



RASHTRIYA ISPAT NIGAM LIMITED

VISAKHAPATNAM STEEL PLANT

(A Govt. of India Enterprise)

W11 - JIBAN MAJHI

WORKS CONTRACTS DEPT, VISAKHAPATNAM STEEL PLANT,

VISAKHAPATNAM - 530031, ANDHRA PRADESH -

INDIA

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### NOTICE INVITING TENDER (NIT)

**NIT TYPE: 2-PRT % BID E-RFX**

**118941 12.04.2016 15:11:08**

**NIT NUMBER & DATE: 2600000120 Dated 26.04.2016**

SHORT OPEN TENDERS IN THE PRESCRIBED FORM ARE INVITED FROM THE REPUTED / EXPERIENCED TENDERERS FOR THE FOLLOWING

**1. NAME OF THE WORK:**

MECHANICAL MAINTENANCE OF NEW DM PLANT

**2 KEY INFORMATION:**

Type of Bid	Type of Submission	EMD in INR	Submission Dead Line date & time in	Bid Opening Date & time in Hours
TWO PART BID	E BID	17500.00	05.05.2016 15:00	05.05.2016 15:30

Contract period : 12 Months

Defect Liability period : 3 Months

Engineer-in-charge : MANAGER(M)-TPP

Estimation Cost : Rs.18,70,086=67 ps.

**3 OFFER VALIDITY DATE:**

Your offer should be valid upto 04.09.2016.

**4 CURRENCY:**

INR.

**5 ELIGIBILITY/EXPERIANCE CRITERIA :**

Agencies Registered under Category 5.1 OR 5.2 of Class-E will be considered

**6. NATURE & SCOPE OF WORK:**

**7 ITEM DETAILS/BOQ:**

**8 LIST OF TENDER DOCUMENTS:**

This document along with those available in cFolders as below, constitute the complete Tender (NIT)

1) Scope of work

- 2) Terms & Conditions
- 3) BOQ
- 4) Special Conditions of Contract
- 5) Undertaking letter
- 6) NIT

## **9 DOCUMENTS TO BE UPLOADED IN CFOLDER TECH BID:**

A) For Earnest Money Deposit: Agencies to deposit the Earnest Money Deposit in the Account No. 915020053600067 of Axis Bank Ltd., payable at Gajuwaka Branch (Branch Code 075). The IFSC Code is UTIB0000075 and SWIFT Code is AXISINBB075

(i) Agency has to indicate the Bank UTR Numbers (NEFT Transaction Id Numbers) of Earnest Money Deposit (EMD) in the Questions tab section which is mandatory.

If the agency seeks exemption from submission of EMD, the agency needs to submit the following:

- (i) District Industries Centre [Acknowledge of Entrepreneur Memorandum ie. EM (Part # II)
- (ii) Khadi and Village Industries Commission
- (iii) Khadi and Village Industries Board
- (iv) Coir Board
- (v) National Small Industries Corporation (NSIC)
- (vi) Directorate of Handicrafts Handloom
- (vii) Any other body specified by Ministry of MSME

B) Statutory Documents to be submitted, wherever required

i) Electrical License (For Electrical contracts) Agencies having valid Electrical license issued by any State Licensing Board / Authority will only be considered

ii) Boiler License (For cases wherever required) Agencies should have boiler repair license, Category-1 issued by the Directorate of Boilers, Andhra Pradesh

iii) Competency Certificate issued by Director of Factories, AP

For Persons competent to carry out Inspection & Certification of Lifting Equipments, Pressure Vessels and Elevators etc

VSP reserves the right to reject the offer in case the required documents are not submitted.

## **10 E RFX SUBMISSION PROCEDURE -2 PART:**

RINL is employing SAP SRM 7.0 for Electronic Tendering System. E-RFx Response to be submitted electronically through System only. No physical paper/print needs to be submitted. Bidders need to have UserID and Password to participate in SRM E-Tenders. All enlisted vendors of RINL would be provided User ID and password for participating in RINL E-Tenders. If a Bidder who wish to participate is not presently enlisted with RINL or not having User ID Password can obtain the same through Registration of Suppliers (RoS) system by providing requisite details well before the RFX Submission deadline. Bidders to go through the User Manual of RoS system available in SRM Portal for detailed steps for obtaining User ID & Password.

In 2-Part E-RFx, Technical RFX Response is uploaded to PQC/Tech RFX cFolder and Price RFX is quoted in Bidding Engine. E-Tendering User Manual available in SRM Portal contains the procedure participating in RINL E-Tenders.

Bidders to ensure the following before submitting the 2-Part E-RFx Response

- a. All Mandatory questions are answered and Requisite documents are uploaded into PQC cFolder including the EMD Submission proof.
- b. All Techno-Commercial documents required as per tender document are uploaded into "Tech RFX" cFolder.
- c. Prices and Taxes (Conditions) are quoted in the bidding engine.

Then upon ensuring confirmation of RFX response is complete and contains no errors, RFX Response to be Submitted.

Bidders to ensure that E-RFx Response submission is done before "Submission deadline date & Time" indicated in the NIT Key information at 2 above. RFX can be "withdrawn" and modified as long as "Submission deadline date & Time" is not over. RFX Response cannot be modified once Submission deadline time passed.

#### **11 E-RFX OPENING PROCEDURE- 2 PART:**

E-RFx Responses are opened in the system Electronically.

System allows opening of RFX responses only after the specified date and Time as indicated at 2 Key information above. Authorized Tender opening officers through the process of "Simultaneous Log-on" shall open the RFX Responses in System.

For 2-Part E-RFx first "PQC" & "Tech RFX" cFolders are opened in the system through Simultaneous Log-on Process. Then Price RFX responses will be opened on a specified Date & Time through Simultaneous Log-on process for Techno-Commercially Accepted Responses on intimation to Bidders.

#### **12 E-RFX EVALUATION PROCESS:**

- (a) Pre-qualification evaluation shall be done based on the documents submitted by the bidders in PQC & Tech RFX cFolders.
- (b) All the RFXs shall be evaluated on the basis of landed cost only which includes all taxes and duties but excluding Service Tax.
- (c) TAL1 (Technically accepted L1) price arrived by the system shall follow automatically to Auction document as start bid price for all cases of Reverse Auction and will be visible in the system only after the start time of Live Auction (E-Reverse Auction).
- (d) On completion of Live Auction, composite comparative statement is generated by the system considering the RFX Prices and Reverse Auction Prices. Placement of Order shall be considered on the L-1 price so arrived.
- (e) Notwithstanding anything specified in this tender documents, RINL, in its sole discretion, unconditionally and without having to assign any reason, reserves the following rights:
  - (i) To reject the response whose performance is poor in awarded /ongoing works if any.
  - (ii) To give purchase preference to Public Sector Undertakings wherever applicable as per Government Policy / Guidelines
  - (iii) To extend purchase preference to Local MSEs (Micro & Small Enterprises) as per prevailing guidelines of RINL subject to submission of documents as stipulated in Detailed Terms & Conditions of NIT at Annexure as given below.

#### **13 REVERSE E-AUCTION PROCESS:**

RINL shall have the option of resorting to reverse e-auction on SAP SRM LIVE AUCTION PLATFORM. All technically and commercially acceptable bidders would be required to participate in the reverse e-auction and quote from a start Price. In reverse e-auction the bidders would be required to quote prices only on the basis of landed net of cost excluding Service Tax but including all other taxes. Definition of key terms for RINLs SAP SRM Live-auction (E-Reverse Auction) user manual is available in SRM Portal. No separate User ID and Password is required for participating in Live Auction. User ID and Password used for Participating in E-Tendering to be used for Live Auction also.

	<b>RINL VIGILANCE TOLL FREE NUMBER: 1800 425 8878</b>	
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JIBAN MAJHI

#### **ANNEXURE :**

##### **1 DETAILED TERMS & CONDITIONS OF NIT:**

- 1) The documents submitted by the tenderers in respect of pre-qualification evaluation criteria are final and no further correspondence / clarifications / submissions in this regard shall be entertained.
- 2) Scope of work, Bill of Materials (BOM), Terms and Conditions, given in the tender documents (placed in the cFolder Publisher area) is final. On verification, at any time, whether the tenderer is successful or not, if any of the documents submitted by the tenderer including the documents downloaded from our website are found tampered / altered / incomplete, they are liable for actions like rejection of the tender, cancellation and termination of the contract, debarring etc., as per the rules of the company.
- 3) It will be presumed that the tenderers have gone through the General Conditions, Special Conditions and Instructions to tenderer etc., of the contract available in the website which shall be binding on him/ them.
- 4) The tenderer shall download the NIT documents etc (TENDER SCHEDULE) available in Tech RFX cFolder Publisher Area on the RINLs SRM Portal in totality and upload the same along with the Undertaking letter in Tech RFX cFolder. At any time prior to the DEADLINE for submission of the bids, VSP may for any reason modify the RFX terms and conditions by way of an amendment or corrigendum. Such amendments or corrigendum will be notified in RINLs SRM Portal at regular intervals. Therefore the tenderers should refer to RINLs SRM Portal regularly for any corrigendum.
- 5) The bidder shall be governed by the General Conditions of Contract of Works Contracts Department which is available on VSP's website which can be freely accessed and downloaded.
- 6) Tenders submitted against the NIT / Tender shall not be returned in case the tender opening date is extended / postponed. Tenderers desirous to modify their offer / terms may submit their revised / supplementary offer(s) within the extended TOD, by clearly stating the extent of updation done to their original offer and the order of prevalence of revised offer vis-à-vis original offer. The employer reserves the right to open the original offer along with revised offer(s).
- 7) Tenderers shall submit VAT Registration Certificate under APVAT Act if available, if not available successful tenderer shall produce Registration Certificate under APVAT Act, wherever applicable, before signing the Work Order / Letter of Acceptance and submit a copy of the same.
- 8) VSP after opening of tender/bid document may seek in writing, documents/ clarifications which are necessary for evaluation of tender/bid document from the Tenderers/ bidders or issuing authority for confirmation of eligibility/ pre-qualification stipulated in the NIT.
- 9) If it comes to the notice of VSP at any stage right from request for registration/ tender document that any of the certificates/ documents submitted by applicant for registration or by bidders are found to be false/ fake/ doctored, the party will be debarred from participation in all VSP tenders for a period of 05(FIVE) years including termination of contract, if awarded. E.M.D/ Security Deposit etc., if any will be forfeited. The contracting agency in such cases shall make good to VSP any loss or damage resulting from such termination. Contracts in operation anywhere in VSP will also be terminated with attendant fallouts like forfeiture of E.M.D./ Security Deposit, if any, and recovery of risk and cost charges etc., Decision of V.S.P Management will be final and binding.
- 10) The date of opening of the PQC and Tech RFX response shall be the date of tender opening.
- 11) Successful tenderer should be in a position to produce, after opening of the price bids, the Original Certificates in support of the attested copies of relevant documents submitted along with tender document. Failure to produce the original certificates at this stage in support of the attested copies of Electrical License/ any other documents etc. submitted earlier would result in disqualification and forfeiture of EMD and also liable for debarring from participation in VSP tenders.
- 12) RINL will not be responsible for any delay/ loss/ any website related problems in downloading the tender documents etc. RINL reserves the right to (A) Split and award the work to more than one agency, (B) Reject any or all the tenders or to accept any tender wholly or in part or drop the proposal of receiving tenders at any time without assigning any reason there of and without being liable to refund the Tender fee thereupon.

## **2 INSTRUCTIONS TO TENDERERS:**

- 1) Tender shall be submitted in the prescribed form issued by VSP in the RINL SRM Portal, Government Portal. The Tender documents issued are non-transferable. Tender documents downloaded shall be submitted wholly without detaching any part.
- 2) The Tenderer shall agree to VSP's terms and conditions, specifications/ scope of work, etc., and quote their Total Amount in figures only.
- 3) Tender shall be for the entire scope of work mentioned in the tender documents.
- 4) If by any reason the tender opening is postponed to any other date, the same will be placed in RINL's SRM Portal and in the Notice Board at Works Contracts Department. Tenderers shall see the SRM Portal / Notice Board regularly and keep themselves informed in this matter.
- 5) Before quoting, the tenderer shall necessarily contact the Engineer and fully understand the job, scope of work, unit of measurement, mode of measurement, scope of supply of materials by VSP if any, working conditions, shutdown arrangements, Labour deployment requirements, risk contingencies and such other factors which may affect their tender.
- 6) Tenders shall be kept open for acceptance for a period 4 (Four) MONTHS from the date of opening of tender.
- 7) Corrections/ amendments/ replacement to/ of the Deficient documents / Financial Instruments for EMD shall not be sought in the following cases where:
  - i) There is evidence of Tampering/ Unauthorized correction.
  - ii) The value of Financial instrument(s)/ document(s) is falling short of the value stipulated in the NIT.
  - iii) The Validity of the BG(s) as on Initial TOD is falling short of the minimum Validity period stipulated in the tender.
  - iv) Discrepancy exists in the name of Payee/ Beneficiary.
  - v) The Bidder fails to submit EMD or submission of UTR No./ Receipt No.

## **3 EMD SUBMISSION PROCESS:**

1) In case of Earnest Money Deposit being less than or equal to Rs. 5 Lakhs, Earnest Money Deposit shall be by means of NEFT. No other mode of payment will be accepted. However, in case EMD exceeds Rs. 5 Lakhs, tenderers have the option to submit the same in the form of Bank Guarantee (In the format as enclosed to the GCC) from any Scheduled Commercial Bank, encashable at Visakhapatnam. Bank Guarantees shall be valid for a minimum period of 04 (Four) months from the Bid opening date. The above shall supersede the instructions regarding Form of EMD elsewhere in the tender document.

2) Public Sector Enterprises of State / Central Government Undertakings are exempted from submission of Earnest Money Deposit (EMD) provided they submit a letter requesting for exemption from submission of EMD along with their offer.

### **3) EXEMPTIONS / PREFERENCES FOR MICRO AND SMALL ENTERPRISES:**

1. Micro and Small Enterprises (MSEs) are exempted from submission of Cost of Tender Documents / Tender Processing Fee (CTD), Earnest Money Deposit (EMD), and Security Deposit (SD), irrespective of whether the service is to be carried out within or outside their premises subject to submission of proof of enlistment / registration with any of the following agencies:

- (i) District Industries Centre [Acknowledge of Entrepreneur Memorandum i.e. EM (Part # II)]
- (ii) Khadi and Village Industries Commission
- (iii) Khadi and Village Industries Board
- (iv) Coir Board
- (v) National Small Industries Corporation (NSIC)
- (vi) Directorate of Handicrafts Handloom
- (vii) Any other body specified by Ministry of MSME

Note:

(a) Tender documents are uploaded in the websites ([www.vizagsteel.com](http://www.vizagsteel.com); [www.pubtenders.gov.in](http://www.pubtenders.gov.in); <http://eprocure.gov.in> ) and are to be down loaded from there only.

(b) The Micro and Small Enterprises registered for the particular trade/items for which the tender is relevant, would only be eligible for exemption.

(c) As regards Security Deposit (SD) exemption, the MSEs shall be required to submit a #Performance Guarantee Bond# of requisite value in the prescribed pro-forma in lieu of Security Deposit. It may be noted that waiver of SD is permitted only up to the monetary limit as specified in the proof of enlistment for which the unit is registered.

2. Preference to MSEs shall be considered under the following conditions:

(i) When the work is to be awarded to more than one tenderer, as stated in NIT.

(ii) In such cases the package size / value is pre-decided and indicated in the NIT.

(iii) MSEs shall have valid enlistment / registration with specified agencies (as above), in relevant category. The successful tenderer should ensure that the same is valid till the end of the contract period.

(iv) The offer / bid of MSE shall be within the price band of L1 +15% and upon their matching with the final negotiated price of (L1 being other than MSE).

On fulfilling the above conditions, the eligible MSEs shall be considered for award of the rest of the package(s) (after negotiating the final L1 price) of aggregate value not less than 20% of the total tendered value, in the order of their ranking in the bid. In case there are more than one eligible MSEs with one or more owned by scheduled caste and scheduled tribe entrepreneurs, package(s) not less than 4% of the tendered value shall be considered for awarding to MSEs owned by SC and ST Entrepreneurs. The preferential award of work shall cease once the limit of 20% of tendered value is attained. Further allotment / award would be based on inter-se ranking of the rest of the tenderers other than who are already considered for allotment/award of package, subject to their matching with the final L1 negotiated price.

4) EMDs of unsuccessful tenderers will be refunded after reasonable time without interest.



**RAHSTRIYA ISPAT NIGAM LIMITED**  
**VISAKHAPATNAM STEEL PLANT**  
**VISAKHAPATNAM - 530031**

**BILL OF QUANTITIES**

<b>PR No / Date:</b> 73001571 / 14.03.2016	<b>Report Date :</b> 14.03.2016
<b>Pur . Org.:</b> WORKS CONTRACTS	
<b>MSS:</b> 5050615004 : MECHANICAL MAINTENANCE OF NEW DM PLANT	
MECHANICAL MAINTENANCE OF NEW DM PLANT	

The BOQ Items are taken as per the following Rates.						
	Central Rates	VSP Rates				
<b>Skilled</b>	390.000	634.150				
<b>Semi Skilled</b>	333.000	546.050				
<b>Unskilled</b>	294.000	485.750				
Sl.No	Service Number	Description of the item	Qty	UOM	Rate	Amount
1	510007750	Inspection and condition monitoring of cartridge type Centrifugal pumps	252.000	NO	1,013.59	255,424.68
2	510007751	Preventive maintenance of cartridge type Centrifugal pumps	84.000	NO	1,549.04	130,119.36
3	510007752	Removal, overhauling and fixing back of cartridge type Centrifugal pumps	5.000	NO	6,520.13	32,600.65
4	510007753	Replacement of cartridge assembly of Centrifugal pumps with a spare cartridge assembly	1.000	NO	2,173.03	2,173.03
5	510007754	Replacement of coupling assembly in cartridge type Centrifugal pumps	2.000	NO	1,637.58	3,275.16
6	510007755	Servicing of cartridge assembly of Centrifugal pumps	1.000	NO	1,637.58	1,637.58
7	510007756	Inspection and condition monitoring of split casing type Centrifugal pumps	72.000	NO	506.28	36,452.16
8	510007757	Preventive maintenance of Split casing type Centrifugal pumps	12.000	NO	1,549.04	18,588.48
9	510007758	Overhauling of Split casing type Centrifugal pumps	3.000	NO	10,604.71	31,814.13
10	510007759	Replacement of rotor assembly in split casing type Centrifugal pumps	2.000	NO	7,953.53	15,907.06
11	510007760	Replacement of coupling assembly in split casing type Centrifugal pumps	2.000	NO	1,637.58	3,275.16
12	510007761	Servicing of rotor assembly of split casing type Centrifugal pumps	1.000	NO	3,275.17	3,275.17
13	510007762	Inspection and condition monitoring of Metering pumps	138.000	NO	1,013.59	139,875.42
14	510007763	Overhauling of Metering pumps	6.000	NO	3,275.17	19,651.02
15	510007764	Servicing of spare Metering pumps	6.000	NO	1,637.58	9,825.48
16	510007765	Replacement of Metering pumps	6.000	NO	1,637.58	9,825.48
17	510007766	Maintenance of pressure sand filter and activated carbon filter exchanger vessels	6.000	NO	10,576.58	63,459.48
18	510007767	Maintenance of Strong Acid Cation, Strong Base Anion and Mixed Bed Exchanger vessels	9.000	NO	12,692.32	114,230.88
19	510007768	Replacement of cartridge filter elements	12.000	NO	1,968.85	23,626.20
20	510007769	Maintenance of Ultra filter skids	3.000	NO	2,115.73	6,347.19
21	510007770	Maintenance of RO skids	3.000	NO	6,346.16	19,038.48
22	510007771	Inspection and condition monitoring of Clariflocculator Agitator gear box	18.000	NO	1,013.59	18,244.62
23	510007772	Preventive maintenance of Clariflocculator Agitator gear box	12.000	NO	2,057.40	24,688.80
24	510007773	Removal, overhauling and fixing back of Clariflocculator Agitator/ Main drive gear box	3.000	NO	5,087.76	15,263.28
25	510007774	Replacement of Clariflocculator Agitator gear box with spare one	1.000	NO	2,173.03	2,173.03
26	510007775	Servicing of Clariflocculator Agitator gear box	1.000	NO	1,637.58	1,637.58



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**BILL OF QUANTITIES**

Sl.No	Service Number	Description of the item	Qty	UOM	Rate	Amount
27	510007776	Inspection and condition monitoring of Twin-Lobe Blower	60.000	NO	1,013.59	60,815.40
28	510007777	Preventive maintenance of Twin-Lobe Blower	60.000	NO	1,013.59	60,815.40
29	510007778	Overhauling of Twin-Lobe Blower	2.000	NO	4,347.10	8,694.20
30	510007779	Maintenance of manual and pneumatic Butterfly valves	65.000	NO	1,637.58	106,442.70
31	510007780	Maintenance of Lever-operated Butterfly valves of sizes 1/80 mm to 1/150 mm	10.000	NO	1,160.48	11,604.80
32	510007781	Maintenance of pneumatic Diaphragm valves of sizes 1/32 mm to 1/65 mm	50.000	NO	1,160.48	58,024.00
33	510007782	Maintenance of pneumatic Diaphragm valves of sizes 1/80 mm to 1/150 mm	20.000	NO	2,115.73	42,314.60
34	510007783	Maintenance of manual Diaphragm valves	50.000	NO	1,637.58	81,879.00
35	510007784	Maintenance of manually operated Gate valves of sizes 1/15 mm to 1/50 mm	10.000	NO	1,160.48	11,604.80
36	510007785	Maintenance of manually operated Gate valves of sizes 1/80 mm to 1/200 mm	10.000	NO	1,549.04	15,490.40
37	510007786	Maintenance of manually operated Ball valves	20.000	NO	1,013.59	20,271.80
38	510007787	Maintenance of Non-return valves of sizes 1/25 mm to 1/80 mm	6.000	NO	1,160.48	6,962.88
39	510007788	Maintenance of Non-return valves of sizes 1/100 mm to 1/200 mm	5.000	NO	2,115.73	10,578.65
40	510007789	Deployment of Un-skilled manpower for miscellaneous jobs	100.000	MDY	485.75	48,575.00
41	510007790	Deployment of Semi-skilled manpower for miscellaneous jobs	100.000	MDY	546.06	54,606.00
42	510007791	Deployment of Skilled manpower for miscellaneous jobs	75.000	MDY	634.15	47,561.25
43	510007792	Un loading of HCl / NaOH Tankers	78.000	NO	535.44	41,764.32
44	510007793	Man hole cover opening/box up of Exchangers for inspection and open back wash	10.000	NO	1,490.70	14,907.00
45	510007794	Structural repair works	5.000	TO	5,515.09	27,575.45
46	510007795	Maintenance of Submersible Dewatering pumps	4.000	NO	1,794.06	7,176.24
47	510007796	Attending pipe line flange gasket leakages in new DM Plant	10.000	NO	1,490.70	14,907.00
48	510007797	Replacement of MS Rubber lined pipe line or SS pipe line with MS RL / SS / CPVC lines	15.000	NO	2,026.15	30,392.25
49	510007798	Replacement /repair of pipe supports	8.000	NO	1,160.48	9,283.84
50	510007799	Maintenance of self-cleaning filters	4.000	NO	1,160.48	4,641.92
51	510007800	Replacement of Resin/ Carbon / Sand & Gravel in Exchangers	1.000	NO	15,025.77	15,025.77
52	510007801	Inspection, repair and replacement of Bed-Plate nozzles	1.000	NO	18,557.20	18,557.20
53	510007802	Replacement of Middle Collector pipes of Exchangers	4.000	NO	6,079.48	24,317.92
54	510007803	Preparation of MS Rubber lined tanks for rubber lining	4.000	NO	1,579.25	6,317.00
55	510007804	Repair or replacement of Ejectors	4.000	NO	1,637.58	6,550.32
<b>Total Value: In words : eighteen lakh seventy thousand eighty six rupees sixty seven paise</b>						<b>1,870,086.67</b>

Signature of the Tendere



## **SCOPE OF WORK**

### **WORK DESCRIPTION:** MECHANICAL MAINTENANCE OF NEW DM PLANT

#### **01. INSPECTION AND CONDITION MONITORING OF CARTRIDGE TYPE CENTRIFUGAL PUMPS:**

Check the oil level/grease in the sump and top up as required. Check for any abnormal vibration (by hand feel/ SPM Meter). Check for any leakage from gland/ mechanical seal and tighten, if required. Check the temperature of bearing housing (By hand / Laser gun). Check for any abnormal sound and leakage of lubricant.

Note: There are 42 pumps installed and Inspection and monitoring of all installed pumps is considered as one unit for billing purpose.

#### **02. PREVENTIVE MAINTENANCE OF CARTRIDGE TYPE CENTRIFUGAL PUMPS:**

Carry out necessary isolations and collect work permit. Check the condition of coupling (coupling pads, bolts, bushes, pins, etc.) and replace if required. Check the condition of foundation studs or bolts and tighten fully. Check alignment and correct, if required. Check the condition of gland studs, bearing bracket and tighten. Check the condition of oil seals and replace, if required. Check and replace oil/grease as required.

Note: Preventive maintenance of one pump is considered as one unit for billing purpose.

#### **03. REMOVAL, OVERHAULING AND FIXING BACK OF CARTRIDGE TYPE CENTRIFUGAL PUMPS:**

Carry out necessary isolations and collect work permit. Remove the coupling guard. Loosen the coupling bolts and decouple the motor from the pump by removing the spacer. Put chain block and sling in position and attach the sling to the pump. Remove all the nuts from the bearing bracket and base plate. Ensuring the rotor is properly hanged; slowly remove the rotor from casing. Carefully remove the gasket from the rotor and store it. Place the rotor in the trolley and bring it to the workshop. Remove the coupling half with a suitable puller. Unscrew the impeller nut and remove the impeller and stuffing box. Remove the end cover bolts from the bearing bracket. Pull out the shaft and bearing(s) from the bracket. Now remove the bearings from the shaft (using the bearing dismounting tool – SKF) if they are not suitable for use. Check the condition of shaft for any wear out/damage. If the wear out or damage is unacceptable, then repair or renew the shaft. Check the run out of the shaft (using V-Block, Scriber and Dial Gauge). Check the condition of sleeve for any wear out or damage. Check the condition of bearing bracket for any cracks, damage, etc. after cleaning the sump/housing. Check the condition of end covers. Check the condition of stuffing box and deflector. Check the condition of impeller for any imbalance, abnormal wear out, damage, etc. Check condition of oil seals. Check the condition of mechanical seal and its parts. Check the condition of gland follower, studs and nuts. Check the condition of coupling and bolts for any damage. Fix the end cover (on the gland side) and lock it with bolts and turn the bracket upside down and place it at some height (in order to insert the shaft). Mount the bearings upon the shaft with the aid of a proper mounting tool. Carefully place the shaft with bearings in the bracket. Now place the end cover (with shims if required) so as to lock the shaft perfectly at both ends without any play in the bearing

bracket. Now insert the deflector back in its position. Now check whether the sleeve is in proper position and lock it with the pin. Renew the stuffing box with gland packing rings. Insert the stuffing box carefully onto the shaft. Place the impeller onto the shaft and wind the Teflon (using a Teflon tape) to prevent water entry into the gap between the sleeve and the shaft. Place the washer and screw the impeller nut and tighten it completely. Place the coupling half on the shaft at the rear end and lock it with the key (to prevent its relative motion with the shaft). Place the rotor on the trolley and take it back for fixing. Attach the rotor to the chain block properly and rigidly with a sling. Bring the rotor to the position and insert the gasket onto the rotor carefully. Insert the rotor in casing carefully and tighten all the nuts. Place the support foot to the rotor and tighten it at both places. Now separate the coupling spacer halves and lock them to the motor and pump. Check for any misalignment (angular, radial or skew) and align the shafts by adopting standard procedure. Place the coupling pads, spiders, etc. and lock the pads with socket headed screws and ensure that pump is rotating freely with hand force. Tighten all the coupling bolts and place the guard. Return the work permit. Open the suction valve and take the trial run of the pump.

Note: Maintenance of one pump as above is considered as one unit for billing purpose.

#### 04. REPLACEMENT OF CARTRIDGE ASSEMBLY OF CENTRIFUGAL PUMPS WITH A SPARE CARTRIDGE ASSEMBLY

Take work permit (shutdown). Turn the push button to off position and ensure that suction and discharge valves are closed. Remove the coupling guard. Loosen the coupling bolts and decouple the motor from the pump by removing the spacer. Bring the chain block and sling in position and attach the sling to the pump. Remove all the nuts from the bearing bracket and base plate. Ensuring the rotor is properly hanged; slowly remove the rotor from casing. Carefully remove the gasket from the rotor. Move the rotor from the position and carefully place it on the trolley. De-link the rotor from the chain block. Attach the spare rotor to the chain block properly and rigidly with a sling. Bring the rotor to the position and insert the gasket onto the rotor carefully (Note: Condition of gasket must be good). Insert the rotor in casing carefully and tighten all the nuts. Place the support foot to the rotor and tighten it at both places. Separate the coupling spacer halves and lock them to the motor and pump. Check for any misalignment (angular, radial or skew) and align the shafts by adopting standard procedure. Place the coupling pads, spiders, etc. and lock the pads with socket headed screws and ensure that pump is rotating freely with hand force. Tighten all the coupling bolts and place the guard. Return work permit. Open the suction valve and take the trial run of the pump.

Note: Replacement of cartridge in one pump is considered as one unit for billing purpose.

#### 05. REPLACEMENT OF COUPLING ASSEMBLY IN CARTRIDGE TYPE CENTRIFUGAL PUMPS:

Open the bolts of the guard and remove the coupling guard and place it aside carefully. Unscrew the bolts of the coupling with a suitable spanner and remove the spacer. Unscrew the base bolts of the motor and remove them. Attach a suitable sling to the motor and carefully lift and turn the motor aside. With the aid of a suitable puller, remove the coupling hub from the motor shaft. Check the condition of shaft and dust-off any kind of foreign material with an emery paper. Place the new coupling hub and slowly insert it onto the shaft with the aid of proper mounting tool. With the aid of a suitable puller, remove the coupling hub from the pump shaft. Check the condition of shaft and dust-off any kind of foreign material with an emery paper. Place the new coupling hub and slowly insert it

onto the shaft with the aid of proper mounting tool. Now lift the motor, turn it and place it in position carefully. Place the bolts of the motor and tighten them (with hand force) initially. Place the new spacer halves in-between the hubs and check for any misalignment. Align the motor shaft with the pump perfectly as per standard procedure. Once alignment is done, box-up the coupling with the given spider/tyre and tighten the bolts and nuts. Finally tighten the motor bolts with the aid of pipe (for getting required torque) and suitable spanner. Place the coupling guard carefully back in position and lock it with the bolts provided.

Note: Replacement of coupling assembly in one pump is considered as one unit for billing purpose.

#### 06. SERVICING OF CARTRIDGE ASSEMBLY:

Remove the coupling half with a suitable puller. Unscrew the impeller nut and remove the impeller and stuffing box. Remove the end cover bolts from the bearing bracket. Pull out the shaft and bearing(s) from the bracket. Remove the bearings from the shaft (using the bearing dismantling tool – SKF) if they are unsuitable for further use. Check the condition of shaft for any wear out/damage. If the wear out or damage is unacceptable, then repair or replace the shaft. Check the run out of the shaft (Using V-Block, Scriber and Dial Gauge). Check the condition of sleeve for any wear out or damage. Check the condition of bearing bracket after cleaning the sump/housing for any cracks/damage etc. Check the condition of end covers, stuffing box and deflector. Check the condition of impeller for any imbalance / abnormal wear out / damage etc. Check the condition of oil seals, mechanical seal and its parts. Check the condition of gland follower, studs and nuts. Check the condition of coupling and bolts for any possible damage. Fix the end cover (on the gland side) and lock it with bolts and turn the bracket upside down and place it at some height (in order to insert the shaft). Mount the bearings upon the shaft with the aid of a proper mounting tool. Carefully place the shaft with bearings in the bracket. Place the end cover (with shims if required) so as to lock the shaft perfectly at both ends without any play in the bearing bracket. Now insert the deflector back in its position. Check whether the sleeve is in proper position and lock it with the pin. Renew the stuffing box with gland packing rings. Insert the stuffing box carefully onto the shaft. Place the impeller onto the shaft and wind the Teflon (using a Teflon tape) to prevent water entry into the gap between the sleeve and the shaft. Place the washer and screw the impeller nut and tighten it completely. Place the coupling half on the shaft at the rear end with the key.

Note: Servicing of one cartridge assembly is considered as one unit for billing purpose.

#### 07. INSPECTION AND CONDITION MONITORING OF SPLIT CASING TYPE CENTRIFUGAL PUMPS:

Top up grease in the Plummer block as required. Check for any abnormal vibration (by hand feel / SPM Meter). Check for any leakage from gland /mechanical seal and tighten if required. Check the temperature of bearing housing (by hand / Laser gun). Check for any abnormal sound and leakage of lubricant.

Note: There are 6 pumps installed and Inspection and monitoring of all pumps is considered as one unit for billing purpose.

#### 08. PREVENTIVE MAINTENANCE OF SPLIT CASING TYPE CENTRIFUGAL PUMPS:

Carry out necessary isolations and collect work permit. Check the condition of coupling (bolts, bushes, pins) and replace, if required. Check the condition of studs or bolts (casing studs) and foundation bolts and tighten. Check the condition of gland studs and replace, if required. Check the condition of bearing covers for any damage, cracks, etc. and replace, if required. Top up or replace grease as required.

Note: Preventive maintenance of one pump is considered as one unit for billing purpose.

#### 09. OVERHAULING OF SPLIT CASING TYPE CENTRIFUGAL PUMPS:

Take work permit (shutdown). Turn the push button to off position and ensure suction and discharge valves are closed. Remove the coupling guard. Unscrew the coupling pins and bushes and place them aside carefully to decouple the motor from the pump. Open the motor base bolts and carefully place the motor aside from the position. Pull out the coupling half from the shaft and keep it aside carefully. Unscrew the bearing cover bolts and remove the covers on both sides of the pump. Now eject the bearings on both sides with the aid of a suitable puller. Unscrew the follower nuts and remove the gland followers on both sides. Open the upper half casing bolts and place them aside carefully. Also remove the nuts on the aligning pins. Bring the chain block and sling in position and attach the sling to the upper half casing. Lift the casing half slowly and carefully with the chain block and place it in a safe and secure position (on proper supports). Remove the lantern rings (if any) at the gland areas. Remove the entire shaft and impeller assembly and take it to the repair shop. Dismantle all the parts of the sub-assembly one by one. Inspect all parts such as sleeves, impeller, keys, spacer rings and other grooves provided on the shaft for any kind of possible damage or wear out. Replace or repair the worn out/damaged parts. Assemble back the parts to complete the sub assembly. Now check whether all the parts are properly fastened together and finally place the coupling half. Take back the sub-assembly to the pump for fixing. Clean the mating faces of the casing halves and ensure that the condition of the gasket is good. Place the sub-assembly of the shaft and impeller on the bottom half casing carefully with the help of sling and chain block / crane. Make sure that the spacer rings are arranged properly. Ensure that there is no foreign material in the suction and discharge grooves and other pipes. Place the lantern rings (if required) before placing the top cover. Place the gaskets on the face(s) carefully. Now bring the upper cover and place it on the lower half adjusting the halves with the aid of pins provided at opposite ends. Now fasten the upper and lower halves with the studs and nuts provided and tighten them. Insert the bearings on the shaft and lock them with lock nuts. After ensuring that the shaft is rotating, place the bearing cover(s) and tighten the bolts. Insert the new gland packing rings and finally the gland follower and lock it with nuts. Now, bring the motor back to the position and align the motor to the pump using a standard procedure (Dial gauge/Laser methods). After the alignment is completed, join both the coupling halves with pins and bushes (damaged ones if any, must be renewed) and tighten them. Place the coupling guard and return the work permit. Take trial run and ensure smooth running of the pump before handing over to the operations department.

Note: Overhauling of one pump is considered as one unit for billing purpose.

#### 10. REPLACEMENT OF ROTOR ASSEMBLY IN SPLIT CASING TYPE CENTRIFUGAL PUMPS:

Take work permit (shutdown). Turn the push button to off position and ensure suction and discharge valves are closed. Remove the coupling guard. Unscrew the coupling pins and bushes and place them aside carefully to decouple the motor from the pump. Open the motor base bolts and carefully place the motor aside from the position. Pull out the coupling half from the shaft and keep it aside carefully.

Unscrew the bearing cover bolts and remove the covers on both sides of the pump. Eject the bearings on both sides with the aid of a suitable puller. Unscrew the follower nuts and remove the gland followers on both sides. Open the upper half casing bolts and place them aside carefully. Remove the nuts on the aligning pins. Now, bring the chain block and sling in position and attach the sling to the upper half casing. Lift the casing half slowly and carefully with the chain block and place it in a safe and secure position (on proper supports). Remove the lantern rings (if any) at the gland areas. Remove the entire shaft and impeller assembly and place it aside. Clean the mating faces of the casing halves and ensure that the condition of the gasket is good. Place the sub-assembly of the shaft and impeller on the bottom half casing carefully with the help of sling and chain block/crane. Make sure that the spacer rings are arranged properly. Ensure that there is no foreign material in the suction and discharge grooves and other pipes. Place the lantern rings (if required) before placing the top cover. Place the gaskets on the face(s) carefully. Now bring the upper cover and place it on the lower half adjusting the halves with the aid of pins provided at opposite ends. Fasten the upper and lower halves with the studs and nuts provided and tighten them. Insert the bearings on the shaft and lock them with lock nuts. After ensuring that the shaft is rotating, place the bearing cover(s) and tighten the bolts. Insert the new gland packing rings and finally the gland follower and lock it with nuts. Bring the motor back to the position and align the motor to the pump using a standard procedure (Dial gauge/Laser method). After the alignment is completed, join both the coupling halves with pins and bushes (damaged ones, if any, must be replaced) and tighten them. Place the coupling guard and return the work permit. Take trial run and ensure smooth running of the pump before handing over to the operations department.

Note: Maintenance of one pump as above is considered as one unit for billing purpose.

#### 11. REPLACEMENT OF COUPLING ASSEMBLY IN SPLIT CASING TYPE CENTRIFUGAL PUMPS:

Open the bolts of the guard and remove the coupling guard and place it aside carefully. Unscrew the bolts of the coupling with a suitable spanner and remove the spacer. Unscrew the base bolts of the motor and remove them. Attach a suitable sling to the motor and carefully lift and turn the motor aside. With the aid of a suitable puller, remove the coupling hub from the motor shaft. Check the condition of shaft and dust-off any kind of foreign material with an emery paper. Place the new coupling hub and slowly insert it onto the shaft with the aid of proper mounting tool. With the aid of a suitable puller, remove the coupling hub from the pump shaft. Check the condition of shaft and dust-off any kind of foreign material with an emery paper. Place the new coupling hub and slowly insert it onto the shaft with the aid of proper mounting tool. Now lift the motor, turn it and place it in position carefully. Place the bolts of the motor and tighten them (with hand force) initially. Place the new spacer halves in-between the hubs and check for any misalignment. Align the motor shaft with the pump perfectly as per standard procedure. Once alignment is done, box-up the coupling with the given bushes and pins and tighten the bolts and nuts. Finally tighten the motor bolts with the aid of pipe (for getting required torque) and suitable spanner. Place the coupling guard carefully back in position and lock it with the bolts provided.

Note: Maintenance of one pump as above is considered as one unit for billing purpose.

#### 12. SERVICING OF ROTOR ASSEMBLY:

Dismantle all the parts of the sub-assembly one by one. Inspect all parts such as sleeves, impeller, keys, spacer rings and other grooves provided on the shaft for any kind of possible damage or wear

out. Replace or repair the worn out/damaged parts. Assemble back the parts (as per the drawing) to complete the sub assembly. Now check whether all the parts are properly fastened together and finally place the coupling half.

Note: Maintenance of one pump as above is considered as one unit for billing purpose.

### 13. INSPECTION AND CONDITION MONITORING OF METERING PUMPS:

Check for any leakage of process fluid from suction and discharge lines. Check for any abnormal sound. Check the colour/condition of lubricating oil in the gear box. Check the oil level in the Gearbox. Stop the pump locally and clean suction strainer and replace strainer if required.

Note: There are 23 installed pumps and inspection and condition monitoring of all pumps is considered as one unit for billing purpose.

### 14. OVERHAULING OF METERING PUMPS:

Take work permit (shutdown). Turn the push button to off position and ensure suction and discharge valves are closed. Open the nuts of the motor and remove the motor from position and keep it aside. Open the base bolts and carefully place them. Open the socket headed bolts of the suction and discharge flange and carefully place it aside. Open the bolts and ECC Stroke adjustment plate (Power). Tap the pump and slowly separate the pump from any left out connections and remove it from position. Check the condition of worm shaft and gear for any wear out/damage. Check the condition of eccentric, piston and stroke adjusting sleeve for any wear out/damage. Check the condition of oil pumping chamber and clean it. Check the condition of spur gears in the capacity adjustment mechanism. Check the condition of cup valve. Check the condition of diaphragm(s) inside the pump. Check the condition of ball type NRV(s) present near the suction and discharge ports and their seats for any possible damage/wear out. Check the condition of bearings, circlips, O-rings, oil seals, etc. Check the condition of worm shaft supports inside the pump. After thorough inspection of all the parts, arrange for new parts/repair the damaged parts and place them and complete the assembly. Place the pump on the baseplate and connect it to the stroke adjuster and screw back the bolts. Fasten the pump to the base plate after making sure that there is no misalignment. Connect the suction and discharge flange with socket headed bolts. Bring and place the motor back in position, couple it to the pump and fasten it with the bolts. Ensure all the bolts and screws are properly tightened. Return the work permit. Ensure that suction and delivery valves are fully opened and pump is not air locked. Take a trial run of the pump and handover to operations.

Note: Maintenance of one pump as above is considered as one unit for billing purpose.

### 15. SERVICING OF REPLACED SPARE METERING PUMPS:

Check the condition of worm shaft and gear for any wear out / damage. Check the condition of eccentric for any wear out/damage. Check the condition of piston for any wear out/damage. Check the condition of stroke adjusting sleeve. Check the condition of oil pumping chamber and clean it. Check the condition of spur gears in the capacity adjustment mechanism. Check the condition of cup valve. Check the condition of diaphragm(s) inside the pump. Check the condition of ball type NRV(s) present near the suction and discharge ports and their seats for any possible damage/wear out. Check the condition of bearings, circlips, O-rings and oil seals, etc. Check the condition of worm shaft

supports inside the pump. After thorough inspection of all the parts, arrange for new parts/repair the damaged parts and place them in their respective position and complete the assembly.

Note: Maintenance of one pump as above is considered as one unit for billing purpose.

#### 16. REPLACEMENT OF METERING PUMPS:

Take work permit (shutdown). Turn the push button to off position and ensure suction and discharge valves are closed. Open the nuts of the motor and remove the motor from position and keep it aside. Open the base bolts and carefully place them. Open the socket headed bolts of the suction and discharge flange and carefully place it aside. Open the bolts and ECC Stroke adjustment plate (Power). Tap the pump and slowly separate the pump from any left out connections and remove it from position. Now, take the spare pump and place the pump on the base plate and connect it to the stroke adjuster and screw back the bolts. Fasten the pump to the base plate after making sure that there is no misalignment. Connect the suction and discharge flange with socket headed bolts. Bring and place the motor back in position, couple it to the pump and fasten it with the bolts. Ensure all the bolts and screws are properly tightened. Return the work permit. Ensure that suction and delivery valves are fully opened and pump is not air locked. Take trial run of the pump and handover to operations.

Note: Maintenance of one pump as above is considered as one unit for billing purpose.

#### 17. MAINTENANCE OF PRESSURE SAND FILTER AND ACTIVATED CARBON FILTER EXCHANGER VESSELS:

Replace gaskets, if damaged. Arrest leakages from vessels or attached pipes (by welding). Open the manhole cover. Inspect the condition of vessel and take necessary corrective action. Inspect the nozzles inside the exchanger and replace damaged/unsuitable nozzles. Inspect and carry out minor repairs of abnormal/damaged MC headers. Replace/top-up sand and gravel (as per set frequency). Box-up the manhole cover.

Note: Maintenance of one exchanger as above is considered as one unit for billing purpose.

#### 18. MAINTENANCE OF STRONG ACID CATION, STRONG BASE ANION AND MIXED BED EXCHANGER VESSELS:

Replace gaskets, if damaged. Arrest leakages from vessels or attached pipes (by welding). Open the manhole cover. Inspect the condition of vessel and take necessary corrective action. Inspect and replace damaged Middle Collector nozzles. Inspect and replace damaged Bed Plate nozzles. Inspect and carry out minor repairs of damaged MC Headers. Top-up or replace resin as per the requirement. Box-up the manhole cover.

Note: Maintenance of one exchanger as above is considered as one unit for billing purpose.

#### 19. REPLACEMENT OF CATRIDGE FILTER ELEMENTS:

Replace gaskets, if damaged. Bring the new cartridges from the store. Open top cover. Unscrew the nuts and remove old cartridges inside the filter. Flush the filter with back water under the supervision of VSP Authority. Place the new cartridges in the filter and lock them with nuts. Inspect O-ring for any damage or failure and replace, if required. Place the top cover back in position and lock it with the removed bolts/studs. Arrest leakages from vessels or attached pipes (by welding – Stainless Steel).

Note: There are 33 filter elements installed in each filter assembly. Replacement of all 33 filter elements is considered as one unit for billing purpose.

#### 20. MAINTENANCE OF ULTRA FILTER SKID:

Replace gaskets, if damaged. Replace cartridges inside the filter as per standard frequency or as per actual condition. Arrest leakages from vessels or attached pipes (by welding).

Note: There are 33 filter elements installed in each filter assembly. Replacement of all 33 filter elements is considered as one unit for billing purpose.

#### 21. MAINTENANCE OF RO SKID:

Replace gaskets, if damaged. Replace the damaged ball valves. Repair/replace damaged tubes. Repair/replace membranes and other components inside the vessels. Arrest leakages from vessels or attached pipes (by welding).

Note: There are 3 skids installed with 13 vessels per skid and maintenance as above in one vessel is considered as one unit for billing purpose.

#### 22. INSPECTION AND CONDITION MONITORING OF CLARIFLOCCULATOR AGITATOR OR MAIN DRIVE GEAR-BOX:

Check for any oil leakage. Check for any abnormal vibration (by hand feel/ SPM Meter). Check the temperature of gear box (by hand/ Laser Gun). Check for any abnormal sound/noise and oil level in the gear box and top up, if required.

Note: Inspection and condition monitoring of all 3 installed gear boxes is considered as one unit for billing purpose.

#### 23. PREVENTIVE MAINTENANCE OF CLARIFLOCCULATOR AGITATOR GEAR BOX:

Check the tension in belt/ chain and repair/replace if necessary. Alignment is to be done if chain/belt is disturbed during repair/replacement. Check the condition of pulleys/sprockets on motor and gearbox and repair/replace, if required. Alignment is to be done if pulleys or sprockets are replaced. Check the colour/condition of lubricating oil in the gear box and replace, if required. Check oil breather plug for any jamming and clean it.

Note: Preventive maintenance of all the 3 installed gear boxes is considered as one unit for billing purpose.

#### 24. REMOVAL, OVERHAULING AND FIXING BACK OF CLARIFLOCCULATOR AGITATOR / MAINDRIVE GEAR BOX:

Take work permit (shut down). Open the bolts of the belt guard and place them aside. Remove the belt from the pulleys carefully. Open the bolts of the flanged coupling and carefully place them aside. Open the base bolts of the gear box and carefully place them aside. Now, tap the gear-box and slowly remove it from position. (Note: Supports arrangement is to be done for hanging the chain block). Eject the coupling half and the pulley from the output shaft and input shaft of the gear box



respectively. Open the end covers and top covers. Dismantle all the parts from the gear box one-by-one. Carefully inspect each and every part of the assembly like oil seal, gears, pinion etc., for any abnormal wear out/damage. Repair or replace the damaged/worn-out components. Make sure that all parts to be assembled back are fit for operating for a durable time. Assemble the parts back in order, one after the other. Put the end covers and fasten them with bolts. Attach the gearbox to the chain block and keep it in required position. Carefully place the bolts of the flanged coupling and tighten the nuts. Place the gearbox base bolts, but do not tighten them. Insert the pulley onto the shaft and lock it with the key. Check for any misalignment and correct it, if required. Tighten the gear box base bolts completely. Place the belt in the V-groove of the pulley. Then place the guard and lock it with the given bolts and nuts. Return the work permit. Take a trial run of the agitator and handover for operation.

Note: Overhauling of one gear box is considered as one unit for billing purpose.

#### 25. REPLACEMENT OF CLARIFLOCCULATOR AGITATOR / MAIN DRIVE GEAR BOX WITH SPARE ONE:

Transport the spare gear box from storage location to the respective work-spot. Take work permit (shut down). Open the bolts of the belt guard and place them aside. Remove the belt from the pulleys carefully. Open the bolts of the flanged coupling and carefully place them aside. Open the base bolts of the gear box and carefully place them aside. Now, tap the gear-box and slowly remove it from position. (Note: Supports arrangement is to be done for hanging the chain block). Remove the coupling half and the pulley from the gear box and place them on the shafts of the new gear box in their positions. Lift the new gear box with the use of chain block and sling and keep it in correct position. Carefully place the bolts of the flanged coupling and tighten the nuts. Place the gearbox base bolts, but do not tighten them. Insert the pulley onto the shaft and lock it with the key. Check for any misalignment and correct it, if required. Tighten the gear box base bolts completely. Place the belt in the V-groove of the pulley. Then place the guard and lock it with the given bolts and nuts. Return the work permit. Take a trial run of the agitator and handover for operation.

Note: Replacement of one Gear Box is considered as one unit for billing purpose.

#### 26. SERVICING OF CLARIFLOCCULATOR GEAR BOX:

Eject coupling half and the pulley from the output shaft and input shaft of the gear box respectively. Open the end covers and top covers. Dismantle all the parts from the gear box one-by-one. Carefully inspect each and every part of the assembly like oil seal, gears, pinion etc., for any abnormal wear out/damage. Repair or replace the damaged/ worn-out components. Make sure that all parts to be assembled back are fit for operating for a durable time. Assemble the parts back in order, one after the other. Put the end covers and fasten them with bolts.

Note: Servicing of one gearbox is considered as one unit for billing purpose.

#### 27. INSPECTION AND CONDITION MONITORING OF TWIN LOBE BLOWER:

Check the oil level in the sump and top-up if required. Check for any abnormal vibration (by hand feel/SPM Meter). Check the temperature of lobe housing (by hand/Laser Gun). Check for any abnormal sound and leakage of lubricant. Strainer and silencer are to be inspected and cleaned.

Note: Inspection and condition monitoring of all 5 blowers is considered as one unit for billing purpose.

## 28. PREVENTIVE MAINTENANCE OF TWIN LOBE BLOWER:

Open the guard and check the tension in belts. Check the condition of V-belts and pulleys. Check for looseness of bolts, if any. Check for any misalignment of pulleys. Check the condition of oil breather plug for any jamming and clean it. Inspect the functioning of safety valve and its elements and repair accordingly.

Note: Preventive maintenance of one blower is considered as one unit for billing purpose.

## 29. OVERHAULING OF TWIN LOBE BLOWER:

Take work permit (shutdown). Turn the push button to off position and ensure suction and discharge valves are closed. Remove the guard and place it aside. Open and remove the belts from the pulleys one after the other. Unscrew the bolts and remove the gear housing cover. Unscrew the gear locking bolts and carefully eject the gear wheels with a suitable puller. Remove the gear locking bush and place it carefully. Now carefully eject the bearing cover and bearings with suitable pullers. Similarly, on the other end, with the aid of taper lock bushes provided on the shaft, remove the pulley. Remove the bearing cover and eject the bearings from the shaft after making necessary arrangement. Remove the lobes carefully from the casing and take them to the workshop. Check the condition of the lobes for any wear out/damage. Repair or replace the lobes as per requirement. Check the condition of gear wheels, sleeves and rings. Carefully inspect all the rotating parts and fasteners for any kind of damage and repair/replace them accordingly. After making sure that all parts are ready for assembling, take them back to the blower. Check the condition of oil seals and replace if necessary. Assembling is carried out as per the standard procedure and clearance setting is to be strictly adhered to. Initially place the lobes inside the grooves casing with temporary supports. Insert the sleeves on two ends of the both the shafts. Place the bearings onto the sleeves (without outer races) and place the cover(s). Insert the rings provided for oil splashing and tighten the bolts of the covers to a certain extent (so that the lobes are free to rotate with a pipe wrench). Now insert the gear wheels on the required side one by one and ensure that the mating is quite smooth and then lock them with bolts provided. Place the cover with gasket in-between so as to avoid leakage of oil from sump. Then on the other side, completely tighten the cover bolts and insert the pulley and lock with the given taper lock bush. Check for misalignment if any, and align the blower and motor perfectly with the aid of string. Place the belts on the pulley one after the other and place the guard on the belts and lock it properly. After entire assembling procedure is completed, the work permit is returned back. Take trial run.

Note: Overhauling of one blower is considered as one unit for billing purpose.

## 30. MAINTENANCE OF MANUAL AND PNEUMATIC BUTTERFLY VALVES:

Repair/replace of damaged components. Repair/ replace gear mechanism if there is any abnormality/failure. Check whether there is any leakage from gasket(s) and replace if leak is found. Check if there is any leakage from flanges/valve body and arrest the leakage (by welding – i.e., metal buildup). Service pneumatic actuators, if required; repair or replace damaged components. Adjust drive mechanism from Manual to Auto and vice-versa depending on requirement.

Note: Maintenance of one valve is considered as one unit for billing purpose.

31. MAINTENANCE OF LEVER-OPERATED BUTTERFLY VALVES OF SIZE  $\Phi$  80 MM TO  $\Phi$  150 MM:

Repair/replace damaged components. Check whether there is any leakage from gasket(s) and replace if leak is found. Check if there is any leakage from flanges/valve body and arrest the leakage (by welding – i.e., metal buildup).

Note: Maintenance of one valve is considered as one unit for billing purpose.

32. MAINTENANCE OF PNEUMATIC DIAPHRAGM VALVES OF SIZE  $\Phi$  32 MM TO  $\Phi$  65 MM:

Check if there is any leakage from valve bonnet and replace the diaphragm/bonnet as per requirement. Check the condition of body and the components inside the bonnet during diaphragm changing and repair/replace the same if any abnormality is found. Replace bonnet, if damaged. Replace body, if damaged. Check whether there is any leakage from gasket(s) and replace if leak is found. Check if there is any leakage from flanges/valve body and arrest the leakage (by welding – i.e., metal buildup). Service pneumatic actuators if required; repair or replace damaged components. Adjust drive mechanism from Manual to Auto and vice-versa depending on requirement.

Note: Maintenance of one valve is considered as one unit for billing purpose.

33. MAINTENANCE OF PNEUMATIC DIAPHRAGM VALVES OF SIZE  $\Phi$  80 mm to  $\Phi$  150 mm:

Check if there is any leakage from valve bonnet and replace the diaphragm/bonnet as per requirement. Check the condition of body and the components inside the bonnet during diaphragm changing and repair/replace the same if any abnormality is found. Replace bonnet, if damaged. Replace body, if damaged. Check whether there is any leakage from gasket(s) and replace if leak is found. Check if there is any leakage from flanges/ valve body and arrest the leakage (by welding – i.e., metal buildup). Service pneumatic actuators if required; repair or replace damaged components. Adjust drive mechanism from Manual to Auto and vice-versa depending on requirement.

Note: Maintenance of one valve is considered as one unit for billing purpose.

34. MAINTENANCE OF MANUAL DIAPHRAGM VALVES:

Check if there is any leakage from valve bonnet and replace the diaphragm/ bonnet as per requirement. Check the condition of body and the components inside the bonnet during diaphragm changing and repair/replace the same if any abnormality is found. Replace bonnet, if damaged. Replace body, if damaged. Check whether there is any leakage from gasket(s) and replace if leak is found. Check if there is any leakage from flanges/ valve body and arrest the leakage (by welding – i.e., metal buildup).

Note: Maintenance of one valve is considered as one unit for billing purpose.

35. MAINTENANCE OF MANUALLY OPERATED GATE VALVES OF SIZE  $\Phi$  15 MM TO  $\Phi$  50 MM:

Check if there is any leakage from gland and take necessary action (tighten the gland/ replace the packing). Check the condition of gland studs/bolts. Lubricate the spindle (for raising spindle gate valves). Check whether there is any leakage from gasket(s) and replace gasket if leak is found. Check if there is any leakage from flanges/valve body and arrest the leakage (by welding – i.e., metal buildup).

Note: Maintenance of one valve is considered as one unit for billing purpose.

36. MAINTENANCE OF MANUALLY OPERATED GATE VALVES OF SIZE  $\Phi$  80 MM TO  $\Phi$  200 MM:

Check if there is any leakage from gland and take necessary action (tighten the gland/replace the packing). Check the condition of gland studs/bolts. Lubricate the spindle (for raising spindle gate valves). Check whether there is any leakage from gasket(s) and replace gasket if leak is found. Check if there is any leakage from flanges/valve body and arrest the leakage (by welding – i.e., metal buildup).  
Note: Maintenance of one valve is considered as one unit for billing purpose.

#### 37. MAINTENANCE OF MANUALLY OPERATED BALL VALVES:

Replace the seat(s) inside the valve, if damaged. Replace entire valve if repair is not possible. Check whether there is any leakage from flange gasket(s) and replace if leak is found. Check if there is any leakage from flanges/valve body and arrest the leakage (by welding – i.e., metal buildup).  
Note: Maintenance of one valve is considered as one unit for billing purpose.

#### 38. MAINTENANCE OF NON-RETURN VALVES OF SIZE $\Phi$ 25 MM to $\Phi$ 80 MM:

Repair or replace worn out components inside the valve. Replace entire valve if repair is not possible. Do welding of worn out parts inside the valve as per requirement. Check whether there is any leakage from gasket(s) and replace if leak is found. Check if there is any leakage from flanges/valve body and arrest the leakage (by welding – i.e., metal buildup).  
Note: Maintenance of one valve is considered as one unit for billing purpose.

#### 39. MAINTENANCE OF NON-RETURN VALVES OF SIZE $\Phi$ 100 MM to $\Phi$ 200 MM:

Repair or replace worn out components inside the valve. Replace entire valve if repair is not possible. Do welding of worn out parts inside the valve as per requirement. Check whether there is any leakage from gasket(s) and replace if leak is found. Check if there is any leakage from flanges/valve body and arrest the leakage (by welding – i.e., metal buildup).  
Note: Maintenance of one valve is considered as one unit for billing purpose.

#### 40. DEPLOYMENT OF UN-SKILLED MAN POWER FOR MISCELLANEOUS MAINTENANCE JOBS:

To carry out miscellaneous unplanned and break down jobs, contractor must be able to deploy adequate un-skilled man power as per the site requirement on round the clock basis. Payment shall be made as per actual man days of un-skilled man power deployed.

#### 41. DEPLOYMENT OF SEMI-SKILLED MAN POWER FOR MISCELLANEOUS MAINTENANCE JOBS:

To carry out miscellaneous unplanned and break down jobs, contractor must be able to deploy adequate semi-skilled man power as per the site requirement on round the clock basis. Payment shall be made as per actual man days of semi-skilled man power deployed.

#### 42. DEPLOYMENT OF SKILLED MAN POWER FOR MISCELLANEOUS MAINTENANCE JOBS:

To carry out miscellaneous unplanned and break down jobs like welding, gas cutting, etc., contractor must be able to deploy adequate skilled man power as per the site requirement on round the clock basis. Payment shall be made as per actual man days of skilled man power deployed.

#### 43. UNLOADING OF HCL / NaOH TANKERS:

HCL or NaOH is to be unloaded from the Tanker to the respective storage tanks following the below mentioned procedure:

Transport Challan(s) are to be thoroughly scrutinized and signed by the VSP shift in-charge before tanker is brought for unloading. Ensure that the tanker is parked in proper position suitable for unloading. Follow the standard unloading procedure and unload the tanker. After unloading is completed, handover the papers to the VSP shift in-charge and get the papers signed. Unloading hoses and their fittings must be repaired or replaced with new hose(s) (supplied by VSP free of cost) if it is damaged or leaking.

Note: Unloading of one tanker is considered as one unit for billing purpose.

#### 44. MAN HOLE COVER OPENING AND BOX-UP OF EXCHANGERS FOR INSPECTION AND BACKWASH:

Ensure that work permit/ shutdown is taken for opening the man-hole covers. Check that sufficient space is available for placing the removed man-hole cover. Unscrew the bolts and nuts one-by-one with suitable spanners and place them aside carefully. Leave two bolts on opposite sides after unscrewing without removing them from position. With the use of screw driver and hole bar, slowly disturb the man-hole cover and ensure that it is free to come out from its position. Remove the remaining two bolts and place them aside carefully. Slowly remove the man-hole cover from position and place it in a safe location. Ensure that the removed bolts and nuts are free from rust and are in good condition. If they are rusted, they are to be cleaned with diesel or oil and lubricated with grease (or oil). Ensure that the condition of gasket is good. If the condition is not good, replace the gasket by cutting a new one from the gasket sheet provided by VSP free of cost). Slowly lift the man-hole cover and place it in position and hold it with the use of hole bars, if necessary. Ensure that the gasket holes are properly matched with the cover holes and insert the bolts and nuts on opposite sides (top and bottom) initially. Now insert all the bolts and nuts and start tightening on the opposite corners with suitable spanners. Once the opposite side bolts are tightened, tighten all the remaining bolts and nuts. After tightening is over, work is to be cross-checked for any leakage from the cover. If any leak is observed, then bolts and nuts are to be further tightened or replaced as per necessity and leak must be arrested before handing over the exchanger for operation.

Note: Opening and box-up of each man-hole cover is considered as one unit for billing purpose.

#### 45. STRUCTURAL REPAIR WORKS:

The party has to carry out structural repair works at New DM Plant like providing protection shield cover or coupling guards or as directed by the Engineer In-Charge. Structural material required for repair is to be transported from Steel Storage Yard/Stores to the respective work-spot by the contractor. Scrap removal from site and proper disposal is also in the scope of contractor. Structural works includes painting also, which is a part of the work and shall not be measured separately.

Note: The measurement shall be done on Metric Tonnage basis.

#### 46. MAINTENANCE OF SUBMERSIBLE DEWATERING PUMPS:

Remove the non-working pump from the pit. Shift spare pump (if required) from shops stores to site based on the assessment of the reparability of old pump by the Engineer In-Charge. Assist in preparation of pump discharge end flexible PVC hose connection (if required). Make necessary arrangements for placement or removal of pump in the pit. Place new/repared old pump in the pit. Shift old pump to the designated place as instructed by the Engineer In-charge.

Note: Maintenance of one submersible pump is considered as one unit for billing purpose.

**47. ATTENDING PIPE LINE FLANGEGASKET LEAKAGES IN NEW DM PLANT:**

Open the flange joint and remove the old gasket and clean the flange faces. Check the condition of flange faces. Metal build-up is to be done, if required. Suitable electrodes will be issued free of cost by VSP. Grind/file the built-up faces to the required level. Prepare new gasket from sheet provided by VSP free of cost. Sheet is to be collected from VSP stores. Position new gasket and tighten the bolts. Re-tighten the bolts in case leak still exists.

Note: Arresting the leakage from one pair of flanges is considered as one unit for billing purpose.

**48. REPLACEMENT OF MS RUBBER LINED PIPE LINE or SS PIPE LINE WITH MS RL/SS/CPVC LINES:**

Join the CPVC pipes and fittings as per the requirement to make the new pipe line which is to be kept in place of damaged MSRL pipe line or shift the required SS/MS pipes and other fittings from steel storage yard or stores to the site or fabricating the SS/MS pipe with required fittings as per the instruction of Engineer-in-Charge. Open the damaged MSRL/SS pipe line flange bolts and nuts. Remove it from position by using proper handling tools and tackles such as chain block, sling, etc. Clean and inspect the condition of existing pipe line flanges. With the aid of proper handling tools and tackles, place and position the new pipe. Insert gaskets in-between the flanges and fasten the pipes with bolts and nuts. Once job is completed, trial is to be taken to ensure that the pipe and flanges are leak free. If any leak is observed, it has to be attended immediately.

Note: Replacement of one length of pipe is considered as one unit for billing purpose.

**49. REPLACEMENT OR REPAIR OF PIPE SUPPORTS:**

Obtain permit for doing the work. Shift required material from TPP Steel storage yard (and stores) to the work spot. Remove the damaged supports. Repair the damaged supports, if possible or fabricate necessary components to make the supports. Fix them in place of the removed supports and fasten with suitable clamps. Return the work permit.

Note: Repair or fabrication and replacement of one pipe support is considered as one unit for billing purpose.

**50. MAINTENANCE OF SELF CLEANING FILTERS:**

Obtain permit for doing the work. Open the filter. Inspect parts inside the filter. Repair or replace damaged components inside the filter. Ensure that all components are in good condition. Place them back in the filter in their respective positions. Box-up the filter. Return the work permit.

Note: Maintenance of each filter is considered as one unit for billing purpose.

**51. REPLACEMENT OF RESIN / CARBON / SAND and GRAVEL IN EXCHANGERS:**

Obtain permit for doing the work. Remove the drain pipe dummy flange and fix the resin extraction pipe. Under the supervision of VSP authority, remove the existing resin and collect it in empty drums. Open manhole cover. Remove the resin extraction pipe. Empty the left out resin in the exchanger, if any, and fix the dummy flange in back position. Inspect nozzles inside the exchanger and replace damaged/unsuitable nozzles. Inspect and do minor repairs of abnormal/damaged MC headers.

Inspect the condition of exchanger vessel for any kind of possible damage such as damaged rubber lining, corrosion and erosion of vessel, etc. Make necessary handling arrangement for filling up the resin. Fill the resin in the exchanger under the supervision of the VSP authorities. Box-up the manhole cover. Take trial run and ensure that there is no leakage of resin from the vessel and water from the man hole cover flanges and pipe flanges.

Note: Replacement of resin in one exchanger is considered as one unit for billing purpose.

## 52. INSPECTION, REPAIR AND REPLACEMENT OF BED-PLATE NOZZLES:

Take work permit. Remove the drain pipe dummy flange and fix the resin extraction pipe. Under the supervision of VSP authority, remove the existing resin and collect it in empty drums. Open manhole cover. Remove the resin extraction pipe. Empty the left out resin in the exchanger, if any, and fix the dummy flange in back position. Inspect nozzles inside the exchanger and replace damaged/unsuitable nozzles. Inspect and do minor repairs of abnormal/damaged MC headers. Inspect the condition of exchanger vessel for any kind of possible damage such as damaged rubber lining, corrosion and erosion of vessel, etc. Remove bottom man-hole cover and remove the damaged bed-plate nozzles using proper tools and tackles. Inspect and clean the bed plate. Fix the new nozzles in position and lock them with nuts, if provided. Inspect whether there is any leakage from welding joints of the bed-plate and take corrective action to arrest the leakage. Fix back the bottom man-hole cover. Make necessary handling arrangement for filling up the resin. Fill the resin in the exchanger under the supervision of the VSP authorities. Box-up the manhole cover. Take trial run and ensure that there is no leakage of resin from the vessel and water from the man-hole cover flanges and pipe flanges.

Note: Inspection, repair and replacement of bed-plate nozzles in one exchanger is considered as one unit for billing purpose.

## 53. REPLACEMENT OF MIDDLE COLLECTOR PIPES OF EXCHANGERS

Take work permit. Remove the drain pipe dummy flange and fix the resin extraction pipe. Under the supervision of VSP authority, remove the existing resin below the middle collector level and collect it in empty drums. Ensure that the resin is emptied beneath the MC pipes level. Open manhole cover. Remove resin extraction pipe. Fix the dummy flange back in position. Nozzles on the headers are to be replaced, if required. Open the MSRL T-Joints of The Middle Collectors and remove them and place aside carefully. Remove damaged MC headers slowly and keep them aside in a safe place. Take the new or repaired MC header pipes and carefully insert them in the slots available. Adjust them in proper position and place the MSRL T-Joints with new gaskets and fasten them with bolts and nuts. Clean and lubricate the bolts, replace the damaged bolts and nuts. Fix back the nozzles after cleaning them ensuring that all the nozzles being placed are in good condition. Make necessary handling arrangement for filling up the resin. Fill the resin up to the required level in the exchanger under the supervision of the VSP authorities. Box-up the manhole cover. Take trial run and ensure that there is no leakage of resin from the vessel and water from the man hole cover flanges and pipe flanges.

Note: Replacement of middle collector pipes of one exchanger is considered as one unit for billing purpose.

## 54. PREPARATION OF TANKS FOR RUBBER LINING:

Remove any damaged rubber lining pieces stuck inside the surfaces of the tank. Carefully inspect the welding joints for any cracks/damage and take necessary corrective action if required. Using the hand grinding machine, grind the entire inner surfaces of the tank and the top face. Once surfaces are

smooth, then wipe of the dust and clean the tank so that the tank can be rubber lined. Preparation of one tank for rubber lining is taken as one unit for billing purpose.

#### 55. REPAIR OR REPLACEMENT OF EJECTORS:

Take the work permit. Ensure that the isolations are properly done. Open the flange bolts with suitable spanners. After both the ends of the flanges are opened, tap the ejector with a screw driver and pull it out from the pipe carefully. Inspect the ejector for any cracks or damage. If any damage is observed, repair the ejector. If repair is not possible, then replace the ejector with a new one. Cut the gaskets from the sheet provided by VSP free of cost to suit the faces of the ejector. Place the ejector back into the pipeline with gaskets neatly inserted in position and join the pipes by bolting the flanges. Ensure that the bolts are in good condition and lubricate them if necessary. Once all the bolts and nuts are inserted, tighten them slowly and carefully. Care is to be taken to ensure that bolts are not over tightened as the faces of ejector may develop cracks. Open the valves and check for any leakage from flanges or ejector and tighten the bolts if leak persists.

Note: Repair/ replacement of one ejector is taken as one unit for billing purpose.



## **TERMS AND CONDITIONS**

<b>WORK DESC : MECHANICAL MAINTENANCE OF NEW DM PLANT</b>	
<b>Cond No</b>	<b>Cond Desc</b>
01	Contractor must visit the site; understand fully the scope/extent of work, ways and means including handling equipment, tools and tackles, man-power required for doing the job before quoting.
02	The contractor has to make temporary platforms/scaffoldings wherever necessary for carrying out the above job and the same has to be removed after the completion of job.
03	The Contractor has to bring the following items for executing the contract: a) Welding Machines. b) LPG & Oxygen cutting sets. c) All tools and tackles including slugging spanners except special purpose tools and tackles. d) All safety appliances. e) Grinding machines, drilling machines and grinding wheels, cutters, drill bits of various sizes, etc. f) All materials handling equipment such as chain pulleys, max pullers, etc.
04	The following items will be provided by VSP:  a) Scaffolding pipes and clamps on returnable basis. b) Special purpose tools and tackles, if required, on returnable basis. c) Power supply.
05	Electrical supply shall be given to a switch board to be arranged by the party. Separate individual connections to various equipment are to be drawn by a qualified electrician of the party. The contractor has to use all standard electrical fittings duly earthed.
06	Flood lights/hand lamps required shall have to be arranged by the party.
07	The contractor has to follow VSP safety rules while executing the job. Safety clearance is to be taken by the contractor from VSP safety department before starting the job. The workmen engaged by the contractor should have height passes issued by safety department for the work.
08	No workman will be allowed to work without wearing safety helmet & shoes.
09	The party has to remove all the scrap in the area, shift to a place shown by the Engineer-in-charge and the work area is to be cleaned after the completion of the job.

## **TERMS AND CONDITIONS**

<b>WORK DESC : MECHANICAL MAINTENANCE OF NEW DM PLANT</b>	
<b>Cond No</b>	<b>Cond Desc</b>
10	Any job which is not included in the scope of work, is minor in nature and is inherent part of the job shall be executed by the contractor at no extra cost.
11	During the course of contract if the contractor is allowed to erect any temporary shed for storing his materials the same has to be dismantled and the area is to be cleaned completely before submitting his final bill.
12	At any time during the course of contract, work should not get affected due to lack of manpower or tools & tackles.
13	The party should be in a position to start the work on telephonic information.
14	The party has to take work authorization/ permit to work from Engineer- In-Charge or his representative before starting the job and the same has to be returned immediately after the completion of job. However, for jobs inside closed areas/confined spaces, the work permit has to be taken and returned from the concerned engineer on day to day basis.
15	The contract is valid for 12 months.
16	<p>Sales Tax clause:</p> <p>The scope of materials supply and consumable supply in the present proposal are as follows:</p> <p>a) Materials to be supplied by VSP: Spares, valves, fasteners, structural, lube/hydraulic oil, paint.</p> <p>b) Consumable to be supplied by VSP: LPG, Oxygen gas, gasket, grease, MS electrodes.</p> <p>c) Material to be supplied by Contractor: NIL.</p> <p>d) Consumable to be supplied by Contractor: NIL.</p> <p>The deduction of sales tax shall be done as per rules prevailing from time to time.</p>
17	<p>Performance guarantee: NIL.</p> <p>A defect liability period of 3 months from the date of completion of work shall be considered for this contract. If any defective work is observed during the defect liability period the contractor shall rectify the defective work at his own cost immediately after receiving information from the Engineer-in-charge.</p> <p>Engineer-in-charge shall be Manager (M).</p>
18	The contractor shall ensure usage of ISI marked regulators, hoses, nozzles, cutting torches, welding holders and cables for the cutting and welding works. This must be adhered to strictly.
19	Welfare allowance: SMS & ASMA are applicable for this contract.

## **SPECIAL CONDITIONS OF CONTRACT**

1. GENERAL : The special conditions of the contract (SCC) are complementary to and shall be read in conjunction with General Conditions of Contract (GCC) of VSP for works contracts. Scope of work, Bill of Quantities and other documents form part of the Tender Documents. In case of any conflict of meaning between SCC & GCC, provisions of SCC shall over ride the Provisions of GCC.
2. Visakhapatnam Steel Plant reserves the right to accept or reject the lowest or any other tender without assigning any reason and the work may be awarded to one of the Tenderers or to more than one tenderer.
3. The contract shall be treated as having been entered into from the date of issue of the letter of intent/work order to the successful tenderer, unless otherwise specified.
4. WATER, POWER AND COMPRESSED AIR: Unless otherwise specified to the contrary in the tender schedule, the contractor is entitled to use in the work such supplies of water, power and compressed air (Basing on availability) from VSP's sources from approved tapping points, free of cost. The contractor shall make his own arrangement for drawing the same to the work spot.
5. The successful tenderer shall produce Registration Certificate under APVAT Act, wherever applicable, before signing the Work Order / Letter of Acceptance and submit a copy of the same.
6. Immediately on receipt of work order, the successful tenderer shall obtain and submit the following documents to the Engineer with a copy to ZPE/Manager (Pers)/CLC before start of work.
  - a(i) ESI registration certificate with the contractor's Code no. covering all the workmen under ESI Scheme, which shall be effective from the date of start of contract and cover for the entire period of contract including extended period/defect liability period, if any.
  - a(ii) Insurance policy for payment of exgratia amount of Rs.5,00,000/- (Rupees Five lakhs only) per head in case of fatal accidents while on duty, to the contract labour engaged by him in addition to the coverage under ESI Scheme / Workmen Compensation Insurance Policy whichever is applicable. As and when a fatal accident takes place while on duty along with the benefits under the ESI Scheme / Workmen Compensation, whichever is applicable, the contractor is required to pay the ex-gratia amount within 30 (Thirty) days from the date of accident to the legal heir of the deceased. In case of any delay in paying the ex-gratia amount as above, the Employer has the right to pay such amount directly to the legal heir of the deceased and recover the same from the contractor's running / future bills. This insurance policy is to be taken by the contractor over and above the provisions specified under Clause No. 6.13 (Third Party) and 6.14 (ESI Act) of the General Conditions of Contract.
  - a(iii) Copy of the policy for third party insurance as stipulated in Clause 6.13 of the GCC.
  - b) Labour License obtained from Assistant Labour Commissioner (Central), Visakhapatnam.
  - c) PF Registration Certificate issued by PF Authorities
  - d) Safety clearance from Safety Engineering Department of VSP.
7. The contractor shall submit wage records, work commencement/completion certificate etc. and obtain necessary clearance from Contract Labour Cell of VSP for bills clearance.
8. The contractor shall ensure strict compliance with provisions of the Employee's Provident Fund Act, 1952 and the scheme framed there under in so far as they are applicable to their establishment and agencies engaged by them. The contractor is also required to indemnify the employer against any loss or claim or penalties or damages whatsoever resulting out of non-compliance on the part of the contractor with the provisions of aforesaid act and the schemes framed there under. A copy of the provident fund membership certificate/PF CODE number shall be submitted by the contractor.
9. The contractor shall follow the provisions of Indian Factories Act and all rules made there under from time to time as applicable and shall indemnify the employer against all claims of compensations under the provisions of the act in respect of workmen employed by the contractor in carrying out the work against all costs, expenses and penalties that may be incurred by the employer in connection therewith.
10.
  - a) Total amount quoted shall be inclusive of all taxes, levies, duties, royalties, overheads and the like but excluding service tax prevailing as on the date of submission of bids.
  - b) During the operation of the contract if any new taxes/duties/levies etc are imposed or rates undergo changes, as notified by the Government and become applicable to the subject works, the same shall be reimbursed by VSP on production of documentary evidence in respect of the payment of the same. Similarly benefits accruing to agency on account of withdrawal/reduction in any existing taxes and duties shall be passed on to VSP.

- c) The benefit offered by the agency (other than Service Tax) will be deducted from each bill on the offered percentage basis. Amount so recovered shall be released, limiting to the percentage of benefit offered on the quoted price, only on receipt of credit by VSP.
  - d) The prices are exclusive of Service Tax. RINL-VSP will pay Service Tax as applicable on submission of Invoices in accordance with Rule 4A (1) of Service Tax Rules 1994. The contractor will be paid Service Tax by RINL-VSP along with monthly service charge bills for further deposit with Central Excise Authorities. The contractor will, in turn, submit the documentary evidence in support of payment of Service Tax of each month along with subsequent month RA Bills.
11. ADVANCE: No advance of any sort will be given by VSP.
  12. PAYMENT TERMS: Payment will be made monthly on recommendations of the Engineer basing on the quantities executed, at accepted rates.
  13. MEASUREMENTS: The contractor shall take measurements jointly with the Engineer or his representative and keep joint records for the same. Bills shall be prepared and submitted by the contractor basing on agreed measurements.
  14. INITIAL SECURITY DEPOSIT (ISD): Initial Security Deposit for the work shall be @ 2% of contract price. Earnest Money Deposited by the successful tenderer shall be adjusted against ISD, and the difference between ISD and EMD shall be deposited in the manner mentioned in the work order/letter of intent.
  15. RETENTION MONEY: Retention Money for contracts up to a value of Rs. 100 lakhs, at the rate of 7.5% of the bills for works with defective liability period *not NIL* and at the rate of *5.0% for works with defective liability period "NIL"* will be deducted from each bill until this amount together with the Initial Security Deposit reach the limit of retention which is 7.5% or 5.0% as the case may be for the value of work. The Retention Money shall be released after the satisfactory completion of defect liability period after liquidating the defects. For contracts of value above Rs.100 Lakhs, the limit of retention money shall be Rs.7.5 lakhs plus 5% of the value exceeding Rs.100 lakhs.
  16. Security Deposit: : The Public Sector Enterprises or State/Central Government Undertakings/ MSEs shall be required to submit a "Performance Guarantee Bond" of requisite value in the prescribed proforma in lieu of Security Deposit covering the period of contract + defect liability period + 6 months (Claim period). It may be noted that waiver of Security Deposit is permitted only up to the monetary limit as specified in the proof of enlistment for which the unit is registered for MSEs.
  17. Recovery of income tax at source will be made from contractor's bill and deposited with Income Tax Department as per rules. Recovery of sales tax applicable shall be made from the contractor's bills.
  18. SAFETY:
    - a) The contractor and his workers must strictly take all safety precautions and shall supply to his workers dependable safety appliances like hand gloves, safety boots, safety belt, safety helmets, duster cloth, dust mask/nostril filter etc. In addition to this, contractor shall also provide additional safety appliances as per requirement and follow safe working practices like using fully insulated electrode holders etc. He shall also ensure that his workmen intelligently use only dependable safety appliances supplied to them.
    - b) The contractor shall take adequate safety precaution to prevent accidents at site. The contractor shall also ensure that his employees observe the statutory safety rules and regulations and also those laid down by the employer from time to time and promptly submit report of accident and state the measures taken by him to prevent their recurrence and also keep the employer indemnified of all claims arising out of such accidents.
    - c) No Workmen shall be engaged on the work without proper safety induction and without using required PPE. Use of safety helmet and shoe is must excepting in painting works where shoe will not be used.
    - d) All the safety appliances required for safe working as decided by SED/Contract operating department shall be provided by the contractor to his workmen.
    - e) Clearance to start the job will be obtained by the contractor in form 'A&B' before start of work. The forms may be obtained from the dept. concerned.
    - f) Works at height cannot be started without clearance from Zonal Safety Officer. The workers engaged for work at height shall possess height pass from SED. The names of workmen working at height or in hazardous areas will be written on the body of form "B".
    - g) Contravention of any safety regulation of VSP in vogue from time to time will result into work stoppage, levying penalties and ultimately in contract termination. The list of safety violations category wise are as follows:

- I. Category-I of Safety Violations:  
Penalty amount: First offence Rs.100/-, 2<sup>nd</sup> or subsequent offences Rs.300/-
- (1) Occasional violation of not wearing crash helmet;
  - (2) Driver of two wheeler carrying more than one pillion rider;
  - (3) Wrong parking of vehicle.
- II. Category-II of Safety Violations (Minor Violations):  
Penalty amount: 1<sup>st</sup> violation Rs.2500/-, 2<sup>nd</sup> violation Rs.10,000/-, 3<sup>rd</sup> & subsequent violations Rs.20,000/-
- (1) Working at Height without Height-pass;
  - (2) Unauthorized entry at hazardous location;
  - (3) Engaging workers without safety training;
  - (4) Proper ladder/steps not provided for working;
  - (5) Failure to provide proper Shuttering at excavation works;
  - (6) Power connection taken from board without proper board plug;
  - (7) Fitness certification of cranes/hydra/heavy vehicles not available;
  - (8) Crane rope conditions not ok;
  - (9) Not wearing safety helmet/safety shoe at site;
  - (10) Safety goggles/Hand gloves not used;
  - (11) Gas cutting without goggle;
  - (12) Rolling/lifting of cylinder/dragging on the ground (without cage);
  - (13) Welding with non-standard holder;
  - (14) Welding machine earthing (double body earthing) not done;
  - (15) Gas hose pipe clamping done by wires;
  - (16) LPG cylinder date expiry/over;
  - (17) Loading/unloading of cylinder – cushion not given;
  - (18) Condition of hose pipe not good;
  - (19) Working with leaking cylinder;
  - (20) Using non-power cable instead of welding cable;
  - (21) Working without work permit/shut down;
  - (22) Not putting red flags/stoppers;
  - (23) Dismantling of structure without authorized plan;
  - (24) Unauthorized Oxygen/Nitrogen tapping;
  - (25) Not having proper gate passes/other area passes;
  - (26) Use of damaged slings/tools/ropes;
  - (27) Use of hand grinders/mixer machines without guard;
  - (28) Not reporting of accident;
  - (29) Taking shelter behind Electrical panel;
  - (30) Driving of heavy vehicles on the road during restricted hour;
  - (31) Truck side panel Broken/Not Ok;
  - (32) Dropping/Spillage of material on the road;
  - (33) No number plate on vehicle;
  - (34) No indicator light/brake light on vehicles;
  - (35) Driving Dangerously;
  - (36) Overloading of vehicles beyond CC weight;
  - (37) Racing and trials of speed, overtaking heavy vehicles;
  - (38) Moving vehicles in unauthorized restricted routes;
  - (39) Talking with cell-phone while driving;
  - (40) Truck carrying powdery material without Tarpaulin;
  - (41) Vehicles without Red flags/Red lights, side-guards & Donnage;
  - (42) Stock protruding out of the truck body;
- III. Category-III of Safety Violations (Major Violations):  
Penalty amount: 1<sup>st</sup> violation Rs.7,500/-, 2<sup>nd</sup> & subsequent violations Rs.15,000/-

- (1) Using bamboo or other non standard material for scaffolding;
- (2) Railing not given at platforms or opening of floor;
- (3) Scaffolding planks not tied properly;
- (4) Throwing/dropping of material from height;
- (5) Proper ladder/approach not given for working at height;
- (6) Walkway/Cross over not provided;
- (7) No barricading of excavated pits;
- (8) No top cover on power distribution board;
- (9) Sleeping under truck;
- (10) Absence of Supervisor at height-works, confined space jobs and other hazardous jobs;
- (11) Welding screen/Face shield, welder gloves not used;
- (12) Driving vehicles without valid driving licence;
- (13) Driving by an Drunken person.

IV. Category-IV of Safety Violations (High-Risk Violations): Penalty amount: Rs.15,000/-

- (1) Failure to use Full body harness with double lanyard;
- (2) Life line of Full body harness not anchored;
- (3) Floor opening left unguarded in the area of work;
- (4) Working at roof without daily permit;
- (5) Working in confined space without Confined-space work-permit;
- (6) Violation of electrical shutdown/PTW;
- (7) Violation of HOT work permit system

V. Category-V of Safety Violations: (The penalties will be imposed on agency in case the reasons to the accidents are attributable to the agency).

- (1) Serious injuries and permanent disabilities - Penalty amount: Rs.1,00,000/- or 2.5% of contract value whichever is less;
- (2) Fatal accident cases - Penalty amount: Rs.2,00,000/- or 10% of contract value whichever is less.

(1) The above penalties related to the accidents mentioned at Category (V) will be imposed on agency in case the reasons to the accidents are attributable to the agency.

(2) Independent of the above, the contractor shall be debarred or deregistered from taking up further contractual work in VSP in case any repeated fatal accident after 3<sup>rd</sup> incident for the reasons attributable to contractor.

Note: The penalties mentioned above are in addition to those which are applicable as per the Statutory Acts & Rules. In case of any imposed penalty by any statutory authority, the same shall be over and above the contractual clauses).

(3) Without prejudice to the right conferred for stoppage of work for violation of safety rules, the contractor shall be liable for penalty at the rates indicated above depending upon the category of violation.

(4) Operating authority will assess the penalty amount having regard to all the circumstances in particular in nature and gravity of the violation on the advice of Head of the Safety Engineering Department and will issue a show cause notice specifying therein the proposed penalty. Considering the cause shown by the contractor, if any, the operating authority shall pass final orders which shall then be binding on the contractor. The penalty amount shall be recoverable from any bill and / or EMD / Security Deposit of the contractor without any further reference to him.

h) "The contractor shall ensure that the Welders and Gas Cutters wear cotton dress and leather apron. They shall not wear nylon/synthetic dress. This is required to avoid any fire accident. This must be followed strictly".

19. SHUTDOWNS:
- A) Necessary shutdowns will be arranged by VSP to the contractor for carrying out the work based on requirement. No claims on account of delayed/prolonged shutdown will be entertained.
  - B) The works assigned to the contractor by the Engineer from time to time shall be completed within the time schedule fixed by the Engineer in each case, within the approved shutdown period.
20. LABOUR DEPLOYMENT:
- A) The contractor shall deploy his labour as per requirement and as instructed by the Engineer. It may be necessary to carryout the work round the clock based on requirement and shutdown provided. The contractor's rate shall cover such eventualities.
  - B) Only trained, experienced, safety inducted workers acceptable to the Engineer shall be engaged on this work, work shall be executed as per specifications to the satisfaction of the Engineer.
  - C) As and when need arises in the Annual works from time to time either for extra requirement of work or as a replacement in running contracts or a contract commencing for the first time, the contractor shall ensure that Displaced Persons (DPs) are engaged in unskilled category of workers to the extent of 50% (fifty percent). The contractor shall contract the Engineer-in-charge for this purpose.
  - D) **%As and when need arises in the annual works from time to time either for extra requirement of work or as a replacement in running contracts or a contract commencing for the first time in semi-skilled category, the contractor shall ensure the minimum qualification of ITI in the relevant field for such semi-skilled category of workers. The contractor will also ensure to engage 50% (Fifty percent) of such semi-skilled vacancies from Displaced Persons (DPs) category. The contractor shall contact the Engineer-in-charge (EIC) for this purposeö.**
  - E) The Contractor shall engage contract worker(s) who do not have any adverse record with respect to his character in the past. For this purpose, the character and antecedents of the proposed worker(s) whom the Contractor intended to engage, shall be got verified by the Police and report shall be submitted. Till such time the report is submitted, the proposed contract worker(s) will be given only provisional pass and the pass will be cancelled in case any adverse report is reported.
21. SECURITY REGULATIONS: The contractor shall abide by and also observe all security regulations promulgated from time to time by the employer.
22. STORING/STACKING OF MATERIALS: Storing/Stacking/Placing of materials shall be only at the places designated by the engineer.
23. The contractor, his supervisors and workmen shall observe entry and exit timings strictly.
24. After completion of work activity, the site has to be cleared of all debris, construction material and the like.
25. The successful tenderer shall start the work immediately after obtaining gate passes and safety induction training and clearance from the Employer.
26. NOTICES: Any notice to be given to the contractor under terms of the contract shall be considered duly served, if the same has been delivered to, left for or posted by registered post to the contractors principal place of business (or in the event of the contractor being a company, its registered office), at the site or to their last known address.
27. DEFAULT BY TENDERERS: The successful tenderer may be debarred at the discretion of the company, from issue of further tender documents, work orders etc., for a specified period to be decided by the employer in case of :  
"Undue delay in starting and execution of work awarded, poor performance, backing out from the tender, non accepting work order/LOI during the validity of tender or non observance of safety rules and regulations, misappropriation of company's materials/property, non payment of due wages to labour or such similar defaults".
28. Successful tenderer should be in a position to produce the Original Certificate in support of the attested copies of relevant documents enclosed along with pre-qualification documents or afterwards, after opening of the Price Bids.
29. Failure to produce the original certificates at this stage in support of the attested copies of PF Registration/ITCC/Electrical License/Experience/Qualification any other documents etc., submitted

earlier would result in disqualification and forfeiture of EMD and also liable for debarring from participation in VSP tenders.

30. If it comes to the notice of VSP at any stage right from request for registration/tender document that any of the certificates/documents submitted by applicant for registration or by bidders are found to be false/fake/doctored, the party will be debarred from participation in all VSP tenders for a period of 05 (FIVE) YEARS including termination of Contract, if awarded. EMD / Security Deposit etc., if any, will be forfeited. The Contracting Agency in such cases shall make good to VSP any loss or damage resulting from such termination. Contracts in operation any where in VSP will also be terminated with attendant fall outs like forfeiture of E.M.D. / Security Deposit, if any, and recovery of risk and cost charges etc. Decision of V.S.P. Management will be final and binding.
31. Failure to execute the work after LOI/WORK ORDER is given, will make the party liable for debarring for a period of 2 (TWO) YEARS.
32. In case it is found before/after award of work to the person/agency through Limited Tender Enquiry (LTE) that the same person/agency is proprietor/proprietress/partner of two or more separate agencies and quoted for the same work, then punitive action to the extent of debarring up to 02 (Two) years from participating in VSP tenders will be taken.
33. In case the Tenderers revoke/withdraw/cancel their tender or they vary any terms of their tender during the validity period of the tender without the written consent of Visakhapatnam Steel Plant (VSP) or in the event of VSP accepting their tender and fail to deposit the required security money, execute the Agreement and fail to start the work within reasonable time (to be determined by the Engineer) after written acceptance of their tender – EMD submitted by them will be forfeited by VSP.
34. Contractor shall note that:
- i) Time for mobilization after issue of FAX Letter of Intent/detailed Letter of Intent / Work Order shall be;
    - a. 03 (Three) days for Capital Repairs
    - b. 15 days for Civil Works
    - c. 60 days for painting works of Structural Engineering Department
    - d. 07 (Seven) days for Annual Mechanical, Electrical and works of technological assistance/cleaning.
  - ii) Re-starting the work after disruption shall be within 04 (Four) to 06 (Six) hours after the cause of disruption is removed as decided by the HOD.
  - iii) Notice period for Contract Termination shall be - 03 (Three) hours in the event of breakdowns, 02 (Two) days in Capital Repairs and 10 days in other works.
- Failure to adhere to above stipulations may result in Termination of contract at risk & cost and will make the party liable for debarring for a period o 2 (Two) years.*
35. Agencies are required to submit Bank Guarantee for the value as decided by the Engineer as a Security while taking out Equipment/Components/materials of VSP to their workshop situated outside the VSP premises for carrying out repairs.
36. In case of revision in RINL / VSP approved wage rate, consequent to the revision in the minimum wages (either in Basic Wage or Living Allowances) as notified by the Regional Labour Commissioner (Central), Hyderabad, Escalation amount to the contract shall be payable as per the following formula:

$$V = \frac{L \times W \times (X - X_o)}{X_o}$$

WHERE:

- V= Escalation Payable
- L= Labour Content during billing period
- W= Gross value of work done on the basis of Contract Rates for the period for which variation is applicable
- X= Revised Weighted Average of RINL/VSP approved Rates for the period for which variation is applicable (for Unskilled, Semi-skilled and Skilled categories of Workers) based on the minimum wages as notified by the ALC (Central), Hyderabad, for the period under consideration for that contract as per present man days of different categories for the billing period.
- Xo = Existing (on the basis which tender estimate prepared) Weighted average of VSP approved rates (for Unskilled, Semi-skilled and Skilled categories of Workers and which is based on the Minimum Wages notified by Commissioner of Labour, Govt. of Andhra Pradesh, Hyderabad) for that contract as per present man days of different categories for the billing period.



Computation of X and Xo & L :

$$\begin{aligned}X &= (a*USR + b*SSR + c*SKR)/(a+b+c) \\Xo &= (a*USRo + b*SSRo + c*SKRo) / (a+b+c) \\L &= (a*USRo + b*SSRo + c*SKRo) / W\end{aligned}$$

Where

a= man days present by USW during the billing period  
b= man days present by SSW during the billing period  
c= man days present by SKW during the billing period

USR= Revised VSP approved Rate for USW at the time of billing  
SSR= Revised VSP approved Rate for SSW at the time of billing  
SKR= Revised VSP approved Rate for SKW at the time of billing

USRo= VSP approved Rate for USW indicated based on which the Estimate of work was prepared,  
SSRo= VSP approved Rate for SSW indicated based on which the Estimate of work was prepared,  
SKRo= VSP approved Rate for SKW indicated based on which the Estimate of work was prepared,

(The above escalation shall be independent of the award percentage whether positive or negative)

37. PAYMENT OF MINIMUM WAGES:

37.1. *Wages paid to the workmen by the contractor should not be less than the rates notified by the Regional Labour Commissioner (Central), Hyderabad, from time to time with regard to the minimum wages applicable to the respective categories of workmen plus the ad-hoc amount at the rate of ₹.11.54ps as per working day per workman per category. Wages with ad-hoc amount to the workmen should be paid on or before the 7<sup>th</sup> of the subsequent month. if 7<sup>th</sup> falls on a holiday or weekly off day, the payment should be made one day prior to that. Payment of PF for the month, both the employer's (in this case contractor) and employee's (in this case workmen employed by the contractor) contributions should be deposited in the bank in the permanent PF code number and challan obtained before the 15<sup>th</sup> of the subsequent month and forwarded to the Engineer". In case of failure of the contractor to comply with any of the above, the following action will be taken by VSP.*

1a) Lapse ———Payment of wages at rates less than those notified under the minimum wages.

Action by VSP ———An amount equivalent to the differential amount between wages to be paid under minimum wages notification of the Government applicable for the period less actual wages paid shall be recovered from the bills as certified by the engineer.

b) Lapse ———Non payment of adhoc amount

Action by VSP ———An amount equivalent to actual payable towards adhoc amount to the workmen engaged for relevant period shall be recovered from the bills as certified by the Engr.

2) Lapse ———Non payment of wages

Action by VSP ———An amount equivalent to wages payable by the contractor applicable for the relevant period shall be recovered from the bills as certified by the Engineer.

3) Lapse ———Non payment of PF

Action by VSP ———Recovery of PF amount and an amount equivalent to maximum penalty leviable by Regional Provident Fund Commissioner for the delayed period under the

provisions of ERP & MP Act and Rules for delayed remittance of PF contributions (both the employee's and employer's contribution), shall be recovered from the bills of contractor as certified by Engineer.

4) Lapse ———Delayed payment of PF

Action by VSP ——— An amount equivalent to maximum penalty leviable by Regional provident Fund Commissioner for the delayed period under the provisions of EPF & MP Act and rules for delayed remittance of PF contributions (both the employee's and employer's contribution), shall be recovered from the bills of the contractor as certified by Engineer.

37.2. The contractor shall have to pay WELFARE ALLOWANCE (earlier known as SMA, ASMA) towards fuel charges, food, milk, tiffin, coconut water, washing allowance etc @ ₹.80.76ps per day of actual attendance of each worker deployed in the contract not exceeding ₹.2100/- per month in addition to the wages as indicated in the minimum wages clause of Special Conditions of Contract . The contractor will submit his claim with proof of such payment made in this connection in the RA Bill and the same amount will be reimbursed/paid to him.

37.2.1. It may be noted that the payment of WELFARE ALLOWANCE is towards the expenditure incurred by the contract labour towards Fuel Charge, Coconut Water Allowance, Washing Allowance, Food/Milk/Tiffin Allowance.

37.2.3. The contractor is required to take the above aspects into consideration while submitting their offers and no profit/overhead charges will be paid by VSP on this account.

37.2.4. As regards applicability of payment of WELFARE ALLOWANCE, the contractor may refer NIT/Terms & Conditions of the contract in this regard.

37.3. (a) **Penalty for delayed payment / non-payment of wages:**

If the contractor fails to pay wages within the stipulated time ie., by 7<sup>th</sup> working day of the subsequent month, a penalty up to 1% of the gross wages (Basic, DA & Over time (if any) except Adhoc, SMA, ASMA and other allowances) of the workers will be levied for every day of lapse subject to a maximum of 10% in any calendar month. This is without prejudice to appropriate action against the contractor including debarring, in case of perpetual / habitual default".

(b) **Payment of wages through banks:**

The contractor shall pay wages not less than the minimum wages notified by the appropriate Government from time to time to the workers deployed by him. The payment shall be made on the due dates either by way of crossed cheques or crediting the wages to the bank accounts of the concerned contract workers. Proof of such payment shall be submitted by the contractor to the Engineer Incharge by 10<sup>th</sup> of the subsequent calendar month.

38. The contract period can be extended at the discretion of V.S.P. up to 04 (Four) months at the existing Rates, Terms and conditions and the Contractor shall be bound to execute the work accordingly and the offer of the Contractor is deemed to include this aspect.

39. The tenderers shall note that in case of quoting above the Estimated Value of V.S.P. the L-1 party shall furnish logical / satisfactory explanation which V.S.P. may seek if felt necessary for quoting such high rates. If the explanation offered by the L-1 party is not acceptable to V.S.P., the L-1 party may be recommended for disqualification while retendering the work.

40. The contractor should clearly understand and comply with the Factories Act 1948 and relieve the FEMALE WORKERS from their work site within the restricted working hours prescribed therein under section 66(b).

41. The following deductions per workman deployed category-wise shall be made from the bills/amounts due to the contractor as applicable for the work done and such deducted amounts shall be released as mentioned below:

1) Component ——— Notice pay  
Recovery amount per labour per every working day —  
USK —Rs.23.68ps, SSK —Rs.26.77ps, SK —Rs.31.49ps

2) Component ——— Retrenchment compensation

Recovery amount per labour per every working day —  
 USK —Rs.11.84ps, SSK —Rs.13.39ps, SK —Rs.15.75ps

- 3) Component ——— Leave with wages  
 Recovery amount per labour per every working day  
 USK —Rs.14.57ps, SSK —Rs.16.48ps, SK —Rs.19.38ps

To be released when ——— After the contractor makes payment to the work men in the presence of Engineer Incharge and CLC representatives, a certificate to this effect is to be enclosed with pre-final bill (to be paid with pre-final bill).

Sub-total -  
 USK —Rs.50.09ps, SSK —Rs.56.64ps, SK —Rs.66.62ps

- 4) Component ——— Bonus  
 Recovery amount per labour per every working day  
 USK —Rs.11.55ps, SSK —Rs.11.55ps, SK —Rs.11.55ps

To be released when ——— After the contractor makes the payment to the workmen in the presence of Engineer Incharge and CLC representatives, a certificate to this effect is to be enclosed with RA bill / pre-final bill (to be paid with RA bill / pre-final bill as and when paid by the contractor).

GRAND TOTAL  
 USK —Rs.61.64ps, SSK —Rs.68.19ps, SK —Rs.78.17ps  
 10% towards profit and over heads of contractor  
 USK —Rs.06.16ps, SSK —Rs.06.82ps, SK —Rs.07.82ps  
 Total recovery amount  
 USK —Rs.67.80ps, SSK —Rs.75.01ps, SK —Rs.85.99ps

Note:

- i) The above recovery rates are effective from 01/10/2014. In case of any statutory revision in minimum wages payable to contract workmen as notified by the Regional Labour Commissioner (Central), Hyderabad from time to time, the above recovery amounts for workmen category-wise will be revised by RINL/VSP and will be notified accordingly.
- ii) Payment against the above component is to be made to the workmen based on effective wages of last drawn pay.

42. PAYMENT MODE FOR BILL AMOUNTS:

42.1 Following are the options available to the Contractors for availing e-payments.

42.1.1 EFT System: Under this system Banks offer their customers money Transfer service from account of any bank branch to any other Bank Branch. The EFT system presently covers all the branches of about 77 banks located at 15 centers indicated below, where clearing houses are managed by RBI i.e.,

i) New Delhi ii) Chandigarh iii) Kanpur iv) Jaipur v) Ahmedabad vi) Mumbai vii) Nagpur viii) Hyderabad ix) Bangalore x) Chennai xi) Trivendrum xii) Kolkata xiii) Bhubaneswar xiv) Guwahati xv) Patna.

42.1.2 Direct Credit: Suppliers opting for this system may open Bank accounts with any one of the following banks.

- |      |                         |   |                             |
|------|-------------------------|---|-----------------------------|
| i)   | State Bank of India     | - | Steel Plant Branch          |
| ii)  | Canara Bank             | - | Steel Plant Branch          |
| iii) | Bank of Baroda          | - | Steel Plant Branch          |
| iv)  | State Bank of Hyderabad | - | Steel Plant Township Branch |
| v)   | Andhra Bank             | - | Steel Plant Township Branch |

- vi) UCO Bank - Steel Plant Township Branch
- vii) IDBI - Visakhapatnam Branch

42.2 The Successful tenderer shall agree that all the payment due and payable in terms of the contract will be paid direct to his bank account and he shall give the bank account number and the address of the Bank in which the money is to be deposited" as per the format given below:

- (1) Vendor Code :
- (2) Option : RTGS / EFT
- (3) Beneficiary Details
  - a) Name of Beneficiary (Max.35 characters) :
  - b) Bank Name (Max. 35 characters) :
  - c) Branch Name (Max. 35 characters) :
  - d) Account Number (Max. 35 characters) :
  - e) Account type (Max. 35 characters) :  
(Savings / Current / Overdraft) [Mention Code No. also]
  - f) Beneficiary Bank's IFSC Code (Max. 11 characters):  
(For RTGS Mode only)
  - g) Beneficiary Bank's MICR Code (Max.09 characters):  
(For EFT Mode only)

(Signature of the Party / Contractor)

Name:

Desgn:

#### CERTIFICATE

Certified that the above particulars are found to be correct and matching with our records in respect of the above beneficiary.

Sd/-.....

(Signature of Branch Manager)

Name :

Seal of Bank :

42.3 The contractor has to submit their bank account details in VSP format duly certified by Concerned Bank Manager for the purpose of making electronic payment before submission of First Running Account Bill, failing which the bill will not be processed.

42.4. The Successful tenderer is required to give an undertaking to the Finance Department of VSP that the payment made by RINL/ VSP of any sum due to him by directly remitting the same in his bank, the address and the number of which is to be furnished, shall be in full discharge of the particular bill raised by him, and that he shall not have any claim in respect of the same".

42.5 *In respect of payment made through Electronic Fund Transfer mechanism or Direct Credit to the supplier's/contractor's bank account, the supplier/contractor/receiver should intimate discrepancies, if any, within 10 days from the date of dispatch of intimation letter of payment to them to Finance Department of VSP failing which it shall be presumed that the funds have reached to their bank account and that no claims will be entertained after the said 10 days.*

43. CLAUSES CONCERNING CENVAT AGAINST EXCISE DUTY:

- a) The tenderer shall specify the percentage of CENVAT benefit on quoted price for which they shall furnish the duty paying documents.
- b) The successful tenderer shall take necessary steps to comply with the rules and provisions of central excise and service tax law facilitating VSP to avail CENVAT credit.

- c) The amount of CENVAT benefit declared shall be deducted from the tendered price for the purpose of tender evaluation i.e. the evaluation shall be on the net of CENVAT benefit.
  - d) The invoice raised by the Contractor should clearly mention VSP as the consignee (Consignee: RINL, VSP, A/c: Name of the contractor). It should be ensured that material has been delivered along with the duplicate for transporter copy of the invoice, based on which CENVAT credit is to be claimed.
  - e) The duty paying documents shall be submitted as soon as the material is procured by the agency for incorporation in the work. The CENVAT benefit offered by the agency will be deducted from each bill on the offered percentage basis and will be released to the extent CENVAT benefit could be availed by VSP. The contractor shall extend all possible help to facilitate VSP to avail CENVAT benefit. If CENVAT benefit could not be availed by VSP due to reasons attributable to the contractor, such amount will not be released by VSP.
  - f) In the event the CENVAT benefit realized by VSP (based on documents) is in excess of the CENVAT benefit offered by the agency/contractor, the refund will be restricted to the benefit offered by the agency. The excess amount realized from Excise Authorities will be to the credit of VSP only.
  - g) Material once received in to the factory would not be allowed to go outside the factory premises for any reason. Excess/Rejected material will be allowed to be taken back after complying with the provisions of CE Act.
44. RINL reserves the right to reject the offers of tenderers whose performance is poor in awarded / ongoing works if any.

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**(This undertaking has to be printed on the letter head of the agency, sign, scan the same and upload in the Tech RFx folder)**

## **UNDERTAKING LETTER**

To  
Deputy General Manager (WC) I/C  
Works Contracts Department  
Visakhapatnam Steel Plant  
Visakhapatnam-530 031.

Name of work: **MECHANICAL MAINTENANCE OF NEW DM PLANT**

RFx No. **2600000120**

Sir,

With reference to the Notice Inviting Tender, I/We have gone through the tender documents downloaded from SRM Portal. I/We have also gone through the General Conditions of Contract of VSP available in VSP web site and noted the contents therein. I/We hereby confirm that I/We shall abide by the Terms and Conditions and General Conditions of the Contract including Form of Tender, Invitation to Tender, Articles of Agreement etc. I/We hereby declare that, I/We have visited, inspected and examined the site and its surroundings and satisfied ourselves before submitting this tender, obtained information about the nature of work, facilities that may be required and obtained necessary information about Working Conditions, risk contingencies etc., which may influence this tender. We hereby offer to execute & maintain the work during the defect liability period in conformity with the tender conditions at the respective rates quoted by us.

I/We have deposited the Earnest Money Deposit (EMD), which amount is not to bear any interest and I/We do hereby agree that this sum shall be forfeited by me/us if I/We revoke/withdraw/cancel my/our tender or if I/We vary any terms in our tender during the validity period of the tender without your written consent and/or if in the event of Visakhapatnam Steel Plant accepting my/our tender and I/We fail to deposit the required security money, execute the Agreement and/start the work within reasonable time (to be determined by the Engineer) after written acceptance of my/our Tender.

**SIGNATURE OF THE TENDERER**