

CORRIGENDUM 01 dated 07.01.2014

REF: BHEL RFQ NO. RED000025 DTD 23.12.2013 DUE ON 24.01.2014.

ITEM: TURBINE SUPERVISORY SYSTEM AND VIBRATION MONITORING SYSTEM FOR VARIOUS PROJECTS.

Reference : Pre Bid meeting held on 02-01-2014 at BHEL EDN, Bangalore

SI No.	Technical Clarifications sought by Bidder	BHEL's reply
A)	TECHNICAL:	
1	BHEL specs calls for 19" Rack mounted. Can DIN rail Mounted systems offered?	DIN rail mounted systems are not acceptable.
2	If bidder qualifies in Technical bid but does not qualify in commercial bid, whether such bidders will be considered for registration at BHEL-EDN , Bangalore.	Will be considered for registration. Such registration shall be after evaluation of Supplier Registration Form (SRF), which is to be submitted by OEM.
3	PQR for Farakka Project and PQR general are at variance.	General PQR is applicable and supersedes PQR under clause No. BB of spec ref: CE/409-416/TSS-VMS/FSTPP for Farakka R&M.
4	Ref: Dadri Specs : For Abs Bearing Vibration measurement, Mounting arrangements will be as per BHEL specs. For Bearing No. 7, there is no mention of above.	There is no TSI measurement on bearing No.7.
5	Clause Ref : CE/409-416/TSS-VMS/PQR 3.0 : Can New products or new Models/versions are allowed ?	BHEL specification allows improved versions to be offered and this will be evaluated only after receipt of formal offers from bidders.
6	Clause Ref : CE/409-416/TSS-VMS/PQR 3.5.1 : In the event Improved versions a part is offered (such as sensor) is additional spares are required for item or for all items for each project	Even if one item is offered as improved version, all spares as per clause 3.5.1 shall be offered for each project separately.
7	Clause Ref : CE/409-416/TSS-VMS/PQR 3.5.1 Quantity of spares, whether it is more or less ?	The spares should be calculated as per the spares requirement spelt out in specs.
8	CE/409-416/TSS-VMS/PQR 7.0: Original Equipment Manufacturer (OEM): In specs, OEM is mentioned. Whether all items should be manufactured by OEM himself or he can buy Sensors from one source and Modules from some other source, etc.?	Selection of components is responsibility of the OEM and corresponding PQR shall be submitted. Critical components such as all electronic modules, sensors, Analysis and diagnostic hardware and software shall be sourced through OEM. All critical components shall meet PQR requirement indicated above.

Sl No.	Technical Clarifications sought by Bidder	BHEL's reply
9	In specs 2 to 4 channels have been called. Whether, one can supply one Channel without sacrificing the Specs requirement?	Single channel systems are not acceptable. Bidder shall meet project specific technical requirements.
10	Any specific technical queries, specific to Bidder whom to approach?	Bidder can send an e-mail and seek clarifications. This shall be addressed to the purchase officer. BHEL will upload replies in the websites for use by all other bidders
11	Clarification w.r.t KPCL Bellary 1x700 MW VMS Specification	Specification for Bellary project, section C-1 ref.: CE /409-416/TSS-VMS/KPCL, clause BB Specification line "Separate vibration monitors & mounting racks/cabinets shall be offered for AHP Supply Pump & their motors." stands withdrawn.
12	Clarification w.r.t K.P.C.L Bellary 1X700 MW VMS Specification	Specification for Bellary project, section C-1 ref.: CE /409-416/TSS-VMS/KPCL, clause BB 2.8.6 Specification line shall be read as "The system shall be interfaced with unit DCS system through redundant communication link with two separate Ethernet/FO switch for CW control room VMS & Main control room VMS."
13	Clarification w.r.t R.P.C.L Yermarus 2X800 MW VMS Specification	Specification for Yermarus project, section C-10 ref. CE /409-416/TSS-VMS/RPCL, clause BB 1.10 Revised list of Vibration Sensors / Machine Data attached.
14	Clarification w.r.t Bokaro 1X500 MW VMS Specification	Specification for Bokaro project, section C-2 ref. CE / 409-416 / TSS-VMS / BOK, clause BB 2.2 Panel specification at cl. BB 2.2 stands withdrawn; bidder to follow panel specification as per cl. BB 1.9.11. Please note panel height is changed to 2415 mm.
15	Specification for TSS for Farakka (SUB – SECTION C4) ref: CE/409-416/TSS-VMS/FSTP REV 00 PAGE: 01 OF 13	Page number should be read as 01 OF 01 instead of 01 OF 13.

Sl No.	Commercial Clarifications sought by Bidder	BHEL's reply
B)	COMMERCIAL:	
1	Ref: Special conditions of contract (SCC) Note 1 under Clause No. 1: How BHEL will evaluate financial soundness, Organizational capability, service network, etc. ?	Applicable only for new vendors, who have not been evaluated and registered with BHEL-EDN-Bangalore. Evaluation will be based on their "Source request form (SRF)", which has to be submitted along with Quotation.
2	Ref: SCC clause No. 5 i.e Package purchase: Pricing / price mix varies depending on the total No of projects. If one project is taken out for any reason, then it will be difficult to maintain the Price. BHEL to review.	No change w.r.t. NIT. PI note, unit rates should be maintained same irrespective of the project as per Clause No. 6 of SCC.
3	Ref: SCC Clause No 1: The Tentative requirements mentioned are they linked to Plant Shut-down?	No, they are the tentative schedule of delivery, which BHEL will be looking for.
4	Ref: SCC Clause No. 3 : Bidders can seek clarifications thro' E-mails also. There should be a cutoff date for seeking clarifications as it will have bearing on the Quotation submission.	LAST DATE OF RECEIPT OF REQUEST FOR CLARIFICATIONS IS 10 TH JAN 2014. NO CLARIFICATIONS WILL BE ENTERTAINED AFTER 10 TH JAN 2014. ANSWERS WILL BE UPLOADED ON 13 TH JAN 2014.
5	Ref: Scc clause No. 11 : Erection & commissioning charges: Bidders should be allowed to quote with limitation on No. of days/ visits as it is difficult to assess the same.	Only Lump sum charges are acceptable as L1 is decided based on "Total cost to BHEL" . The No.of days and visits as required for completing the erection & commissioning may be given for our information.
6	Can a bidder choose not to quote for a project?	Bidders have to quote for all the projects as evaluation is based on Total Cost of all projects.
7	If a bidder is technically not acceptable for a Project, whether BHEL will reject them for the total tender ?	Yes.
8	Supposing a Customer not approves a New Model for the L1 bidder ?	BHEL/Vendor will make all out efforts to get the approval from all customers / end user. In the event customer approval cannot be obtained, such projects will be treated separately.
9	Any change in specs, Scope and Commercial terms & conditions by BHEL, whether Price impact is allowed ?	Yes.
10	If a bidders has quoted more than, what is required, and there is no price impact, whether bidder will be allowed to reduce the quantity? Similarly, if less is quoted then the required Qty, whether price impact is allowed.	No. As long as there is no change in specification by BHEL, price impact due any changes by vendor to meet technical specification will not be accepted .

Sl No.	Commercial Clarifications sought by Bidder	BHEL's reply
11	Ref: SCC CI No. 15: Dealing with Indian Agents. As Indian representative/agent Is quoting, doing Engg and Co-coordinating site activities, BG will be given by them instead of principals/OEM. Same should be accepted.	Imported portion, OEM should furnish BG and for Indigenous portion, Indian representative/agent on whom, PO is placed has to give BG.
12	A bidder accepts all your Terms & conditions but, during execution asks for dilution of BG clause, whether it is allowed?	No commercial/technical dilution will be allowed after placement of Order.
13	Ref: Instructions to Bidders: "On award of contract if a bidder seeks dilution of the Ordered specs and if such deviation is acceptable to BHEL, Bidder shall pass on mutually agreed price reduction to BHEL" - Is redundant.	This clause stands deleted.
14	Ref: SCC CI No. 12: When will a bidder come to know whether Reverse auction is there or not ?	After technical evaluation.
15	If a bidder does not agree for Reverse auction, what will happen?	It will be dealt as per BHEL guidelines.
16	Minimum how many bidders should be there for conducting Reverse Auction.	As per BHEL guidelines.
17	Ref: SCC CI No. 14: Integrity pact: When we have to submit and whether it should be on a Bond paper ?	It should be given along with Quotation (Part-1 Bid). It can be in a plain paper.
18	Who has to sign the pact agreement?	Any authorized person of Bidder / contractor.
19	Project status (Annexure-I) not attached with Tender documents.	Attached herewith. Please refer page 7 of 7 of corrigendum.
20	In case of High Sea Sales: BG for Imported portion, who has to furnish ?	Indian representative/agent, on whom, PO is placed.

Sd

For BHEL



**Specification for
Vibration Monitoring System (VMS) &
Analysis & Diagnostics System**

REF. : CE/409-416/TSS-VMS/RPCL
REV. NO. : 00
PAGE : 4 of 11

1.10 List of Vibration Sensors / Machine Data:

Machine Data of YERAMARUS (2x800 MW) TPS												
Sl. No.	Machine	Machine Qty. per Unit	Machine Qty. for 2 Units	Cabling distance from the M/c to VMS Panel (Mtr.)	No. of Bearings per M/c for monitoring vibration	Installation (Horizontal/ Vertical)	Machine RPM	Range	Alarm Level	Trip Level	Mounting Details	Total No. of Vibration points for 2 Units
1	TDBFP ^a	2	4	80	2	Horizontal	800-6500	0-200 ^a	90 ^a	150 ^a	C	16
2	MDBFP ^a	1	2	80	2	Horizontal	800-6500	0-200 ^a	90 ^a	150 ^a	C	8
2	MDBFP - Motor	1	2	80	2	Horizontal	1500	0-25 ^b	4.5 ^b	7.1 ^b	B	4
3	CEP	3	6	105	1	Vertical	1485	0-25 ^c	7 ^c	7.6 ^c	A	6
4	CEP - Motor	3	6	105	2	Vertical	1500	0-25 ^b	4.5 ^b	7.1 ^b	B	12
5	ECW TG Pump	3	6	160	2	Horizontal	1500	0-25 ^b	10 ^b	15 ^b	A	12
6	ECWP TG Motor	3	6	160	2	Horizontal	1500	0-25 ^b	7 ^b	12 ^b	A	12
7	ECW SG Pump	2	4	160	2	Horizontal	1500	0-25 ^b	10 ^b	15 ^b	A	8
8	ECWP SG Motor	2	4	160	2	Horizontal	1500	0-25 ^b	7 ^b	12 ^b	A	8
9	ACW Pump ^d	1	2	500	1	Vertical	1500	0-25 ^b	10 ^b	15 ^b	A	2
10	ACWP Motor ^d	1	2	500	1	Vertical	1500	0-25 ^b	7 ^b	12 ^b	A	2
11	CW Pump ^d	4	8	415	1	Vertical	500	0-25 ^c	11 ^c	18 ^c	A	8
12	CWP - Motor ^d	4	8	415	2	Vertical	500	0-25 ^b	4.5 ^b	7.1 ^b	A	16
13	APH Wash Pump ^d	3	6	180	1	Vertical	1500	0-25 ^b	10 ^b	15 ^b	A	6
14	APHWP - Motor ^d	3	6	180	1	Vertical	1500	0-25 ^b	7 ^b	12 ^b	A	6
15	Drip Pump	2	4	100	1	Vertical	1500	0-25 ^b	10 ^b	15 ^b	A	4
16	Drip Pump Motor	2	4	100	1	Vertical	1500	0-25 ^b	7 ^b	12 ^b	A	4
17	Mill Motor	8	16	205	2	Horizontal	1000	0-25 ^b	4.5 ^b	7.1 ^b	B	32
18	ID Fan	2	4	405	1	Horizontal	120-580 VFD	0-25 ^b	4.5 ^b	11 ^b	E	4
19	IDF - Motor	2	4	405	2	Horizontal	600	0-25 ^b	4.5 ^b	7.1 ^b	B	8
20	FD Fan	2	4	200	1	Horizontal	990	0-25 ^b	4.5 ^b	11 ^b	E1	4
21	FD - Motor	2	4	200	2	Horizontal	1000	0-25 ^b	4.5 ^b	7.1 ^b	B	8
22	PA Fan	2	4	205	1	Horizontal	1490	0-25 ^b	4.5 ^b	11 ^b	E	4
23	PAF - Motor	2	4	205	2	Horizontal	1500	0-25 ^b	4.5 ^b	7.1 ^b	B	8
	TOTAL	60	120									202

Note:

^a Shaft vibration sensor for BFP; 2 nos. probe each side (DE & NDE) 90 degree apart, for probe arrangement refer drawing no. P1-R6235, R-3 attached. Unit of Range, Alarm & Trip shall be in 'µm - Peak-Peak'

^b Bearing casing vibration sensors. Unit of Range, Alarm & Trip shall be in 'mm/sec - Peak'.

^c Bearing casing vibration sensors. Unit of Range, Alarm & Trip shall be in 'mm/sec - RMS'

^d VMS racks/modules for these machines shall be in separate common panel located at CW Pump house control room.

^e Mounting Details:

A: 60 x 60 x 10 mm removable pad on bearing housing

B: 60 mm cube vibration pad welded on both end shields

C: 40 x 100 mm machined surface provided on DE & NDE bearing housing

E / E1: 70 x 80 mm / 80 x 80 mm, machined surface provided on bearing housing

KKS Tag Nos. for transducers will be provided during detailed Engineering.

Enclosure to Special Conditions of Contract (RFQ No.: RED0000025)

Sl. No.	PROJECT	ITEM	LOCATION	FOR IMPORTED ITEMS	FOR INDIGENOUS ITEMS
1	SAGARDIGHI (2 X 500 MW)	TSS+VMS WITH ANALYSIS & DIGNOSTICS	SAGARDIGHI, WEST BENGAL	NIL CUSTOMS DUTY – MEGA PROJECT	ED NIL, CST IS REIMBURSABLE BY CUSTOMER. VAT AT NORMAL RATE.
2	MUZAFFERPUR (2 X 195 MW)	VMS	MUZAFFERPUR, BIHAR	MERIT DUTY Basic CD @ 7.5 %	ED, CST / VAT APPLICABLE AT NORMAL RATES.
3	DVC BOKARO (1 X 500 MW)	TSS+VMS WITH ANALYSIS & DIGNOSTICS	BOKARO, JHARKHAND	PROJECT IMPORTS. Hardware: Basic CD @ 5 %, Software : CVD @ 12 %	ED, CST / VAT APPLICABLE AT NORMAL RATES.
4	BELLARY (1 X 700 MW)	VMS WITH ANALYSIS & DIAGNEOSTICS	BELLARY, KARNAKATA	PROJECT IMPORTS. Hardware: Basic CD @ 5 %, Software : CVD @ 12 % CUSTOMS DUTY REIMBURSABLE BY CUSTOMER.	ED, CST / VAT APPLICABLE AT NORMAL RATES.
5	YERMARUS (2 X 800 MW)	VMS + ANALYSIS & DIGNOSTICS FOR TSS	RAICHUR, KARNAKATA	PROJECT IMPORTS. Hardware: Basic CD @ 5 %, Software : CVD @ 12 % CUSTOMS DUTY REIMBURSABLE BY CUSTOMER.	ED & CST/VAT ARE APPLICABLE AT NORMAL RATES. ONLY ED & VAT ARE REIMBURSABLE BY CUSTOMER.
6	FARAKKA R & M (2 X 500MW)	TSS+VMS & ANALYSIS & DIGNOSTICS FOR TSS	KOLKATA, WEST BENGAL	MERIT DUTY: Basic CD @ 7.5%. If PAC is received then Hardware : Basic CD @ 5 % Software : CVD @ 12 % .	ED, CST / VAT APPLICABLE AT NORMAL RATES.
7	DADRI R & M (4 X 210 MW)	TSS	DADRI, UTTAR PRADESH	MERIT DUTY: Basic CD @ 7.5%. If PAC is received then Hardware : Basic CD @ 5 % Software : CVD @ 12 %.	ED, CST / VAT APPLICABLE AT NORMAL RATES.
8	VINDHYACHAL (1 X 500 MW)	TSS WITH ANALYSIS & DIGNOSTICS	VINDHYACHAL, MADHYA PRADESH	PROJECT IMPORTS. Hardware: Basic CD @ 5 %, Software : CVD @ 12 % .	ED, CST / VAT APPLICABLE AT NORMAL RATES.
9	SINGARENI (2 X 600 MW)	TSS+VMS WITH ANALYSIS & DIGNOSTICS	MANCHERYAL, ANDHRA PRADESH	PROJECT IMPORTS. Hardware: Basic CD @ 5 %, Software : CVD @ 12 % .	ED, CST / VAT APPLICABLE AT NORMAL RATES.
10	LALITPUR (3 X 660 MW)	VMS WITH ANALYSIS & DIGNOSTICS	JHANSI, UTTAR PRADESH	MERIT DUTY : Basic @ 7.5 %. If BG / Mega Certificate received from customer then Custom duty NIL. FREIGHT REIMBURSABLE BY CUSTOMER.	ED NIL, CST/VAT, FREIGHT ARE REIMBURSABLE BY CUSTOMER.

Note: If any of the above benefits/reimbursements undergo change, latest status will be considered for evaluation of offers.