub Vendor to adopt good erection practices / procedures with the objective of reduction of waste generation / rework / resource and energy conservation.
- To comply with all applicable legislations / regulations in respect of environment and in line with HSE policy of PSSR (list to be obtained from BHEL)

4.0 OTHER HSE REQUIREMENTS TO BE COMPLIED BY SUB VENDOR

- Sub Vendor to clearly understand and implement the HSE policy of PSSR with a commitment to comply the requirements of the policy.
- Sub Vendors to arrange for daily meeting of their supervisors and work force before they disperse for their daily planned activities where in the relevant health , safety and environment aspects of the job and use of PPES are explained
- Sub Vendor to conduct monthly HSE meeting (internal) and submit the report to BHEL. They also should attend the monthly HSE meeting conducted by BHEL and comply to all points raised by BHEL.
- HSE slogans to be displayed in a proper board - hoarding at designated places in consultation with BHEL
- Sub Vendor to submit a structured programme for HSE training & occupational health screening of their workforce before the commencement of the work at site.
- To comply all the statutory requirements as applicable while Implementing HSE management system
- Sub Vendor to complete the management programmes improvement activities and follow all the relevant operation control procedures while executing the sub Vendor works.

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Contractor Performance Evaluation Report

Base Document for Form No. F15

Contract No./Date	SCT 1296/7-May-2008	Vendor Name	NAVA BHARATI TRANSPORT SERVICE
Site	BELLARY UNIT 2	Name Of Work	MATERIAL HANDLING
Package	Material Handling & Material Management	Monthly Evaluation for the Month	October' 11
Sl No	Parameter of Measurement	Max Score	Score Obtnd
QUALITY			
1.10	Total number of instances in the month, House keeping NOT attended to inspite of instructions by BHEL -le removal / disposal of surplus earth / debris / scrap / unused / surplus cable drums / other electrical items / surplus steel items / packing materials, thrown out scrap like weld butts, cotton waste etc from the working area to identified locations	1.25	0.750
1.03	Level of compliance wrt decisions taken in previous Quality meetings	0.7	0.420
1.02	Shortfall in number of weekly Quality meetings in the month, not conducted or not attended by Quality officer or his authorised nominee	1.4	0.840
1.04	Number of batches of welding electrodes, cement, sand, aggregate, consumable, Paints etc as applicable for which test certificates not submitted OR MM & MH pkg:) In case of MM & MH package, monthly checks	0.75	0.000
1.05	Number of incidences of improper storage of inflammable gases and liquids, fuel etc	0.7	0.140
1.06	Total number of complaints in the month on non-preservation of materials under the custody of the contractor / erected in his scope.	0.7	0.420
1.07	Cumulative number of days in the month delayed due to poor organisation/planning of works at site.	1.25	0.000
1.08	Total number of rework instances in a month necessitated due to improper works/procedures by contractor	1.25	0.500
1.09	Total number of complaints received in the month on the quality of finish / aesthetics	1.3	0.260
1.01	Cumulative number of days in the month, the nominated Quality Officer or his authorised nominee was not available	0.7	0.560
QUALITY SUB Total		10.000	3.890
PERFORMANCE			
2.10	Number of times the commitments on augmentation of resources as per plan for the month have slipped	2.6	1.560
2.17	Number of times rework refused	1.3	0.000
2.03	Cumulative number of days of delay in submission of plan FOR THE NEXT MONTH supported by deployment plan of Major T&Ps and Manpower (as per C-1 & C-2 of Format F-14)	1.3	0.780
2.04	Percentage of delayed submission of Daily Reports for Progress, Labour etc	1.4	0.840
2.05	Number of days delayed for submission of log sheets / protocols / Monthly Progress reports for the work executed during the month under measurement	0.7	0.280
2.06	Shortfall attributable to contractor as a percentage of what is clearly executable (In line with Terms of payment) by contractor as per the plan (part-A of F-14) for the subject month	15.5	15.500
2.07	Cumulative number of days in the month for which feedback/briefing on plans for the day and the progress of previous day was not given to BHEL	2	0.800
2.01	Number of times the workplan submitted FOR THE NEXT MONTH is REJECTED for not being supported with proper T&P (major) and Manpower.	2.6	2.080
2.09	Cumulative number of days of work lost due to interface issues with fellow contractors/ customers leading to stoppage / delay in works, attributable to the contractor	1.3	1.040
2.11	Number of days the submission of Running bills for the month are delayed	0.7	0.560
2.12	Number of days the supporting documents for the Running bills submitted for the month are delayed	0.7	0.280
2.13	Number of times updations were not carried out in maintenance of records in PC in a form approved by BHEL at site (as applicable for respective packages).	1	0.200
2.14	Number of times the Top Management of contractor did not respond to critical issues of site, for the month	2.6	1.560
2.15	Number of refusals for improvement/remedial measures suggested by BHEL	0.5	0.000
2.08	Cumulative number of major instances in the month hampering/affecting progress of work due to improper management of labour and T&P at site leading to slowed progress of work or extended the completion of works	2.6	0.520
2.02	Number of times the Work plan (unloading and storage plans in case of MM & MH packages) is not supported by relevant construction/layout drawings - like A4 plan / elevation views of plan status for structures / pressure parts/Civil Works, Piping isometrics for piping, Layout / PID / System reference sketch, Unloading/storage plans etc as applicable for the works planned	2.6	1.560
2.18	Cumulative number of days in the month recording/logging was not done in daily log/ history register / hindrance register maintained at BHEL Site Office	1	0.800
2.16	Cumulative number of days in the month the works were stopped / refused on interpretation of contract clauses/scope due to tendency of taking undue advantage by interpreting contract clauses in their favour	2	0.000
2.19	Erection Agency: Cumulative number of major instances in the month hampering/affecting progress of work due to delayed or non-deployment of separate gang for material handling works OR MM Agency: Cumulative number of major instances in the month hampering/affecting erection work due to not identifying or not locating or not retrieving of materials required by erection agency	2.6	1.560
PERFORMANCE SUB Total		45.000	29.920
RESOURCES			
3.08	Cumulative number of major instances in the month hampering/affecting progress of work due to non-availability of Consumables under the scope of contractor	2.5	1.500
3.01	Number of days of delay in submission of PLAN vis a vis ACTUAL deployment of Manpower for the month under review (as per part B-2 of F-014)	1.5	0.300
3.02	Number of days of non-availability of supporting staff at office for submission of required reports/documentation as required for the contract	1.5	0.000
3.03	Number of days of delay in submission of PLAN vs ACTUAL deployment of major T&P for the month under review (as per B-1 of F-14)	2.5	1.500
3.04	Cumulative number of major instances in the month hampering/affecting progress of work due to non availability of operator / fuel in contractor's scope for Major T&P and MME	2.5	1.000
3.05	Cumulative number of major instances in the month hampering/affecting progress of work due to breakdown or non availability of major T&P and MME for the work	2.5	0.500
3.07	Number of times Contractor's T&P (items common to BHEL and Contractor) was NOT made available before requesting for the same T&P from BHEL	2.5	2.000
3.09	Cumulative number of days in the month lost due to use of improper consumables like electrodes, gases, Cement, sand, etc as applicable	2	2.000
3.06	Cumulative number of major instances in the month hampering/affecting progress of work due to non-availability of proper T&P/MME (number, capacity adequacy, and working condition) under the scope of contractor	2.5	1.500
RESOURCES SUB Total		20.000	10.300

Monthly Evaluation Score

SITE INFRASTRUCTURE & SERVICE			
4.09	Commitment of Top Management of Contractor for welfare of labour	0.7	0.560
4.07	If applicable as per contract, Provision of Water meter for each point of distribution and cumulative number of days of non-submission of water consumption / non-working of water meter	0.7	0.280
4.06	Number of days of non-availability of potable drinking water stations for workers in specified areas.	0.7	0.420
4.08	Provision of Energy meter for each point of distribution and cumulative number of days of non-submission of energy consumption / non-working of energy meter	0.7	0.000
4.01	Number of deviations from the site organisation report submitted initially wrt deployment for the current month affecting work progress.	1.5	0.600
4.02	Cumulative number of days in the month lost due to delayed renewal in respect of Labour license, Insurance, electrical licence, factory inspector etc as applicable	1.5	0.000
4.03	Number of non-compliances of Statutory requirements like validity of Labour Licence, Labour Insurance, PF, etc and any other applicable Regulation	0.8	0.320
4.04	Cumulative number of days in a month poor illumination is reported at storage area, erection area, pre-assy area and other designated areas by BHEL site.	0.7	0.420
4.05	Number of days of non-availability of well maintained toilets facilities for workers (separate for men and women)	0.7	0.420
SITE INFRASTRUCTURE & SERVICE SUB Total		8.000	3.020
SITE FINANCE			
5.01	Number of days delayed in making labour payments of the last month	3	1.800
5.02	Number of complaints from sub supplier for non receipt of payments	2	2.000
5.03	Number of times the site operations are hampered for want of funds at the disposal of site-in-charge.	2	2.000
SITE FINANCE SUB Total		7.000	5.800
HSE & SA			
6.12	Number of times the agency has defaulted on display of safety posters / safety slogans / safety barriers/emergency numbers etc in identified areas	0.5	0.200
6.13	Non compliances observed during HSE and Safety Audit	0.5	0.200
6.14	Cumulative number of days in the month, First Aid Kits were not maintained at designated places at site	0.5	0.300
6.15	Cumulative number of days in the month, there was non-availability of Ambulance or Emergency vehicle (whichever applicable) at Site.	0.5	0.400
6.16	Number of days taken for submission of Root Cause analysis (RCA) for the accident /theft/ incidence from the cut off date intimated by BHEL for submission of RCA NOTE: Occurrences of last month to be accounted for in the evaluating month)	0.5	0.200
6.17	Cumulative number of days in the month Women labour were deployed for office or site works during night hours (anytime between 18.00 hrs to 08.00 hrs)	0.5	0.500
6.18	Cumulative number of days in the month children under the age of 18 years were deployed for office or site works	0.5	0.500
6.04	Delay in submission of monthly report on safety in the prescribed form	0.5	0.000
6.01	Cumulative number of days in a month the nominated Safety Officer or his authorised nominee is not available	1	1.000
6.03	Level of compliance wrt decisions taken in previous Safety meetings	0.5	0.200
6.05	Number of days taken for lodging FIRs from date of occurrence/notice of incident of theft / accident etc	0.5	0.400
6.06	Number of times warnings issued for using scaffoldings other than steel	0.5	0.400
6.07	Number of times punitive fines imposed for not complying with use of PPE	0.75	0.450
6.08	Number of times punitive fines imposed for unsafe practices	0.75	0.600
6.09	Delay in number of days in submission of monthly report on provisions, maintenance and validity of fire extinguishers	0.5	0.400
6.10	Delay in number of days in submission of monthly report on provisions and maintenance of Electrical Safety for Equipments	0.5	0.200
6.02	Shortfall in number of weekly safety meetings in the month conducted or attended by the Safety Officer or his authorised nominee	0.5	0.500
6.11	Delay in number of days in submission of monthly report on provisions and maintenance of proper ELCBs for Electrical Safety of Personnel.	0.5	0.200
HSE & SA SUB Total		10.000	6.650
Total		100.000	59.580
Less Deduction in Score Due to Major Accidents Attributable to the Contractor			0.000
Less Deduction in Score Due to Minor Accidents Attributable to the Contractor			0.000
Final Score			59.580

Prepared on:	Printed on:22-Oct-2011
Package Manger	Vendor