

BHEL- ISG, BANGALORE 	3.0 MTPA INTEGRATED STEEL PLANT Technical Specification for MACHINES	DOCUMENT NUMBER IS-1-10-2003/ PT-1-10- 2000/SPEC
Customer : NMDC LTD, NAGARNAR, CHHATTISGARH		

I. INTRODUCTION:

This document is intended for Pre-tender tie-up for various Machines for RAW MATERIAL HANDLING SYSTEM of NMDC 3 MTPA Integrated Steel Plant at Nagarnar, Chattisgarh. The bidder is expected to study the enclosed document and ensure complete scope for the machines including engineering, design, supply, receipt at site, storage, erection, commissioning and performance guarantee on turnkey basis.

II. BROAD SCOPE OF SUPPLY:

Scope includes design, detail engineering, submission of engineering & civil assignment drawing/ doc./ datasheets/ QAPs/ FQPs, PG test procedure and obtaining the approval from MECON/NMDC, supply including manufacturing/ fabrication, inspection/ shop floor testing, shop floor painting, packing & transportation to site of all equipments/ systems with all related electrics.

The scope of vendor shall also cover receipt & unloading at site, storage, preservation & security at site, shifting to erection work place, erection , initial filling of consumables, trial run, commissioning, functional Testing , Performance guarantee testing, final handing over to end customer NMDC upon satisfactory completion and written confirmation from NMDC for all equipments listed in **annexure-1**.

Painting of all equipments / items which are in vendor's scope at site after erection & commissioning, submission of O & M manuals, as built drgs/ doc. Shall be in the vendor's

Vendor shall supply of the machines as per the **annexure -1** and as specified in detail in the enclosed documents. The counter weight for machines and rails for stacker reclaimer, barrel reclaimer, slew stacker, side arm charger shall be supplied by vendors. The rails for travelling stackers and reclaimers, barrel reclaimer, wagon tippers as specified in detail in the enclosed documents shall be in vendor's scope. Stacker and reclaimer shall be designed as per the Stock pile dimension mentioned in the enclosed tender drawings. Wagon tippler shall be designed as per RDSO (latest edition) . All the statutory approvals shall be taken by vendor. Civil is not in the scope of vendor.


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Vendors to also consider following things in their scope apart from referred bid document and broad scope mentioned above:

1. Supply of grouting cement and grouting of all mechanical equipment/items and its drives. BHEL's civil contractors shall provide only the foundation pockets for pedestals (wherever necessary) as per mech. GA drgs.
2. Rail fixing of all the equipments grouting shall be in vendor scope.
3. Flexible couplings for motors shall be in vendor's scope.
4. Minor chipping i.e. up to 50mm thk, micro leveling, and providing shim plates for erection of equipment/items.
5. Provision of any temporary supports/platforms required for E& C of mech. Equipment /items shall be in the scope of mech. Vendor.
6. Supply of all the foundation bolts for S/R, B/R S/S, WT and Side arm charger shall be in Vendor's scope.
7. Fixing of bolts for S/R, B/R, WT shall be done by vendor. However, BHEL's civil contractors shall provide only the foundation pockets.
8. Vendor shall furnish the L-2 project schedule for complete project indicating various milestones and constraints along with the bid. Successful vendor shall furnish the L-3 project schedule inline with the L-2 schedule after award of the contract.
9. Vendor shall be responsible and depute engineers/supervisors to ensure correctness of civil and structural works at site w.r.t. mechanical GA drgs and civil assignment drgs. done by the contractor engaged by BHEL for the civil works, in order to suit the civil & structural works for equipment erection.
10. Vendor to submit the Stock Pile Capacity Calculation
11. Vendor shall give declaration of the ratings and performance figures of the equipments in their scope and furnished them alongwith the offer.

Note:

1. Vendor to note that list above is not exhaustive and any work required completing the system and ensuring its satisfactory running shall also be in the scope of this package vendor.
2. Vendor shall submit the signed and stamped copy of all the pages which constitutes this technical enquiry specification signed by authorized signatory and clearly mentioning each clause under following two categories to avoid any ambiguity in scope understanding & the scope division as a technical offer during bidding.

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- a. "accepted without deviation and considered in scope of work"
- b. "Not considered in scope of work".

III. ELECTRICAL SCOPE:

BHEL shall provide power supply upto the power JB(vendor scope) in the field, further all electrical related items/equipments including cabling is under the scope of vendor (engineering, supply and E&C) . Necessary Input/output signal shall be provided for interfacing with main PLC system as per the control write-up approved by customer.

Any other electrical required as per specification enclosed.

Broad scope division shall be as given below;

Electrical Battery Limit

B = BHEL

V = Vendor

Sl. No.	Description	WT with SAC	Stacker cum Reclaimer	Blender Reclaimer	Slew Stacker
1	Motor	V	V	V	V
2	VVVF	V	V	V	V
3	HT Cable	B	V	V	V
4	Transformers	B	V	V	V
5	Bus Ducts	B	-	-	-
6	MCC	B	V	V	V
7	Field Devices	V	V	V	V
8	LT Power Cable	V	V	V	V
9	Control/ Fest Cable	V	V	V	V
10	Illumination	B	V	V	V
11	PLC / MMI	-	V	V	V
12	Control Desk	V	V	V	V
13	Control Panel	V	V	V	V
14	Power JB / Control JB	-	V	V	V

WT = Wagon Tippler

SAC = Side Arm Charger

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Note:

1 Stackercum-Reclaimer / Barrel (Blender) Reclaimer / Slew Stacker

- a) BHEL shall provide 6.6KV power supply at the mid-point of machine travel on the ground at the field mounted power JB. From this point onwards (including the power / control JB and trailing cable), complete electrics / controls / illumination, PA system etc. shall be included in the Mechanical Vendor's scope (supply and E&C).

2 Wagon Tippler with Side Arm Charger

- a) Mechanical Vendor's scope starts at the out-going terminals of various feeders of MCC. Hence, all other electrical equipment required for the completeness of the Wagon Tippler shall be included in the vendor's scope (supply and E&C).
- b) Cable trays shall be supplied and erected by BHEL in the WT area as per the routing decided in consultation with Customer. Trench, if any, between WT-MCC Room and WT Complex shall also be constructed by BHEL. Vendor shall lay the cables along these trench / trays

Total scope as per the enclosed tender documents of NMDC but not limited to the above said items.

NOTE:

1. All the EQUIPMENT'S, Quality assurance and procedures, inspection procedures, installation and erection practices shall strictly adhere to the customer (NMDC / MECON) specification,
2. All the documents and drawings shall be submitted in the *approved format* only.
3. All equipment / items shall be from approved vendors of NMDC/MECON enclosed.

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Annexure-1

LIST OF EQUIPMENTS

Sr. No.	Item	Specification	Remarks
1	Wagon tippler-1	24 Tips per Hour	
2	Wagon tippler-2	24 Tips per Hour	
3	Wagon tippler-3	24 Tips per Hour	
4	Side Arm Charger-1	Shall be capable to handle full Rake load of 6380 Ton.	
5	Side Arm Charger-2	Shall be capable to handle full Rake load of 6380 Ton.	
6	Side Arm Charger-3	Shall be capable to handle full Rake load of 6380 Ton.	
7	Stacker-cum - Reclaimer(OSCR1)	1200 TPH (Reclaiming) , 1500 TPH (Stacking)	
8	Stacker-cum - Reclaimer(OSCR2)	1200 TPH (Reclaiming), 1500 TPH (Stacking)	
9	Stacker-cum - Reclaimer(OSCR3)	1200 TPH (Reclaiming), 1500 TPH (Stacking)	
10	Stacker-cum - Reclaimer(OSCR4)	1200 TPH (Reclaiming), 1500 TPH (Stacking)	
11	Blender Reclaimer -	1200 TPH (Reclaiming)	
12	Slew Stacker	Stacking - 1500 TPH	
13	Stacker-cum - Reclaimer(CSCR1)	750 TPH (Reclaiming), 1500 TPH (Stacking)	
14	Stacker-cum - Reclaimer(CSCR2)	750 TPH (Reclaiming), 1500 TPH (Stacking)	
15	Stacker-cum - Reclaimer(CSCR3)	750 TPH (Reclaiming), 1500 TPH (Stacking)	