	NOTICE FOR CHANGE/ CLARIFICATION ON TENDER SPECIFICATIONS	Enquiry No 77/21/6103/LSY
ISG Bangalore	Ash Handling Plant (AHP) Package for 5X800MW Yadadri TPS, Nalgonda Dist, Telangana State	

Corrigendum-1

Dated: 09-February-2022

Tender Ref: 77/21/6103/LSY for "Ash Handling Plant (AHP) Package" for 5X800MW Yadadri TPS, Telangana State.

With reference to the above referred tender, please find the following documents with regard to changes/ clarification in the tender:

1) Pre Bid Clarifications-1, 2 ,3 and 4
2) Design Memorandum of Weigh Bridge-1
3) Climatological_Data-Yadadri

The documents mentioned above shall supersede the earlier revisions of the respective documents.

The above mentioned clarification/ changes/ documents shall form integral part of the tender documents and shall become part of Purchase Order/ Contract after finalization. Offers submitted by bidders shall be in compliance to the same.

All bidders are required to submit the signed & stamped/ digitally signed copy of this corrigendum along with all enclosed documents as a token of acceptance.

All other terms & conditions of the tender remain unchanged.

Note: Bids submitted by bidders before issuance of this corrigendum may get deleted/ cancelled automatically by the website upon publication of this corrigendum. Such bidders are required to check the submission status of their bids and ensure that their complete offers are re-submitted with all necessary confirmations/ compliance to the corrigendum issued against the tender. BHEL shall not entertain any correspondence from bidders in this regard after opening of the Part-1 bid.

For Queries, if any, Contact:
Lakshman Singh Yadav
Dy Manager/ MM
BHEL-ISG, Prof. C.N.R.RAO CIRCLE, MALLESWARAM,
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5 x 800 MW YADADRI THERMAL POWER STATION

Ash handling Plant (AHP) Package (Tender ref. 77/21/6103/LSY)

PRE BID CLARIFICATIONS-1

Date:09-02-2022

SL.No.	Section / Clause / Page No.	Statement of the referred clause	Clarification Required	Purpose for Clarification	BHEL Reply
1	Special Conditions of Contract Page 2 of 43, Sl. No.11, Performance Bank Guarantee	Performance Bank Guarantee in line with Clause No.11 of General Commercial Terms & Conditions of GCC, Rev.01. is to be submitted within 10 days from the date of Letter of Intent (LOI).	As per clause no.11.2 of General Conditions of Contract, Vendors shall submit Contract Performance Bank Guarantee for 10% of order / contract value (excluding tax, duty and freight) before 1st submission of document for payment. However as per terms of payment specified in Clause No.19-A (v & vi) Page No.8 of 43, Special Conditions of Contract (SCC) Rev.00, for supply of goods, retention amount (5%) to be released against trial operation (3%) and on successful completion of PG test (2%). For service (E&C) PG test (5%) retention amount to be released on successful completion of PG test.	Since retention amount has been reduced to 5% as indicated in Special Conditions of Contract, PBG value should also be reduced to 5% of contract value for supply and erection portion of the contract (excluding Freight ,Mandatory Spares and O& M Contracts)	Bidders to follow the NIT and Special conditions of Contract.
2	Special Conditions of Contract (SCC) Rev.0 Page No.8 of 43, Clause No.19 A III	Typographical error Seventy(70) percent (75%) …….	Mistake to be rectified as follows: Seventy Five percent (75%) …….		Please read Seventy Five(75%) in place of Seventy (75%)
3	L-1 Schedule as per Annexure-VII to SCC	Schedule for AH (Unit-1) P1.2 Supply and E&C of B.A. Hopper readiness for Oil Synchoronization within Nine(9) months, P1.3] Supply & E&C of Wet Ash Handling System (Bottom Ash, Coash Ash, and Fly Ash in Lean Slurry Mode Disposal to Ash Dyke) for coal synchronization and coninuous operation within 11 (eleven) months and P1.4] Total completion including dry ash evacuation system and trial operation within twenty (20) months from Zero (0) date. One month gap has been indicated in Schedule of Activities for AHP Unit 2, 3, 4 & 5.	This time schedule is very much difficult to attain considering the volume of the package. Schedule for Unit 1 is very tight and parallel execution for other Units would be very difficult. Pandemic situation is very much active in our country which might affect execution of this package. We don't know when the situation will be normalized. Further, imported HCSD Pumps and allied items are very long delivery items which cannot be accommodated within the present time schedule.	BHEL -ISG is hereby requested to revise and extend the execution schedule. A time gap of six (6) months may please be maintained for execution of subsequent units. AHP Unit 2 to be commissioned after a time gap of six (6) monthsfrom commissioning of Unit # 1 AHP and subsequent units are to be commissioned after a time gap of six (6) months from commissioning of AHP of previous unit. **Note : The schedule would be applicable for intime availability of civil works and erection fronts and timely supply of BHEL - ISG materials.**	Bidders to follow the NIT and Special conditions of Contract.

5 x 800 MW YADADRI THERMAL POWER STATION
Ash handling Plant (AHP) Package (Tender ref. 77/21/6103/LSY)
PRE BID CLARIFICATIONS-2
Date:09-02-2022

SL.No.	Section / Clause / Page No.	Statement of the referred clause	Clarification Required	Purpose for Clarification	BHEL Reply
1	Drawing No: IS-1_FA-699-308-M004A(sheet 03 of 05)	Refrigerant type air dryer for conveying air compressor	our is a lean phase system ,where we provide compressor with High volume and low discharge pressure	No rquirement for air dryer after TAC	Bidder to follow specification.
2	Drawing No: IS-1_FA-699-308-M003A(sheet 01 of 02)	Low level switch shall be provided in 9th field also	please inform us which fields will have low level switch and under whose scope.	Which field and scope	Low level switch shall be provided by bidder from 2nd to 9 th Field .
3	Drawing No: IS-1_FA-699-308-M003A(sheet 01 of 02)	Open and close limit switch feedback shall be provided for MHV valves below ESP hoppers	IN our standard practice we do not provide the same . On Solinoid valves actuation and from the vacuum reading we get to know the position of the valve.	Kindly confirm	Bidder to follow specification.
4	Drawing No: IS-1_FA-699-308-M005(sheet 05 of 05)	IAC air receiver at Recycle pump house	source of the instrument air	Kindly confirm	The Instrument air requirment shall be met from Silo area Compressor. The minimum capacity of Silo area is already mentioned in the specification. Bidder has to check the actual air requirement in Silo area plus Recovery area and provide the compressor accordingly.
5	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.01 Page 14,point No2.	Bidder shall consider one number manual shutter plate gate in each common slurry trough of unit # 1 & 2 ans Unit 3 & 4	As the common trough are having individual Plug gate valve.So this manual shutter valves may be avoided	No rquirement for manual shutter valves	Bidder to follow specification.
6	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.01 Page 14,point No5.	Service water/ fire water terminal points provided by BHEL at 100 meters from each BAH	Kindly furnish the pressure avaliable	Avaliable presure	Approx. 4-5 kg/cm2
7	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.01 Page 14,point No10.	Bends & fittings for BA/CA/FA and Slurry disposal shall be MS with cast basalt lined	Alloy CI fittings of sutiable hardness may be allowed .As this is proven in many projects executed by DCIPS	Alloy CI fittings along in place of basalt fittings may be allowed	Bidder to follow specification.

8	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.04 Page 15,point No2.	Number of cycles of operation in preesure conveying system shall not exceed 14 cycles per hour	limiting this cycles the vessels will become large ,so the number of cycles may be increased to at least 25 cycles per hour	Thenumber of cycles may be increased to at least 25 cycles per hour	Bidder to follow specification.
9	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.06 Page 16,point No1.	Rheology test of fly ash for design for HCSD system.	Has it been done or again to be done by bidder	Kindly confirm,	Rheology Test of Fly Ash is in Bidder scope.
10	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.06 Page 16,point No2. And Kothagudem spec.	The radius of bends for ash conveying pipes shall be three times the pipe radiusfor the vertical and 10 D for the horizontal bend in HCSD line	As per our design we have provided 3D bends in all vertical and horizontal lines in HCSD line	Kindly confirm, acceptance	Bidder to follow specification.
11	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.07 Page 17,point No2.	Number of openings in the FA silo minimum 5, but in SLD it is shown as 6	Will the FA silo have 5 or 6 openings	Kindly confirm.	Bidder to follow SLFD and GA of FA silos for number of openings
	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.07 Page 17,point No2.	Air dryer capacity is 1.2 times the capacity of IAC,but in pageno: 36 it is writen as same as IAC	which one sould be considered	Kindly confirm.	The Air dryer capacity for IAC shall be 1.2 times of the capacity of IAC.
12	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.08 Page 18,point No1.	Slurry disposal line 140 KM shall be supplied by Bhel free.56 KM pipe already available at site of the remaing 84 KM in bidder's scope.	It seems BHEL will supply all the 140 KM slurry disposal pipes	Kindly confirm	BHEL shall supply 140 KMs of ash slurry pipes as free issue to bidder. Out of these 140 kms, 56 kms is already supplied and avaiable at site.
13	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.09 Page 18-19,point No1.	Common Ash Water and Recovery system	Kindly confirm the route length from Recovery pump to Dyke area Clarifier ; Clarifier to recycle pump house and from Recycle Pump house to Inside plant clarifier.	Kindly confirm	Kindly check the plot plan provided with the tender for indicative location of all AHP utilities. In Plant area there shall be no change in the AHP mechanical building location. However, location of Recovery water pump house, Recycle water pump house and Clarifier in Dyke Area may slightly vary upto 50 Meters . Route length from Recycle Water Pump House to Ash Water Pump House may be vary upto 400-500 meter. Bidder has to select the suitable Pipe size such that the Motor KW of Recycle water pump and Recovery Water Pump shall not exceed 160 KW (LTAC).

14	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.10 Page19,point No 6,7,8.	Cooling water ,Raw water, Seal/Clarified water	Kindly let us know the terminal pressure	Kindly confirm	1. Cooling Water Terminal Pressure-5-8 Kg/cm2 2. Raw Water Terminal Pressure-1-2 Kg/cm2 3. CTBD Water Terminal Pressure -1.5-2.5 Kg/cm2 and 4. Seal Water Terminal Pressure-2.5-3.5 Kg/Cm2
15	Specification No: IS-4-ES-699-300-M001,Clause No.2.03.12 Page20	Lifting equipments	It is EOT or Semi EOT	Kindly confirm	It shall be EOT crane.
16	Kothagudem Spec .Vol IVB/54 clause 5.33	Dosing screw for Mixing tank feeding in HCSD system	We generally provide Air slide which is more reliable and proven	Kindly confirm your acceptance of Air slide.	Acceptance of Air slide in place of dosing screw shall be decided during detail engineering without any cost implication to BHEL
17	Please provide us the Site geographical datas				Enclosed
18	Other Mechanical and electrical clarifications are being forwarded soon.				

जलवायवी सारणी
CLIMATOLOGICAL TABLE

BACK

स्टेशन : नलगोंदा
STATION : Nalgonda

अक्षांश LAT. 17°03' देशांतर LONG. 79°16' समुद्री तल माध्य से ऊंचाई HEIGHT ABOVE M.S.L. 227 मीटर METRES

प्रक्षणों पर आधारित BASED ON OBSERVATIONS 1975-2000

माह / MONTH		स्टेशन का सतह दाब / STATION LEVEL PRESSURE	वायु तापमान / AIR TEMPERATURE										आर्द्रता / HUMIDITY		मेघ की मात्रा / CLOUD AMOUNTS		वर्षा / RAINFALL						
			माध्य / MEAN						चरम / EXTREMES														
			शुष्क बल्ब DRY BULB	नम बल्ब WET BULB	दैनिक अधिक नम DAILY MAX	दैनिक न्यून तम DAILY MIN	माह में उच्चतम HIGHEST IN THE MONTH	माह में निम्नतम LOWEST IN THE MONTH	उच्चतम HIGHEST	दिनांक और वर्ष DATE AND YEAR	निम्नतम LOWEST	दिनांक और वर्ष DATE AND YEAR	सापेक्ष आर्द्रता RELATIVE HUMIDITY	वाष्प दाब VAPOUR PRESSURE	समस्त मेघ ALL CLOUDS	निम्न मेघ LOW CLOUDS	मासिक योग MONTHLY TOTAL	वर्षा के दिनोंकी संख्या NO. OF RAINY DAYS	वर्षसहित सबसे नम महीने का योग TOTAL IN WETTEST MONTH WITH YEAR	वर्षसहित शुष्कतम महीने का योग TOTAL IN DRIEST MONTH WITH YEAR	24 घंटोंकी सबसे भारी वर्षा HEAVIEST FALL IN 24 HOURS	दिनांक और वर्ष DATE AND YEAR	माध्य पवन गति MEAN WIND SPEED
		एच.पी.ए hPa	डि. से °C	डि. से °C	डि. से °C	डि. से °C	डि. से °C	डि. से °C	डि. से °C		डि. से °C		प्रतिशत %	एच.पी.ए hPa	आकाश के अष्ठमाश Oktas of sky		मि.मि. mm		मि.मि. mm	मि.मि. mm	मि.मि. mm		कि.मी. प्र. घं. Kmph
जनवरी JAN	I	989.9	21.3	19.3	30.8	18.4	33.8	16.1	36.0	17 1998	14.4	7 1992	82	21.2	2.0	1.8	13.5	0.4	155.7 1978	0.0	55.4	11 1978	
फरवरी FEB	I	988.0	23.6	21.5	33.5	20.7	36.5	18.0	39.0	26 1980	15.4	5 1988	82	24.1	3.0	2.5	7.2	0.5	14.0 1999	0.0	49.2	20 2000	
मार्च MAR	I	985.8	26.2	23.7	37.3	22.8	40.9	19.9	42.0	14 1983			80	27.4	1.7	1.4	6.5	0.4	88.5 1981	0.0	43.6	13 1981	
अप्रैल APR	I	983.6	29.2	25.5	39.6	25.5	43.0	22.4	44.5	30 1991	14.6	15 1987	73	29.7	2.1	2.0	17.6	1.0	65.6 1981	0.0	40.6	24 1981	
मई MAY	I	980.8	31.9	26.3	41.2	28.2	44.8	23.5	46.1	26 1984			63	29.7	2.7	2.5	27.0	1.4	94.3 1991	0.0	49.0	5 1981	
जून JUN	I	978.2	29.8	25.7	37.6	27.2	42.6	23.4	46.3	2 1998	21.8	12 1991	71	29.9	5.1	4.4	65.9	3.5	48.2 2000	0.0	81.7	12 1991	
जुलाई JUL	I	978.8	27.7	24.7	33.9	25.5	37.3	23.2	39.2	7 1992	22.0	2 1992	77	28.6	6.3	5.8	124.6	6.0	176.7 1977	36.8 1979	99.2	24 1977	
अगस्त AUG	I	979.6	27.1	24.3	32.8	25.0	35.4	22.8	37.5	25 1979	22.0	2 1981	78	28.2	6.1	6.0	133.0	6.7	189.0 1998	33.2 1979	88.2	14 1977	
सितम्बर SEP	I	982.0	27.4	24.4	33.6	24.9	36.4	22.8	38.5	23 1987	21.6	8 1989	77	28.3	4.9	4.2	145.5	5.8	393.1 1991	20.3 1984	152.2	21 1991	
अक्तूबर OCT	I	985.3	26.6	23.8	33.1	23.7	36.2	21.4	36.5	1 1987	19.2	28 1980	78	27.2	4.0	3.7	104.3	3.8	333.1 1981	4.2 1984	109.2	6 1987	
नवम्बर NOV	I	987.9	24.2	21.0	31.1	21.2	33.5	17.9	35.5	7 1996	14.6	27 1981	75	22.6	3.2	2.6	48.1	2.8	66.8 1991	1.1 1981	163.5	4 1987	
दिसम्बर DEC	I	990.3	21.7	18.6	30.0	18.6	32.2	15.7			12.6	16 1993	73	19.4	2.7	2.3	3.8	0.3	3.1 1987	0.0	3.1	10 1987	
वार्षिक योग या माध्य ANNUAL TOTAL OR MEAN	I	983.9	26.7	23.4	34.8	23.7	44.3	15.9	46.3	2	12.6	16	75	26.6	3.7	3.2	696.8	32.5	631.7	631.7	163.5	4	
	II								6	1998	12	1993							1982	1982	11	1987	
वर्षोंकी सं NUMBER OF YEARS	I	19	19	19	19	19	21	22	19		19		19	19	18	17	20	20	16	16	23		
	II																						

जलवायवी सारणी
CLIMATOLOGICAL TABLE

स्टेशन : नलगोंदा
STAION : Nalgonda

माह / MONTH	मौसम परिघटना — के साथ दिनों की संख्या / WEATHER PHENOMENA — No. OF DAYS WITH						पवन — पवन की गती के साथ दिनों की संख्या (कि. मी. प्र. घं.) / WIND — No. OF DAYS WITH WIND SPEED (Km. p. h.)				पवन — पवन की दिशा के दिनों की संख्या का प्रतिशत / PERCENTAGE No. OF DAYS WIND FROM										मेघ — मेघ मात्रा (सभी मेघ) सहित दिनों की संख्या - अष्ठमांश / CLOUD — No. OF DAYS WITH CLOUD AMOUNT (ALL CLOUDS) OKTAS					मेघ — निम्न स्तरी मेघ मात्रा सहित दिनों की संख्या - अष्ठमांश / No. OF DAYS WITH LOW CLOUD AMOUNT OKTAS						दृश्यता — दृश्यता सहित दिनों की संख्या / VISIBILITY — No. OF DAYS WITH VISIBILITY				
	वर्षण 0.3 मि.मि.या अधिक / PFT 0.3 mm Or more	ओले / HAIL	गर्जन / THUNDER	कुहरा / FOG	धूल भरी आंधी / DUST STORM	चंड वात / SQU ALL	62 या अधिक / 62 Or more	20-61 / 20-61	1-19 / 1-19	0 / 0	उ / N	उपू / NE	पू / E	दपू / SE	द / S	दप / SW	प / W	उप / NW	शांत / CALM	0	ले-2 / T-2	3-5 / 3-5	6-7 / 6-7	8 / 8	0	ले-2 / T-2	3-5 / 3-5	6-7 / 6-7	8 / 8	कुहरा 8 / FOG 8	1 कि.मी. तक / UP TO 1 Km.	1-4 कि.मी. / 1-4 Kms.	4-10 कि.मी. / 4-10 Kms.	10-20 कि.मी. / 10-20 Kms.	20 कि.मी. से अधिक / OVER 20 Kms.
जनवरी JAN	0.5	0.0	0.0	0.0	0.0	0.0	0	0	29	2	0	30	3	39	3	4	0	11	10	25	0	2	1	3	25	0	2	1	3	0	0.6	6.7	21.3	2.3	0.1
							0	0	31	0	0	29	10	51	3	1	0	4	2	25	2	3	0	1	27	1	2	0	1	0	0.0	1.8	3.1	24.1	1.9
फरवरी FEB	0.6	0.0	0.0	0.0	0.0	0.0	0	0	28	0	1	26	1	55	3	5	0	7	2	18	1	3	2	4	21	1	2	1	3	0	0.1	7.8	18.0	1.7	0.5
							0	0	28	0	1	19	7	64	3	2	0	2	2	22	1	4	1	0	24	1	3	0	0	0	0.0	0.4	4.2	21.2	2.2
मार्च MAR	0.7	0.0	0.1	0.0	0.0	0.0	0	1	30	0	1	25	1	55	3	5	0	9	1	23	2	3	1	2	25	1	3	1	1	0	0.0	3.8	24.1	2.9	0.3
							0	1	30	0	2	12	5	69	1	4	0	5	2	26	1	2	1	1	27	1	2	1	0	0	0.0	0.3	4.4	24.2	2.1
अप्रैल APR	1.1	0.0	0.0	0.0	0.0	0.0	0	0	29	1	0	20	1	46	4	18	0	8	3	20	2	4	2	2	21	1	4	2	2	0	0.0	3.0	21.5	4.3	1.1
							0	0	30	0	1	11	2	65	3	8	0	8	2	21	1	5	2	1	22	1	4	2	1	0	0.0	0.4	3.8	24.3	1.5
मई MAY	1.8	0.0	0.0	0.0	0.0	0.0	0	0	31	0	1	14	0	27	3	21	3	30	1	19	2	5	2	3	21	2	4	1	3	0	0.0	3.1	22.5	3.4	1.9
							0	0	31	0	1	20	2	29	2	19	2	24	1	6	2	18	3	2	20	2	5	2	2	0	0.0	0.6	3.6	24.4	2.4
जून JUN	4.5	0.0	0.0	0.0	0.0	0.0	0	1	29	0	1	2	0	6	0	36	8	47	0	5	1	5	4	15	7	1	4	3	15	0	0.0	4.7	20.2	3.1	2.0
							0	1	29	0	2	5	0	7	0	43	6	35	2	2	1	4	4	19	3	1	5	4	17	0	0.0	1.1	5.2	21.4	2.3
जुलाई JUL	7.1	0.0	0.1	0.0	0.0	0.0	0	1	30	0	1	1	0	1	0	43	10	44	0	2	1	3	5	20	4	1	2	3	21	0	0.0	4.3	23.1	1.9	1.6
							0	0	31	0	0	3	0	3	0	40	9	43	2	1	0	3	4	23	1	1	3	4	22	0	0.0	1.7	4.7	22.4	2.2
अगस्त AUG	7.7	0.0	0.0	0.0	0.0	0.0	0	1	30	0	1	1	0	2	0	32	8	55	1	2	1	5	3	20	3	1	4	2	21	0	0.0	4.1	22.8	2.5	1.6
							0	0	31	0	2	4	0	2	0	26	8	57	1	0	0	1	2	28	1	0	1	2	27	0	0.0	2.8	3.9	22.7	1.6
सितम्बर SEP	6.6	0.0	0.0	0.0	0.0	0.0	0	0	29	1	1	6	0	11	1	29	4	42	6	4	1	6	4	15	5	1	4	3	17	0	0.0	3.2	20.9	3.6	2.3
							0	0	29	1	4	17	1	10	0	25	6	31	6	1	0	2	3	24	2	0	2	2	24	0	0.0	1.3	4.5	22.2	2.1
अक्तूबर OCT	3.9	0.0	0.0	0.0	0.0	0.0	0	0	29	2	1	29	4	16	1	15	2	23	9	18	1	5	2	5	21	0	3	2	5	0	0.1	3.7	22.4	3.8	1.1
							0	0	30	1	2	37	6	26	1	7	2	12	7	22	1	3	2	3	23	1	3	1	3	0	0.1	1.5	3.9	23.6	2.0
नवम्बर NOV	3.3	0.0	0.0	0.0	0.0	0.0	0	0	26	4	3	33	7	18	2	4	0	19	14	16	1	4	3	6	21	1	2	2	4	0	0.0	8.8	17.8	2.9	0.4
							0	0	28	2	2	38	11	24	2	6	1	8	8	20	1	3	2	4	22	1	2	2	3	0	0.1	3.7	5.3	17.6	3.4
दिसम्बर DEC	0.4	0.0	0.0	0.0	0.0	0.0	0	0	29	2	3	46	3	22	1	2	1	14	8	21	1	4	1	4	23	1	3	1	3	0	0.1	6.8	20.8	3.3	0.0
							0	0	30	1	1	55	7	28	1	1	0	3	4	23	2	3	1	2	24	2	2	1	2	0	0.0	4.6	3.3	21.9	1.1
वार्षिक योग या माध्य ANNUAL TOTAL OR MEAN	33.3	0.0	0.1	0.0	0.0	0.0	1	5	346	13	1	19	2	24	2	18	3	26	5	205	13	48	29	70	238	11	37	22	57	0	0.8	60.1	255.4	35.6	13.0
							1	3	355	6	1	21	4	33	1	15	3	19	3	238	14	39	26	48	257	14	34	20	40	0	0.1	20.1	49.9	269.9	25.0
वर्षोंकी सं NUMBER OF YEARS	22						22				22									21					21						22								

5 x 800 MW YADADRI THERMAL POWER STATION
Ash handling Plant (AHP) Package (Tender ref. 77/21/6103/LSY)
PRE BID CLARIFICATIONS-3
Date:09-02-2022

SL.No.	Section / Clause / Page No.	Statement of the referred clause	Clarification Required	Purpose for Clarification	BHEL Reply
1	Annex-12(Scope Matrix Electrical)sl no. 12,36&37	Cabling implies erection of Cable trays & supports.	Cable tray arrangement/ layout of BA Hopper / ESP/APH/ECO/SCR/AWRS area, Clarifier area,FAE Tower area and Silos only for Ash handling related cables or including to BHEL scope of Cables is in the scope of Bidder? For balance areas from Field instruments to JB/LCP's etc. is in the scope of Bidder. Bidder shall provide BOQ of Cable tray and Supports. Terminal points:Upto Pipe rack cum Cable rack/Cable rack/Trench/Pedastale .Tray layout between MCC room and Connecting Trench/ Pipe rack cum Cable rack/Cable rack/Pedastale is in the scope of BHEL.?	to estimate erection costs.	Cabling implies erection of cable tray & supports, Cable laying along with termination at both ends along with the supply of all Accessories like conduits, tags, ferrules, lugs, glands, termination kit etc as per specification. Above shall be arranged by BHEL between BHEL Supplied Equipment and One End BHEL supplied Equipment & Other End Vendor Supplied Equipment. Above shall be arranged by Vendor between Vendor Supplied Equipment. Complete tray layout drawing preparation is in the scope of bidder. BOQ of Cable Tray and Supports of complete system shall be provided by bidder.
2	Annex-12(Scope Matrix Electrical)sl no. 32	Structural Steel for E&C of items/equipments (BHEL free issue items and Vendor supplied items)	Is it excluded for BHEL supplied HT/LT swgr and control equipments installed in Ash Releted blds.		Supply of structural steel,foundation bolts, anchor fasteners, insert plates, any consumables etc. required for E&C of items/equipment (BHEL free issue items and Vendor supplied items) is in Vendor's scope.
3	Annex-12(Scope Matrix Electrical)sl no. 6	HT motor shall be provided with twelve (12) Nos. simplex, (RTDs)…..	What about 690 V VFD motors ?		Not required. If it is a requirement/standard design of HCSD system designer, the same can be considered.

4	Annex-12(Scope Matrix Electrical)sl no. 6	Vibration monitoring system for HT motors is in BHEL scope. Ash vendor supplied HT motor for Compressors will be provided with mounting pads/notch …….and key phasor.	Is vibration monitoring arrange required for HCSD system 690 V VFD motors ?		Not required.
			pl confirm VFD transformer primary supply voltage and respective swgr where from power feed.		VFD transformer primary supply is 11kV and the same will be fed from the 11kV switchgear located in same building(please refere the electrical equipment layout of ER-5 building).
5	IS-1-FL-699-301-M001A , Flow diagram for Bottom and Coarse Ash System	Type of Level transmitters as used for BA overflow sump is not mentioned ,in the SLFD	Type of Level Transmitter ,	ULT / RF/ Displacement type ?	Ultrasonic type Level Transmitter may be considered.
		Type of Level transmitters as used for BA Area drain sump is not mentioned ,in the SLFD	Type of Level Transmitter ,	ULT / RF/ Displacement type ?	Ultrasonic type Level Transmitter may be considered.
		Kindly recheck the requirement of PT as well as FT in seal water line of equipments like Crusher, BA OTP etc	Requirement of FT , normally we consider only PT for such applications		Bidder to follow the specification.
		Other Than ESP SOV'S and SOV Integral to actuators remaining SOV's shall be provided inside the pneumatic JBs	Specification of Pneumatic JB not found	Specification of Pneumatic JB	NIT Specification of Junction Box may be followed. However, additional details, if any, shall be decided during DDE.
6	IS-1-FL-699-307-M003A , Flow diagram for Dry Fly Ash (Vacuum Conveying sysytem)	Open and Close Limit Switch Feedback shall be provided for MHV Valves below ESP Hoppers	Suitability of Limit switches in such high frequency operation (during repeated open/close at VS3) may please be rechecked	Confirmation of requirement	Bidder to follow the specification.
		Low level switch shall be provided in 8 th Field also	Detail B & C shows Low level switches for ESP Hoppers below Field 02 to 08	Confirmation of requirement	Low level switch shall be provided from 2nd to 9 th Field .
		Low level switch type for ESP Hoppers not mentioned	Type of Level Switch	RF type?	Bidder understanding is correct.

		Level Transmitters shall be provided for ESP 1st field hoppers, as shown in detail A	Type of Level Transmitters	RF type?	Non-Contact Non-Intrusive Continuous type Level transmitter or equivalent type may be considered.
		Type of Level transmitters as used for ESP area drain sump is not mentioned ,in the SLFD	Type of Level Transmitter ,	ULT / RF/ Displacement type ?	Ultrasonic type Level Transmitter may be considered.
		Type of Level transmitters as used for Vacuum area drain sump is not mentioned ,in the SLFD	Type of Level Transmitter ,	ULT / RF/ Displacement type ?	Ultrasonic type Level Transmitter may be considered.
		Type of Level transmitters to be used for Nuva feeder is not mentioned ,in the SLFD	Type of Level Transmitter , however , RF level probes provided for all earlier Projects	ULT/ RF/Radar	Non-Contact Non-Intrusive Continuous type Level transmitter or equivalent type may be considered.
		As per Flow Diagram ,Nuva feeder Top Gate / Bottom Gate/ Equalising Valves shall have Open/ Close Limit switches	Suitability of Limit switches in such high frequency operation (Depending on time cycle and pressure setting) may please be rechecked . DCIPS as a standard does not provide Limit switches for this application		Bidder to follow the specification.

5 x 800 MW YADADRI THERMAL POWER STATION
Ash handling Plant (AHP) Package (Tender ref. 77/21/6103/LSY)
PRE BID CLARIFICATIONS-4
Date: 09-02-2022

Sl. No.	Page / Section No.	Clause No.	Comments / Clarifications	BHEL Reply
1.	General	-	All equipment / instruments / items suitable for non-hazardous area have been considered in this offer & offered accordingly.	Please follow NIT specifications.
2.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	14	Complete Earthing Material Including Earth Pit etc shall be supplied by BHEL. Erection of BHEL Free Issue Earthing Material (nearest Earth Pit / Riser / Mat etc) Between Vendor Supplied & Erected items shall be in Vendor Scope including BHEL Free Issue Items.	Noted. However, any special material required for earthing of bidder supplied equipment is in the scope of bidder. Earthing of Vendor supplied & erected (BHEL free issue items) items up to nearest Earth pit/riser/mat is in vendor's scope.
3.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	34	Kindly confirm Make & Model Number of Hart Portable Communicator (Hand Held Calibrator) so that uniform Make could be supplied.	Make and model will be decided during DDE.
4.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	36	Cable Accessories implies erection of cable tray & supports, Cable laying along with termination at both ends along with the supply of all Accessories like conduits, tags, ferrules, lugs, glands, termination kit etc as per specification etc shall be arranged by BHEL between BHEL Supplied Equipments Or One End BHEL supplied Equipments & Others End Vendor Supplied Equipments.	Cable Accessories implies erection of cable tray & supports, Cable laying along with termination at both ends along with the supply of all Accessories like conduits, tags, ferrules, lugs, glands, termination kit etc as per specification etc shall be arranged by BHEL between BHEL Supplied Equipment and One End BHEL supplied Equipment & Other End Vendor Supplied Equipment.

5.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	37	Cable Accessories implies erection of cable tray & supports, Cable laying along with termination at both ends along with the supply of all Accessories like conduits, tags, ferrules, lugs, glands, termination kit etc as per specification etc shall be arranged by vendor between Vendor Supplied Equipments Or One End BHEL Free Issue Equipment To Vendor (i.e. 3.3KV HT Motors except Compressors) & Others End Vendor Supplied Equipments. Cable Tray & Supports shall be Free Issued by BHEL to vendor.	Cable Accessories implies erection of cable tray & supports, Cable laying along with termination at both ends along with the supply of all Accessories like conduits, tags, ferrules, lugs, glands, termination kit etc as per specification etc shall be arranged by Vendor between Vendor Supplied Equipment. Noted.
6.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	41	Kindly confirm Qty & Specification of PC & Printer for Weigh Bridge. Also confirm Type, Specification, Back up time of Weigh Bridge PC & Printer System UPS. One (1) number Table for PC & Printer along with one (1) number chair shall be supplied as a Furniture for Weigh Bridge PC & Printer System.	1 no PC and 1 no Printer per Weigh Bridge and for Common control room of Weigh Bridge shall be considered. Bidder to provide integrated networking of all weigh Bridge control rooms in common control room. Hardware required for the same shall be in the scope of bidder. For PC configuration, Printer (Coloured laser jet Printer (A4 type)) and UPS backup time etc., please refer revised DESIGN MEMORANDUM FOR WEIGH BRIDGE attached with this clarification. Noted.

7.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	42	HCSD Pump Control Panel Having Mini PLC / Controller (Non-Redundant) shall be as per HCSD Pump Manufacturer Standard. This HCSD Pump Control Panel shall be interface with PLC System for HCSD System. PLC System for HCSD System shall be interface with Client DCS on Modbus TCP/IP (Redundant).	Mini PLC/Controller shall have redundant controllers . If redundant controllers are not provided by the vendor, then one no. of additional controller shall be supplied as loose item for each HCSD pump by the vendor. These Loose items are in-addition to the mandatory spares. Noted.
8.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	43	Cables is Bidder scope however Cable Tray along with Support shall be provided by Client for Laying & Installation of Cables.	Noted for cables. For cabling scope, please refer reply in Sl.no 4 &5. Any special arrangement required for cabling (i.e. Drag chain and festoon etc.) shall be in the scope of bidder.
9.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	44	Ash Water Recovery System PLC System shall be interface (OPC & Time Sync) with BHEL DCS Panel Located in Ash Water Recovery System Room. We will consider Cable & Hardware/Software required at PLC End accordingly for Interfacing. Hardware/Software required at DCS end shall be provided by Client / BHEL for Interfacing. Kindly confirm number of PC's & Printer Required for Ash Water Recovery System PLC System.	Noted. Noted. 2nos –OWS, 2nos –OWES, 1 no- OPC SERVER, 1 no- LAPTOP, 1no –Printer and other requirements shall be as per specifications.

10.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	45	Kindly confirm the requirement of ACDB/WDB/Welding Receptacles for each Building / Area etc others than below considered by us so that we could consider the same. We will consider the following 1. One (1) number ACDB for each Building / Floor where we will provide Ventilation/Supply Fans/Exhaust Fans etc 2. PDB for fields instruments (ESP Level Probes, Level Switches etc) All Power Cable Required from distribution of Power supply (i.e. WDB TO Welding Receptacles, ACDB TO AC's, ACDB TO Starter Panel for Ventilation/Supply Fans/Exhaust Fans etc shall be provided by Client / BHEL including Cable Tray with Support etc.	Requirement of ACDB/WDB/Welding Receptacles for each Building / Area etc. shall be decided during DDE. Noted for supply of normal cables and any special cables will be in the scope of bidder. For cabling scope, please refer reply in Sl.no 4 &5.
11.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	Important Notes 28	Kindly provide details of Level Transmitter required for ESP 1st Field and Air Lock Tank. We do not have any experience for application transmitters hence we would request you to kindly excluded the same from our scope. Please also note that any level transmitter is not working / suitable for Air Lock Tank because we are providing Air Inside the vessel. This will be fluidised the Ash & generate the clouds.	Non-Contact Non-Intrusive Continuous type Level transmitter or equivalent type may be considered. Level transmitter for ESP 1st Field Hoppers and Air Lock Tank shall be considered as per specifications.

12.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	Important Notes 29	We will consider following HCSD System UPS for HCSD PLC stage wise. We will not be considered any load for BHEL DCS System. 1. 10KVA if load is less than 10KVA 2. 20KVA if load is more than 10KVA 3. Actual load if load is more than 20KVA.	Noted. However, supplying stagewise UPS by combining HCSD PLC and DCS loads will be decided during DDE.
13.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	Important Notes 30	We will consider following Recovery Water System UPS for Recovery Water PLC stage wise. We will not be considered any load for BHEL DCS System. 1. 10KVA if load is less than 10KVA 2. 20KVA if load is more than 10KVA 3. Actual load if load is more than 20KVA.	Recovery water system PLC is common for all the 5 units. All the signals of AWRS system including IO's of BHEL supplied equipment(MCC, LT Transformers, Battery chargers etc.) will be wired to bidder supplied PLC. Noted for UPS rating. UPS power supply required for BHEL DCS panel located in AWRS control room (for OPC communication) is in the scope of bidder.
14.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	Important Notes 11	Kindly confirm Solenoid Valves shall be required with Dual Contact (2NO+2NC) Open and Close Limit Switches. We understand that Open and Close limit switches is required for All Pneumatic Operated Butterfly Valves and Knife Gate Valves etc. Note that above is not applicable for our Pneumatic Operated Dome Valves.	Confirmed. Open and Close limit switches will be provided for all Pneumatic Operated valves except Two-way inline Solenoid Valve.

15.	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	Important Notes 14	Kindly clarify Solenoid Valves shall have local display of Open & close status at field apart from DCS. We understand that local panel is required for each Solenoid Valve Operated Valves who will display Open & close status at field of each Valves. Note that above is not applicable for our Pneumatic Operated Dome Valves.	Bidder to follow specification. Local display of Open & close status shall be integral part of Solenoid Operated Valves. Bidder to follow specification.
16.	Flow Diagram Notes: All Solenoid Valves will be 24VDC Single Coil Open and Close Limit switches will be provided for All Pneumatic Operated Butterfly Valves and Knife Gate Valves Except Two Way Inline Solenoid Valves.	Note No 5 To 8	Single / Double Coil shall be as per Process requirement However Supply Voltage shall be 24VDC. Open / Close limit switches is not applicable for our Pneumatic Operated Dome Valves.	Noted. Open and Close limit switches will be provided for all Pneumatic Operated valves except Two-way inline Solenoid Valve.
17	Annexure – 12, Scope Matrix of Electrical and C&I Items Supply And Works For Ash Handling System Package of Yadadri TPS (5x800MW)	42	Additional clarifications by BHEL.	In addition to no of PC's (OWS & EWS) indicated in sl.no.5 under sl.no.42 1 no- OPC SERVER, 1 no- LAPTOP per stage wise HCSD PLC shall be considered and other requirements shall be as per specifications.

REV	DATE	ALTERED: AKM	REV	DATE	ALTERED :
01	05.01.19	CHECKED: PKK/GB			CHECKED:

Revised as per customer comments

STATUS : CONTRACT

JOB NO.: 417

TATA CONSULTING ENGINEERS LIMITED
VENDOR DOCUMENT REVIEW STATUS

- [x] A Drawing/Document approved as submitted. Proceed with fabrication/construction.
- [ ] B Drawing/Document approved subjected to comments noted. Proceed with fabrication/ construction considering our commnets.
- [ ] C Our comments are noted on this marked up print.
- [ ] D Our commnets are noted in memo attached to the forwarding transmittal letter No. .....Dated.....
- [ ] E Correct original of this drawing/document to reflect our comments and resubmit for approval.
- [ ] F Correct original of this drawing/document to reflect our comments and resubmit for records.
- [ ] G Drawings/Documents of this category are for information only and not for approval. Information furnished on the drawing/document is noted.
- [x] H Drawing/Document reviewed against our previous comments and other revisions highlighted and identified by the vendor.
- [ ] I Drawing/Document returned without review.
- [ ] J Print not enclosed.

Approval conveyed herein neither relieves the Vendor/Contractor of his contractual obligations and his responsibilities for correctness of dimensions, materials of construction, weights, quantities, design details, assembly fits, performance requirements and conformity of the supplies with the Indian Statutory Laws as may be applicable, nor does it limit the purchaser's rights under the contract.

Reviewed by.....MB.....Date.....01-05-2019

Revised Dated 08-02-2022

CUSTOMER:

TELANGANA STATE POWER GENERATION CORPORATION LTD
TELANGANA STATE, INDIA
5X800 MW YADADRI TPP NALGONDA, TELANGANA

CUSTOMER'S CONSULTANT

TATA CONSULTING ENGINEERS LIMITED
BANGALORE

BHARAT HEAVY ELECTRICALS LTD
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA

DEPT CODE		NAME	SIGN	DATE
M	DRN	AKM	SD/-	05/12/2017
	DESN	AKM	SD/-	05/12/2017
	CHD	PKK/GB	SD/-	05/12/2017
	APPD	SKB	SD/-	05/12/2017

TITLE

DESIGN MEMORANDUM FOR WEIGH BRIDGE

DRAWING NO. PE-DC-417-563-A401

NO. OF SHEETS 5 (EXECLUDING COVER PAGE) REV. 01

1.0.0 GENERAL

This design memorandum provides the specific technical details for Road **Weighbridge** for **5 X 800 MW YADADRI TPP, NALGONDA, TELANGANA**. 1

2.0.0 PLANT DESCRIPTION & DESIGN REQUIREMENTS

2.1.0 Incoming materials shall be received in the plant by road trucks / tractor trailers.

2.2.0 The trucks / trailers are weighed with material before unloading in the power plant and tare weighed after unloading.

2.3.0 The receipt of material in the power plant will be in either of the following:
1. Normal trucks
2. Tractor trailers

3.0.0 Design Parameters

3.1.0 The weigh bridge shall be suitable for 24 hrs. of operation per day.

3.2.0 The weigh bridge shall be suitable for operation during rainy season.

3.3.0 The weigh bridge shall be capable of withstanding dynamic load imparted by the Vehicle movement and braking.

3.4.0 The weigh bridge equipment shall be electronic load cell with micro processor based type.

3.5.0 The weigh bridges shall be pit less type.

3.6.0 Approximately 100 weighments per day are expected to be made using the weigh bridge.

3.7.0 **Load cells**

The Load Cells shall be of multi column compression / double ended shear beam type, indigenously manufactured, shall operate on strain gauge principle and hermetically sealed and must be vibration resistant. Minimum 10 nos. load cells to be used with each load cells having maximum safe over load protection capacity. Suitable compensation shall be built in for temperature variation. Maximum safe over load protection shall be provided upto 300% of the rated capacity and maximum load for mechanical damage shall be 400% of the rated capacity. Overall system accuracy shall be ± 0.25% of actual weight. The system accuracy shall be repeatable. The system shall have in built accuracy recheck capability. The fixing of the load cells shall be such as to facilitate easy access for replacement in case of fault.

3.8.0 **Weighing Equipment – (Digital Weight Indicator)**

The weighing equipment shall be desk top type and shall be suitable for working in dusty and hot condition. Digital weight indicator shall be microprocessor based and shall be protected against all forms of Electro Magnetic and Radio frequency interference.

4.0.0 Specific Details of Weigh Bridge

S. No.	Description	Data
1	Weigh Bridge Type	Electronic Pit Less Type, Microprocessor based Road Weigh Bridge.
2	Quantity	One (1) no.
3	Codes & Standards	IS-1436, IS- 9281
4	Weighing Capacity	100 Tonnes with 20000 mm X 4000 mm platform size of anti-skid steel
5	No. of Trucks / trailers for weighment	100 Trucks / tractor / trailers per day
6	Type of trucks / trailers for weighment	18 wheeler
7	Control Room Size	3 M X 3 M X 4 M (Ht.)
8	Load Cells Type	Compression type with multi columns, or double ended shear beam type hermetically sealed & vibration resistant
9	Number of load cells per weigh bridge	Minimum 10 Nos. each with rating of maximum safe over load capacity. Suitable compression must be built for temperature variation.
10	Maximum Safe over load protection	300 % of rated capacity
11	Maximum load for mechanical damage	400 % of rated capacity
12	Least count of the graduation	As per manufacturer standard

13	Weighing data storage capacity	Minimum 500 weighing
14	Digital weight indicator	To be prov coloured laser jet printer (A4 Type) weight (Microprocess
15	UPS	½ hour backup
16	Printer	Inkjet Printer (Coloured)
17	Accuracy Required	±0.25 % of actual weight
18	Rating of each load cells	Minimum 2 times the rated weight divided by the number of load cells
19	Load cell protection	IP 68 and tested by a national test house and also have overload parameters
20	Visual display unit	Based on SMT technology to be provided in weight indicator
21	Location of PC / Printer	In the control room near weigh bridge
22	Totaliser	Minimum 6 digit type to be provided in the weigh bridge
23	Platform	Anti -skid steel
24	Digital weight indicator	Atleast 20 mm high character display for backlight LCD display
25	Display modes	Weight and 16 mm for message with a) Indicate weight b) Indicate calibration- calibration to be checked automatically every 5 minutes
26	Display of key board entered values	10 mm high characters
27	Indicator	Kg or Tonne
28	Protection	From electromagnetic and radio interference

29	PC Configuration (Industrial Type PC) 1	a) Processor: Core i7 Processor, 3.2 GHz b) RAM: 2GB DDR2 RAM c) Mother Board: Intel Express Chipset d) Graphics: Onboard with min. 512 MB Video Memory e) Hard Drive: 1 no. X 360 GB SATA HDD @ 7200 RPM f) DVD R/W: 1 no. 52X CD RW & 16X DVD RW IDE Combo g) Ethernet Card: 2 nos. X 10/10/1000 MB h) Network Controller: 1 GbE NIC upgraded to 10 GbE i) Seria j) Para k) USB Port: 4 nos. l) Peripherals: 1 no. USB Optical Mouse, 1 no. USB Multimedia QWERTY Keyboard, 1 no. 22'' Colour TFT/LCD Monitor m) OS: Windows 7 n) MS Office 10 Monitor size shall be 24" size(minimum) **SOFTWARE FOR WEIGHBRIDGE MANAGEMENT**: Complete weighbridge management user friendly Software for processing data date wise, truck wise, challan wise, shift wise, customer wise data for generation of daily / Weekly & monthly report. Provision for connecting with other weighbridges /server computer by LAN is provided in PC.
30	Weighment & printouts	1. Name of contractor 2. Date and Time 3. Serial Number

		4. Product Code 5. Customer Code 6. Truck Registration Number 7. First (Gross) Weight (I) 8. Second (Tare) Weight (II) 9. Net (Pay load) Weight (III) 10. LXBXH (M) Weigh slip after every weighment (i.e.) I & II weighments. Built in clock provide date and time to printer. Facility for totalizing the different material received.

5.0.0 Mandatory Spares

Five (5) number load cells shall be supplied as Mandatory Spare

6.0.0 Painting (Only for Weigh Bridge platform)

Surface Preparation: Degreasing and surface preparation to SA 2 1/2.

Prime coat:- One (1) coat of Epoxy based polyamide cured (2) pack HB zinc phosphate primer. Dry-film thickness 75 microns per coat.

Intermediate coat: One (1) layer 2 pack high build epoxy polyamide MIO, dry film thickness 100 micrion.

Finish coat: Application of two coats of chlorinated rubber paint. Dry-film thickness 30 microns per coat.

Total system: Dry film thickness 235 microns.

Final shade of paint shall be as per manufacturer's standard only.

Bidder to provide integrated networking of all weigh bridge control rooms in common control room.