

# TENDER SPECIFICATION

**BHEL: PSSR: SCT: 1431**

**FOR**

Handling at site stores / storage yard, Transportation to site of work, Application of Refractory & Insulation materials and connected works for Boiler, ESP, Fans, Piping, Vessels etc for 1x330TPH Boiler (Unit-6) & 1x67.5 MW Turbo Generator (Unit-5)

at

Rashtriya Ispat Nigam Ltd, Visakhapatnam Steel Plant  
RINL-VSP CPP Expansion, Visakhapatnam  
Andhra Pradesh.

**CORRIGENDUM-2 TO SCT 1431**



**BHARAT HEAVY ELECTRICALS LIMITED**

(A Government of India Undertaking)

Power Sector – Southern Region

690, Anna Salai, Nandanam, Chennai – 600 035.

**भारत हेवी इलेक्ट्रिकल्स लिमिटेड**  
(भारत सरकार का उपक्रम)



**Bharat Heavy Electricals Limited**

(A Govt. of India Undertaking)  
Power Sector - Southern Region  
New No.690 (Old No.474), Anna Salai,  
Nandanam, Chennai-600 035.  
Phone : 2433 0015 (10 Lines)  
Grams : BHELPOWER

**BHEL PSSR SCT 1431**

**DATE: 22.11.2010**

**CORRIGENDUM-2 TO TENDER NOTICE SCT 1431**

**TENDER SPECIFICATION NO BHEL: PSSR: SCT: 1431**

**Sub:** Handling at site stores / storage yard, Transportation to site of work, Application of Refractory & Insulation materials and connected works for Boiler, ESP, Fans, Piping, Vessels etc for 1x330TPH Boiler (Unit-6) & 1x67.5MW Turbo Generator(Unit-5) at RINL VSP Vizag

**BHEL CLARIFICATIONS FURNISHED BELOW FOR THE SUBJECT TENDER AGAINST THE CLARIFICATION SOUGHT BY ONE OF THE BIDDERS IN PRE-BID DISCUSSIONS HELD AT BHEL PSSR ON 9/11/2010.THIS IS FOR YOUR INFORMATION.**

SLNO	QUERY	BHEL CLARIFICATION
1	Volume 1A, Part II Annexure 2 Weight schedule Please confirm the indicated quantity in the tender as 85T of Ancillary materials in PEM scope.	Revised Rate schedule & Weight schedule are enclosed and due date for tender submission is extended as below.
2	Volume 1A,part 1 Chapter 3 Final painting Please specify the quantity /area of painting applicable to this scope of work	As per standard practice
3	Terms of payment for GI Sheets	As applicable to Aluminum sheets

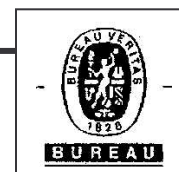
**3. DUE DATE EXTENDED:-**

TENDER SALE CLOSURES ON : 02.12.2010  
DUE DATE & TIME FOR TENDER SUBMISSION : 03.12.2010 16.00 HRS.  
DUE DATE & TIME FOR OPENING OF TECHNICAL BIDS : 03.12.2010 16.30 HRS

**ALL OTHER CONDITIONS REMAIN UNCHANGED.**

AGM / CONTRACTS

पंजीकृत कार्यालय : "बी एच ई एल हाउस, सिरि फोर्ट", नई दिल्ली-110 049.  
Regd. Office : "BHEL House, Siri Fort," New Delhi-110 049.



## REVISED WEIGHT SCHEDULE SUMMARY

SL.NO	DESCRIPTION	WEIGHT IN MT / UNIT	Rate Sch ID
1	CASTABLE REFRACTORY	55.00	1a
2	POURABLE INSULATION	70.00	1b
3	MINERAL WOOL MATTRESSES FOR THERMAL INSULATION AND ACOUSTIC INSULATION	215.4	2
4	IRON COMPONENTS FOR FIXING INSULATION INCLUDING STRUCTURAL MATERIALS FOR ENCLOSURES, Ancillary Materials by PEM	148.750	3
5	SEALING COMPOUNDS/CALCIUM SILICATE	1.00	1c
6	ALUMINIUM SHEETS: PLAIN AND CORRUGATED, INCLUDING OUTER CASTING SHEETS OF BOILER, ALUMINIUM CLADDING SHEETS	43.00	4a
7	GI SHEETS/ GI CLADDING SHEETS	35.00	4b
	TOTAL WT	568.15	

**TOTAL WEIGHT OF INSULATION MATERIALS – 568 MT**

**NOTE:**

PGs covered under this scope of work.

32 ,33, 37,79,81,55 (Part) and PEM supply

1. The weights mentioned above are approximate and are liable to vary as per design consideration of the manufacturing unit. The tender may note that payments will be made to them at the quoted / accepted rates for the tonnage actually erected.
2. Besides product group indicated above, there is likelihood of addition of any product groups integral to Boiler/ESP and pipings by manufacturing units or any other agencies. Contractor's quoted unit rates shall be applicable for any such product groups also.

<b>RINL VIZAG</b>			
<b>REVISED WEIGHT SCHEDULE FOR INSULATION MATERIALS</b>			
<b>PGMA</b>	<b>DESCRIPTION</b>	<b>WEIGHT IN KG</b>	<b>RATE SCHEDULE ID</b>
33-212	Castable Refractory	55000	1a
33-230	Pourable insulation	70000	1b
	<b>MINERAL WOOL</b>		2
33-021	Blr Pr Parts Mineral Wool	41422	2
33-121	Blr Mountings Mineral Wool	1815	2
33-126	SB Pipes Mineral wool	690	2
33-321	Air Ducts Mineral wool	21600	2
33-421	Air Heater and Gas ducts mineral wool	11990	2
33-521	ID Ducts Mineral wool	16560	2
33-721	Oil system Mineral wool	1600	2
33-970	Misc Eqpts Expanded Metal	1400	2
33-971	Misc Eqpts Woven Wire cloth	323	2
81-325	Mineral Wool Mattress-External piping	15000	2
79-867	Min Wool for ESP insulation	95000	2
55-9XX	Min Wool for FD & PA Fan Silencers	8000	2
	<b>Total weight of insulation(MT)</b>	<b>215400</b>	2
	<b>FIXING COMPONENTS</b>		3
32-010	Fixing Comp For Blr Pr Parts Insul	5500	3
32-110	Fixing Comp For Blr Mountings Insul	2300	3
32-310	Fixing Comp For air ducts Insul	15500	3
32-410	Fixing Comp For Ah and Gas ducts Insul	6500	3
32-510	Fixing Comp For ID Ducts Insul	35500	3
32-710	Fixing Comp For Oil System Insul	2100	3

32-120	Fixing Comp For SB Pipes Insul	800	3
81-318	Fixing Comp For Insul of Misc Piping	800	3
33-924	Packing Rope Dia: 102000 Mtr	100	3
81-318	Fix comp for Miscellaneous piping Insulation-PCP	800	3
79-868	Fix compfor ESP Insulation	78000	3
55-9XX	Fixing Materials -FD & PA Fan Silencers	850	3
	<b>Total weight</b>	<b>148750</b>	3
PEM	Ancilliary Material	5000	3
	GI Sheets	30000	4b
	GI Cladding sheet	5000	4b
	<b>Sealing component</b>		1c
81-314	sealing component -External painting	400	1c
33-975	Misc sealing compound	200	1c
81-341	sealing component for insulation - PCP	400	1c
	<b>Total weight</b>	<b>1000</b>	1c
37-010	Blr Outer Casing Components	9000	4a
37-810	Blr Outer Casing	20000	4a
81-350	Aluminium Sheet- External piping	6000	4a
	<b>Totla weight of Al sheets/casing materials</b>	<b>35000</b>	4a
55-9xx	Al Cladding - FD & PA fan silencer	3000	4a
	<b>Total Tonnage of Insulation</b>	<b>568150</b>	
	<b>Say 568.00 MT</b>		

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**FOR**

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at

Rashtriya Ispat Nigam Ltd, Visakhapatnam Steel Plant  
RINL-VSP CPP Expansion, Visakhapatnam  
Andhra Pradesh.

**VOLUME-II PRICE BID  
(REVISED)**



**BHARAT HEAVY ELECTRICALS LIMITED**

(A Government of India Undertaking)

Power Sector – Southern Region

690, Anna Salai, Nandanam, Chennai – 600 035.

**BHARAT HEAVY ELECTRICALS LIMITED**  
(A Government of India Undertaking)  
Power Sector, Southern Region  
690, Anna Salai, Nandanam, Chennai – 35

**Tender Specification No. BHEL: PSSR: SCT: 1431**

for

Handling at site stores / storage yard, Transportation to site of work, Application of Refractory & Insulation materials and connected works for Boiler, ESP, Fans, Piping, Vessels etc for 1x330TPH Boiler (Unit-6) & 1x67.5 MW Turbo Generator(Unit-5) at RINL VSP Vizag

One set of Tender documents consisting of Volume-I and Volume II

**BOOK SLNO** \_\_\_\_\_

Issued to

M/s

For and on behalf of  
BHARAT HEAVY ELECTRICALS LIMITED

Additional General Manager/Contracts

(This tender document is not transferable)

Place: Chennai-600 035.

Date:

**RATE SCHEDULE – RINL, Vizag 1 X 330 TPH Boiler (UNIT – 6) & 1 X 67.5 MW Turbo Generator (UNIT – 5)**

SNO	DESCRIPTION OF WORK	APPROXIMATE WEIGHT ( MT)	RATE / MT ( Rs )	TOTAL AMOUNT ( Rs )
01	<p>Application of all insulation &amp; refractory materials like Cement, mortar standard and shaped bricks refractory, pourable insulation &amp; other similar items as per BHEL Engineers instructions and drawings for Boiler and connected auxiliaries,&amp; equipments, TG Auxiliaries , and piping. Rates quoted shall include all incidental works like chipping, shaping and arranging shuttering if any to suit site conditions &amp; leading these materials from storage yard to place of erection as per BHEL Engineers Instructions and drawings for Boiler and connected auxiliaries&amp;equipments,TG auxiliaries and pipingRates quoted shall include all incidental works like chipping,shapping and arranging shuttering if any to suit site conditions&amp; leading these materials from storage yard to place of erection.</p>			

SNO	DESCRIPTION OF WORK	APPROXIMATE WEIGHT ( MT)	RATE / MT ( Rs )	TOTAL AMOUNT ( Rs )
1a	Castable Refractory	<b>55.00</b>		
1b	Pourable Insulation	<b>70.00</b>		
1c	Sealing Compound/ Calcium silicate	<b>1.00</b>		
2	Application of Mineral wool insulation including acoustic insulation of fans, Insulation in the specific shapes like mattresses of single or multilayer ( with unbonded and bonded wool mattresses) as per drawings, BHEL's specifications & BHEL Engineers instructions for Boiler and their connected auxiliaries, ESP ( excluding one layer of insulation mattress on top of ESP inner roof covered in ESP package) ,piping. These rates shall include preparation of mattresses with specified density and proper shape to suit ducts, vessels, pipes, valves and other similar works. These shall also include leading these materials from storage yard to place of work.	<b>215.00</b>		

SNO	DESCRIPTION OF WORK	APPROXIMATE WEIGHT ( MT)	RATE / MT ( Rs )	TOTAL AMOUNT ( Rs )
3	<p>Application of iron components for linking and fixing components like hooks, casing supports , casing strips, omega strips retainers, sheets, channels, weld mesh, GI wire, etc., including erection of structural material enclosures for pressure parts, skin casing ,pent house, rear arch, drum and other miscellaneous items, for insulation works including fabrication, erection and installation of these components gas &amp; arc welding, gas cutting, etc., required for proper erection of the materials, painting as required for above works as per drawings &amp; specification and instructions of BHEL Engineer. The rate quoted shall also include leading these materials, leading from BHEL sores to place of work and also gas cutting, welding, bolting, threading, jointing, erection, alignment welding of structural parts coming as support for insulation, refractory works, etc., lift all</p>	<b>149</b>		

SNO	DESCRIPTION OF WORK	APPROXIMATE WEIGHT ( MT)	RATE / MT ( Rs )	TOTAL AMOUNT ( Rs )
	temporary supports,welding and painting(including supply of paint) as per BHEL specification.			
4	Application of Aluminium /GI/ MS sheeting of varying thickness including plain & corrugated sheets and fabrication and installation of other connected components used for supporting and reinforcing wool insulation including arc and gas welding, fabrication and installation of these components, painting inner side of the sheets with two coats of anti corrosive paint ,application of sealing compound as per BHEL specification , drawings and site engineers instructions. The rate quoted shall also include fabrication of boxes shaped coverings to suit site conditions and leading these materials from storage yard to place of work.			
4a	Al. Cladding sheets & Al.Sheets	<b>43.00</b>		

SNO	DESCRIPTION OF WORK	APPROXIMATE WEIGHT ( MT)	RATE / MT ( Rs )	TOTAL AMOUNT ( Rs )
4b	GI sheets/ GI Cladding Sheets	<b>35.00</b>		
<b>TOTAL WT</b>		<b>568.00</b>		

**TOTAL ( SL NO 01 TO 04 ) Rs \_\_\_\_\_**

**SIGNATURE OF THE TENDERER**

**Note :**

1. The total weight indicated in rate schedule is only approximate and is liable for variation / alteration at the discretion of BHEL.
2. welding includes welding on pressure parts and non pressure parts of certain places. The accepted rates shall include this also.
3. Tenderers are required to quoted their rates, only in the price bid (Vol II) provided by BHEL. Quoting of rates in any other form / formats will not be entertained.

**SIGNATURE OF THE TENDERER**