

बिड दस्तावेज़ / Bid Document

बिड विवरण/Bid Details	
बिड बंद होने की तारीख/समय /Bid End Date/Time	15-12-2025 12:00:00
बिड खुलने की तारीख/समय /Bid Opening Date/Time	15-12-2025 12:30:00
बिड पेशकश वैधता (बंद होने की तारीख से)/Bid Offer Validity (From End Date)	120 (Days)
मंत्रालय/राज्य का नाम/Ministry/State Name	Ministry Of Steel
विभाग का नाम/Department Name	Steel Authority Of India Limited
संगठन का नाम/Organisation Name	Rourkela Steel Plant
कार्यालय का नाम/Office Name	Contract Cell Works Office
वस्तु श्रेणी /Item Category	Testing Service for On-Board /Commissioned Equipment/ Instrument related to Plant - Residual life assessment of hot metal handling cranes of SMS-I; as per scope of work; as per scope of work
अनुबंध अवधि /Contract Period	1 Year(s)
बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का) /Minimum Average Annual Turnover of the bidder (For 3 Years)	49 Lakh (s)
टर्नओवर के लिए एमएसई को छूट प्राप्त है / MSE Exemption for Turnover	Yes Partial Turn over value - 41.65 (in lakhs)
टर्नओवर के लिए स्टार्टअप को छूट प्राप्त है / Startup Exemption for Turnover	Yes Partial Turn over value - 41.65 (in lakhs)
विक्रेता से मांगे गए दस्तावेज़/Document required from seller	Bidder Turnover,Certificate (Requested in ATC),Additional Doc 1 (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
क्या आप निविदाकारों द्वारा अपलोड किए गए दस्तावेजों को निविदा में भाग लेने वाले सभी निविदाकारों को दिखाना चाहते हैं? संदर्भ मेनू है/Do you want to show documents uploaded by bidders to all bidders participated in bid?	No
बिड लगाने की समय सीमा स्वतः नहीं बढ़ाने के लिए आवश्यक बिड की संख्या / Minimum number of bids required to disable automatic bid extension	3

बिड विवरण/Bid Details	
दिनों की संख्या, जिनके लिए बिड लगाने की समय-सीमा बढ़ाई जाएगी। / Number of days for which Bid would be auto-extended	7
ऑटो एक्सटेंशन अधिकतम कितनी बार किया जाना है। / Number of Auto Extension count	1
बिड से रिवर्स नीलामी सक्रिय किया/Bid to RA enabled	Yes
रिवर्स नीलामी योग्यता नियम/RA Qualification Rule	H1-Highest Priced Bid Elimination
बिड का प्रकार/Type of Bid	Two Packet Bid
तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय /Time allowed for Technical Clarifications during technical evaluation	4 Days
मूल्यांकन पद्धति/Evaluation Method	Total value wise evaluation
मध्यस्थता खंड/Arbitration Clause	No
सुलह खंड/Mediation Clause	No

ईएमडी विवरण/EMD Detail

आवश्यकता/Required	No
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ईपीबीजी विवरण /ePBG Detail

आवश्यकता/Required	No
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बोली विभाजन लागू नहीं किया गया/ Bid splitting not applied.

एमआईआई अनुपालन/MII Compliance

एमआईआई अनुपालन/MII Compliance	Yes
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एमएसई खरीद वरीयता/MSE Purchase Preference

एमएसई खरीद वरीयता/MSE Purchase Preference	Yes
सूक्ष्म और लघु उद्यम मूल उपकरण निर्माताओं को खरीद में प्राथमिकता, यदि उनका मूल्य $L1+X\%$ तक की सीमा में हो / Purchase Preference to MSE OEMs available upto price within $L1+X\%$	15

<p>सूक्ष्म और लघु उद्यम को खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Maximum Percentage of Bid quantity for MSE purchase preference</p>	100
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1. If the bidder is a Micro or Small Enterprise (MSE) as per latest orders issued by Ministry of MSME, the bidder shall be exempted from the eligibility criteria of "Bidder Turnover" as defined above subject to meeting of quality and technical specifications. If the bidder itself is MSE OEM of the offered products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. The bidder seeking exemption from Turnover, shall upload the supporting documents to prove his eligibility for exemption.
2. If the bidder is a DPIIT registered Startup, the bidder shall be exempted from the the eligibility criteria of "Bidder Turnover" as defined above subject to their meeting of quality and technical specifications. If the bidder is DPIIT Registered OEM of the offered products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. The bidder seeking exemption from Turnover shall upload the supporting documents to prove his eligibility for exemption.
3. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.
4. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference for services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered service. If L-1 is not an MSE and MSE Service Provider (s) has/have quoted price within L-1+ 15% of margin of purchase preference /price band as defined in the relevant policy, then 100% order quantity will be awarded to such MSE bidder subject to acceptance of L1 bid price. The buyers are advised to refer to the [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if the credentials of the service provider are validated on-line in GeM profile as well as validated and approved by the Buyer after evaluation of submitted documents.
5. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.
6. Reverse Auction would be conducted amongst all the technically qualified bidders except the Highest quoting bidder. The technically qualified Highest Quoting bidder will not be allowed to participate in RA. However, H-1 will also be allowed to participate in RA in following cases:
 - i. If number of technically qualified bidders are only 2 or 3.
 - ii. If Buyer has chosen to split the bid amongst N sellers, and H1 bid is coming within N.
 - iii. In case Primary product of only one OEM is left in contention for participation in RA on elimination of H-1.
 - iv. If L-1 is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE L-1
 - v. If L-1 is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII L-1

अतिरिक्त योग्यता /आवश्यक डेटा/Additional Qualification/Data Required

Buyer to upload detailed list of equipments/samples, tests to be conducted and technical specifications of equipment/sample to be tested:[1764396971.pdf](#)

Payment Terms:[1764397064.pdf](#)

Buyer to provide price bifurcation format in which Service Provider will submit the breakup of the lumpsum cost quoted.:[1764397069.pdf](#)

Testing Service For On-Board /Commissioned Equipment/ Instrument Related To Plant - Residual Life Assessment Of Hot Metal Handling Cranes Of SMS-I; As Per Scope Of Work; As Per Scope Of Work (1)

तकनीकी विशिष्टियाँ /Technical Specifications

विवरण/ Specification	मूल्य/ Values
कोर / Core	
Type of tests required	Residual life assessment of hot metal handling cranes of SMS-I
Details of tests required	as per scope of work
Eligible Testing Lab	as per scope of work
Testing location	Hybrid (to be detailed in scope of work)
Time within which samples/instruments need to be tested once provided by buyer	as per scope of work
Reports required	as per scope of work
एडऑन /Addon(s)	

क्रेता द्वारा निर्धारित न्यूनतम मूल्य/Minimum Floor Price defined by Buyer

क्रेता द्वारा निर्धारित न्यूनतम मूल्य/Minimum Floor Price defined by Buyer	No
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अतिरिक्त विशिष्टि दस्तावेज़ /Additional Specification Documents

प्रेषिती/रिपोर्टिंग अधिकारी /Consignees/Reporting Officer and Quantity

क्र.सं./S.No.	प्रेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	संसाधनों की मात्रा / Quantity	अतिरिक्त आवश्यकता /Additional Requirement
1	Rama Chandra Subudhi	769011,Contract Cell (Works) Office of GM I/c, CC(W), Near administrative Building , SAIL, Rourkela Steel Plant , Rourkela-769011	1	N/A

क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें/Buyer Added Bid Specific Terms and Conditions

1. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

ITEM	ACTIVITY NUMBER	DESCRIPTION AND SCOPE OF WORK	UNIT	QTY
10	4002191419	<p>RESIDUAL LIFE ASSESSMENT (RLA) FOR LIQUID METAL HANDLING EOT CRANE OF 100T CAPACITY (4 GIRDERS)</p> <p>1.THE VENDOR HAS TO ASSESS THE RESIDUAL LIFE OF CRANES AND SUBMIT DETAILED REPORT AS FOLLOWS:</p> <p>i. VISUAL INSPECTION REPORTS ii. PHOTOGRAPHS iii. NDT REPORTS iv. VIBRATION & NOISE ANALYSIS REPORTS v. STRAIN GAUGE REPORTS vi. THERMOGRAPHY REPORT vii. FINITE ELEMENT METHOD (FEM) REPORT viii. RESIDUAL LIFE ix. RECOMMENDATIONS.</p> <p>REPORTS SHALL BE ISSUED IN PDF FORM (HARD & SOFT COPIES) WITH COMPANY SEAL & WITH AUTHORIZED SIGNATURES.</p> <p>THE DETAILED METHODOLOGY OF CHECKING & ASSESSING ARE:</p> <p>A) LIFTING EQUIPMENT EOT CRANE (VISUAL INSPECTION, FUNCTIONAL TEST AND LOAD TEST):</p> <ul style="list-style-type: none"> · THOROUGH EXAMINATION; · PREVIOUS CERTIFICATE/DOCUMENTS REVIEW; (DESIGN REVIEW NOT INCLUSIVE) · WITNESS LOAD TEST "IF REQUIRED" (REQUIRED TEST LOAD WILL BE MADE AVAILABLE BY RSP); · WITNESS FUNCTIONAL TEST INCLUDING PERFORMANCE TEST TO VERIFY THE SAFETY DEVICES (IF ANY); · REVIEW OF NDT REPORT (IF ANY); · ISSUANCE OF INSPECTION CERTIFICATE AND CONDITIONAL ASSESSMENT REPORT. <p>B) THOROUGH CHECK SAFETY DEVICES INCLUDE/CRANE CONDITION SURVEY:</p> <ul style="list-style-type: none"> · OVERLOAD PROTECTION DEVICES, · STORM LOCKS, · PARKING DEVICES, · EMERGENCY · WARNING LIGHTS, · WARNING BELLS, · WARNING TAGS AND SIGNS, · METERS, WIRE ROPES, 	EA	3

- LOAD CHAINS,
- BRAKES,
- COVERS OF ROTATING EQUIPMENT,
- BUFFERS, LIMIT SWITCHES,
- FIRE EXTINGUISHERS,
- WALKWAYS, RAILINGS,
- LADDERS,
- SERVICE PLATFORMS,
- CABIN CONNECTIONS, RUNWAY STOPS.

C) THOROUGH EXAMINATION OF STRUCTURE:

- WHEELS FOR ANY PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED, BOGIES FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- ALL GEAR BOXES FOR ANY LEAKS IN GEAR BOXES, PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- THE TROLLEY GIRDER WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- ALL BRACES / TIE RODS (FORESTAY), MEMBERS WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- THE MACHINE HOUSE WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- HOIST WINCH IN THE MACHINE ROOM WILL BE INSPECTED & VERIFIED FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE, PROPER SPOOLING OF THE WIRE ROPE & FUNCTIONALITY WILL BE CHECKED,
- MAIN TROLLEY AND CATENARY TROLLEYS WILL BE INSPECTED & VERIFIED FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE.
- CABLE AND HOSE REELS WILL BE CHECKED PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE & FUNCTION TEST WILL BE DONE.
- THE WHOLE TROLLEY RAIL WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- ALL THE SHEAVES AND PULLEYS, WILL BE CHECK FOR

ANY ANOMALIES.

- ALL SERVICE CRANES (EOT CRANE, JIB CRANE WILL BE THOROUGHLY EXAMINED FOR GENERAL CONDITION & FUNCTIONALITY WILL BE VERIFIED,

D) FUNCTIONAL CONDITIONS BY RUNNING TEST WITHOUT LOADING (OPERATOR FOR RUNNING THE CRANE WILL BE PROVIDED BY RSP).

- VISUAL EXAMINATION OF THE GANTRY TRAVELING, TROLLEY TRAVELING AND HOISTING MOTION CONDITIONS.

- VISUAL EXAMINATION OF THE GANTRY/TROLLEY WHEELS RUNNING CONDITIONS ON THE RAIL (OSCILLATION AND ALIGNMENT).

- CHECK THE TRAVELING LIMIT SWITCHES FUNCTIONAL CONDITIONS.

- CHECK THE E-STOP AND WARNING DEVICES FUNCTIONAL.

- VISUAL EXAMINATION OF THE MOTION PARTS TO CHECK FOR ANY INTERFERENCE.

- CHECK THE MECHANICAL / ELECTRICAL COMPONENTS FOR ANY ABNORMAL NOISE DURING THE TESTING.

- CHECK THE FUNCTIONAL CONDITIONS OF THE CONTROLLER.

- CHECK MOTIONS SPEED CONTROLLING CONDITIONS.

- CHECK THE FUNCTIONALITY OF THE BRAKES.

E) PERFORMANCE CONDITIONS BY TESTING WITH THE RATED LOADING:

- VISUAL EXAMINATION OF THE STRUCTURE (INCLUDING ITS WELDS) LOAD PATH MEMBER AND FCM (FRACTURE CRITICAL MEMBER) CONDITIONS AT THE LOAD TESTING.

- SPOT CHECK THE GIRDER VERTICAL DEFLECTION AGAINST EXISTING "REPORT OF EXAMINATION".

- CHECK BRAKE'S PERFORMANCE AT THE LOAD TESTING.

- CHECK IF THE MECHANISM IS FREE OF OIL LEAKAGE DURING THE LOAD TESTING.

- CHECK FOR ABNORMAL NOISE IN REDUCER'S AT THE LOAD TESTING.

- CHECK IF MOTOR'S NOISE AND TEMPERATURE RISE IS ABNORMAL AT THE LOAD TESTING.

- SPOT CHECK IF POWER CABLE TEMPERATURE RISE IS ABNORMAL DURING THE LOAD TESTING.

- CHECK IF THERE IS ELECTRICAL OVER-CURRENT PHENOMENON AT THE LOAD TESTING.

- CHECK IF THE LOAD INDICATOR, OVER-LOAD PROTECTOR IS EQUIPPED ON THE EXISTING CRANE.

F) STRUCTURAL CONDITION SURVEY (COVERING WELDED, BOLTED AND RIVETED JOINTS):

- STRUCTURAL MEMBERS LIKE GIRDERS, END TRUCKS, BRIDGE DRIVE WHEEL, RUNWAY RAILS, BUMPERS, FOOT WALKS, TRAP DOORS, LADDERS, HAND RAILS, TROLLEY FRAME, MAINTENANCE CAGE, ETC. SHALL BE INSPECTED BOTH VISUALLY AND SUPPORTED BY NDT METHODS LIKE DPT & MPI OF WELD JOINTS. JOINT OF RAIL, ROPE CONTROL MECHANISM, SHEAVE BLOCK, BUFFERS, TROLLEY, ROPE PULLEY, WALK WAY SHALL ALSO BE INSPECTED.
- TROLLEY CONSISTS OF: TYPICAL JOINT OF GEAR, JOINTS OF SAFETY LUG, JOINT OF ROPE SHEAVE, TYPICAL JOINTS OF TROLLEY,

G) MECHANICAL SYSTEMS INSPECTION:

- CHECK THE MAIN HOIST / BOOM HOIST SYSTEM IF THERE IS ANY ABNORMALITY WHEN RUNNING.
- CARRY OUT INSPECTION ON MOTOR / REDUCER / DRUM / COUPLING OF BOOM HOIST SYSTEM AND MAIN HOIST SYSTEM WHEN REMOVE THE COVER OF THE REDUCER AND DISMANTLE THE COUPLING.
- CHECK THE MECHANICAL MOTION PARTS (ROPE, GEARS AND REDUCERS) LUBRICATION CONDITIONS.
- CHECK THE MECHANICAL COMPONENTS WEAR CONDITIONS (BRAKE, GEAR, DRUM, ROPE, WHEEL).
- IDENTIFY ANY OIL LEAKAGE TRAILS ON THE CRANE.
- CHECK THE MECHANICAL BOLTING FIXTURE CONDITIONS (ROPE / RAIL CLAMPS, HOOK ASSEMBLY, ETC.)
- CHECK THE MECHANICAL COMPONENTS TO IDENTIFY IF THERE IS ANY DAMAGE OR COMPONENTS MISSING ON THE CRANE.
- CHECK THE SAFETY GUARD EQUIPMENT FOR MECHANICAL MOTION PARTS.
- REPORT ON FINDINGS.

H) NON-DESTRUCTIVE TESTING "NDT" (SUITABLE METHOD)

- THOROUGH VISUAL EXAMINATION
- DYE PENETRANT TESTING / MAGNETIC PARTICLE TESTING OF WELD JOINTS BASED ON DRAWING
- THERMOGRAPHY OF THE ELECTRICAL MOTORS, PANELS ETC
- VIBRATION ANALYSIS OF MOTOR, GEAR BOX ETC
- STRAIN GAUGE MEASUREMENT OF CRITICAL STRUCTURES
- REVIEW OF REPAIRS RECORDS (IF ANY);

- NDT SHALL BE CARRIED OUT AT THE DESCRIPTION OF THE SURVEYOR;
- ALL WELDMENTS/SPECIMENS SHALL BE CLEANED FROM PAINTS AND ANY IMPURITIES PRIOR TO THE TEST.

I) VIBRATION SURVEY

- VIBRATION CHECK ON FOUNDATIONS;
- VIBRATION CHECK ON GEAR BOXES;
- VIBRATION CHECK ON MOTORS;
- VIBRATION CHECK ON COUPLINGS;
- VIBRATION CHECK ON SHAFTS
- VIBRATION CHECK ON IMBALANCE;
- VIBRATION CHECK ON BEARING

J) NOISE SURVEY

- NOISE CHECK ON FOUNDATIONS;
- NOISE CHECK ON GEAR BOXES;
- NOISE ON CHECK ON MOTORS;
- NOISE CHECK ON COUPLINGS;
- NOISE CHECK ON IMBALANCE;
- NOISE CHECK ON BEARINGS.
- NOISE CHECK ON CONTROL ROOM;
- NOISE CHECK ON OPERATOR CABIN.

K) TEMPERATURE SURVEY BY THERMOGRAPH

- ELECTRICAL PANEL INSPECTION THROUGH INFRARED THERMOGRAPHY CAMERA.
- VISUAL EXAMINATION THROUGH INFRARED THERMOGRAPHY CAMERA;
- DETECTION OF THERMOGRAPHY ANOMALIES AND MEASUREMENT OF THE SURFACE TEMPERATURE;
- ANALYSIS OF IMAGES;
- REPORTING

THE FOLLOWING OUTLINES THE STEPS OF THE SURVEY :

- MEETING WITH APPROPRIATE STAFF ON SITE AND REVIEW THE SERVICE ORDER COVERING WHAT WILL BE INSPECTED, WHO WILL ACCOMPANY THE THERMOGRAPHY, PERMIT TO WORK, AND WHAT TYPE OF REPORTING IS EXPECTED .
- PREPARATION FOR INSPECTION WITH THE DESIGNATED STAFF MEMBER OR ELECTRICAL CONTRACTOR. PANELS TO BE REMOVED TO PREPARE ACCESS TO COMPONENTS.
- EACH TYPE OF COMPONENT TO BE DISCUSSED TO DETERMINE HOW IT WILL BE INSPECTED. TO DETERMINE (WITH CLAMP ON AMMETER) THAT ELECTRICAL CIRCUITS ARE OPERATING AT 50% OF RATED LOAD OR MORE, IF POSSIBLE.
- COMPONENTS (BUS BARS, CABLE TERMINATIONS, AC B'S ...), ONCE EXPOSED AFTER SCREENS/COVERS REMOVAL, WILL BE INSPECTED

D WITH INFRARED CAMERA.
DETAILED RECORDS OF LOAD READING TO BE KEPT AS WELL AS TEMPERATURE MEASUREMENTS, AND ALL INFRARED IMAGES OF ANY SUSPECT COMPONENTS FOUND.
· REPORTING.

L) HARDNESS TEST WHERE APPLICABLE
INDENTATION HARDNESS. THIS HARDNESS TYPE REFERS TO THE RESISTANCE TO PERMANENT DEFORMATION WHEN SUBJECTING A MATERIAL TO A CONTINUOUS LOAD.
· REBOUND OR DYNAMIC HARDNESS;

M) DIMENSIONAL CHECK
THE DIMENSIONAL CHECK SHALL BE VERIFIED BY AS PER THE APPROVED DRAWING.
· SPAN LENGTH;
· SPAN WIDTH;
· SPAN HEIGHT;
· LIFTING HEIGHT;
· RUNWAY LENGTH;
· WHEEL DIMENSIONS;
· RAIL SIZE

N) DEFLECTION
THE BRIDGE SHALL BE DESIGNED SO THAT THE VERTICAL DEFLECTION CAUSED BY THE SAFE WORKING LOAD AND THE WEIGHT OF THE HOIST IN THE CENTRAL POSITION SHALL BE MEASURED AND IT SHALL NOT EXCEED AS SPECIFIED BELOW:
· EOT CRANE: 1/750;
· GANTRY CRANE: 1/600;
· MONORAILS: 1/500 SIMPLY SUPPORTED BEAM;
· MONORAILS: 1/250 CANTILEVER;

O) RAIL ALIGNMENT
· TRACK STRAIGHTNESS
· LINE AND LEVEL SURVEYS

P) STRUCTURAL STABILITY ANALYSIS
THE FINITE ELEMENT METHOD (FEM), SOMETIMES REFERRED TO AS FINITE ELEMENT ANALYSIS (FEA), IS A NUMERICAL TECHNIQUE USED FOR FINDING THE APPROXIMATE SOLUTION TO THE COMPLEX ENGINEERING PROBLEMS. THE METHOD ESSENTIALLY CONSISTS OF ASSUMING THE PIECEWISE CONTINUOUS FUNCTION FOR THE SOLUTION AND OBTAINING THE PARAMETERS OF THE FUNCTIONS IN A MANNER THAT REDUCES THE ERROR IN THE SOLUTION. THE PROCESS OF REPRESENTING A PHYSICAL DOMAIN WITH FINITE ELEMENTS IS REFERRED TO AS MESHING, AND THE RESULTING SET OF ELEMENTS IS KNOWN AS THE FINIT

E ELEMENT MESH. THE FINITE ELEMENT METHOD CAN ANALYZE ANY GEOMETRY, AND SOLVES BOTH STRESSES AND DISPLACEMENTS WITH RESPECT TO THE KNOWN APPLIED LOAD MODEL

GENERATION FOR LEVEL 3 FEA ANALYSIS: -

- 3D CAD MODEL WILL BE AS PER THE 2D DRAWING PROVIDED. 3D MODEL WILL CONSIST OF GIRDERS, HOOK, WHEEL RELEVANT DETAILS.
- ACTUAL THICKNESS WILL BE MODELLED FOR THE ANALYSIS AS PER THE AVAILABILITY.
- 3D MODEL SIMPLIFICATION - 3D MODEL WILL CONSIST OF STRUCTURAL PART OF THE CRANES.
- FEA ANALYSIS WILL BE CARRIED OUT FOR THE DETAILS PROVIDED BY THE CLIENT.
- FEA ANALYSIS WILL BE CARRIED OUT AS PER DESIGN SPECIFICATION OR AS PER THE CODES I.S. 3177:1999, I.S. 807:2006 AND I.S. 800:2007
- FEA ANALYSIS WILL BE CARRIED OUT AS PER DETAILED DESIGN PROVIDED BY THE CLIENT.
- ALL STRUCTURAL PARTS WILL BE MODELLED FOR FEA ANALYSIS.
- ALL LOADS AND LOAD CASES WILL BE CONSIDERED FOR FEA ANALYSIS.
- REMAINING LIFE BASED ON FEM OUTPUTS

RSP SHALL PROVIDE ALL THE DESIGN DATA ALONG WITH DRAWINGS FOR EG. :

- RATED CAPACITY
- SELF WEIGHT OF CRANE
- SELF WEIGHT OF TROLLEY
- SPAN
- MAXIMUM WHEEL LOAD
- LONG TRAVEL SPEED
- CENTRE TO CENTRE OF TROLLEY WHEEL
- CROSS TRAVEL SPEED
- HOISTING SPEED ETC

RSP SCOPE

- TO PROVIDE THE REQUIRED DATA FOR ANALYSIS INCLUDING DRAWINGS
- PREVIOUS INSPECTION REPORT OF THE CRANES
- FAILURE HISTORY IF ANY
- ALL THE LOADS REQUIRED FOR PERFORMING THE ASSESSMENT.
- CRANE OPERATOR, CLIENT COORDINATOR AND UNSKILLED LABOURS HAS TO BE PROVIDED.
- WORK PERMITS TO PERFORM THE SITE INSPECTION ACTIVITIES ALONG WITH PERMISSION FOR PHOTOGRAPHY.

		<ul style="list-style-type: none"> · DISSEMBLING AND ASSEMBLE OF COMPONENTS FOR PERFORMING INSPECTION. · ALL SURFACE PREPARATION, REPAINTING AND SCAFFOLDING TO BE PROVIDED BY RSP IF REUIRED · THE WATER AND POWER SUPPLY TO BE PROVIDED. · ANY SITE SERVICES REQUIRED FOR SMOOTH EXECUTION. <p>1 EA= COMPLETE ACTIVITIES MENTIONED IN THE SCOPE OF WORK OF UCS</p>		
20	4002191420	<p>RESIDUAL LIFE ASSESSMENT (RLA) FOR LIQUID METAL HANDLING EOT CRANE OF 120T CAPACITY (4 GIRDERS)</p> <p>1.THE VENDOR HAS TO ASSESS THE RESIDUAL LIFE OF CRANES AND SUBMIT DETAILED REPORT AS FOLLOWS:</p> <ul style="list-style-type: none"> i. VISUAL INSPECTION REPORTS ii. PHOTOGRAPHS iii. NDT REPORTS iv. VIBRATION & NOISE ANALYSIS REPORTS v. STRAIN GAUGE REPORTS vi. THERMOGRAPHY REPORT vii. FINITE ELEMENT METHOD (FEM) REPORT viii. RESIDUAL LIFE ix. RECOMMENDATIONS. <p>REPORTS SHALL BE ISSUED IN PDF FORM (HARD & SOFT COPIES) WITH COMPANY SEAL & WITH AUTHORIZED SIGNATURES.</p> <p>THE DETAILED METHODOLOGY OF CHECKING & ASSESSING ARE:</p> <p>A) LIFTING EQUIPMENT EOT CRANE (VISUAL INSPECTION, FUNCTIONAL TEST AND LOAD TEST):</p> <ul style="list-style-type: none"> · THOROUGH EXAMINATION; · PREVIOUS CERTIFICATE/DOCUMENTS REVIEW; (DESIGN REVIEW NOT INCLUSIVE) · WITNESS LOAD TEST "IF REQUIRED" (REQUIRED TEST LOAD WILL BE MADE AVAILABLE BY RSP); · WITNESS FUNCTIONAL TEST INCLUDING PERFORMANCE TEST TO VERIFY THE SAFETY DEVICES (IF ANY); · REVIEW OF NDT REPORT (IF ANY); · ISSUANCE OF INSPECTION CERTIFICATE AND CONDITIONAL ASSESSMENT REPORT. <p>B) THOROUGH CHECK SAFETY DEVICES INCLUDE/CRAN</p>	EA	2

E CONDITION SURVEY:

- OVERLOAD PROTECTION DEVICES,
- STORM LOCKS,
- PARKING DEVICES,
- EMERGENCY
- WARNING LIGHTS,
- WARNING BELLS,
- WARNING TAGS AND SIGNS,
- METERS, WIRE ROPES,
- LOAD CHAINS,
- BRAKES,
- COVERS OF ROTATING EQUIPMENT,
- BUFFERS, LIMIT SWITCHES,
- FIRE EXTINGUISHERS,
- WALKWAYS, RAILINGS,
- LADDERS,
- SERVICE PLATFORMS,
- CABIN CONNECTIONS, RUNWAY STOPS.

C) THOROUGH EXAMINATION OF STRUCTURE:

- WHEELS FOR ANY PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED, BOGIES FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- ALL GEAR BOXES FOR ANY LEAKS IN GEAR BOXES, PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- THE TROLLEY GIRDER WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- ALL BRACES / TIE RODS (FORESTAY), MEMBERS WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- THE MACHINE HOUSE WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- HOIST WINCH IN THE MACHINE ROOM WILL BE INSPECTED & VERIFIED FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE, PROPER SPOOLING OF THE WIRE ROPE & FUNCTIONALITY WILL BE CHECKED,
- MAIN TROLLEY AND CATENARY TROLLEYS WILL BE INSPECTED & VERIFIED FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE.
- CABLE AND HOSE REELS WILL BE CHECKED PROPER

MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE & FUNCTION TEST WILL BE DONE.

- THE WHOLE TROLLEY RAIL WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- ALL THE SHEAVES AND PULLEYS, WILL BE CHECK FOR ANY ANOMALIES.
- ALL SERVICE CRANES (EOT CRANE, JIB CRANE WILL BE THOROUGHLY EXAMINED FOR GENERAL CONDITION & FUNCTIONALITY WILL BE VERIFIED,

D) FUNCTIONAL CONDITIONS BY RUNNING TEST WITHOUT LOADING (OPERATOR FOR RUNNING THE CRANE WILL BE PROVIDED BY RSP).

- VISUAL EXAMINATION OF THE GANTRY TRAVELING, TROLLEY TRAVELING AND HOISTING MOTION CONDITIONS.
- VISUAL EXAMINATION OF THE GANTRY/TROLLEY WHEELS RUNNING CONDITIONS ON THE RAIL (OSCILLATION AND ALIGNMENT).
- CHECK THE TRAVELING LIMIT SWITCHES FUNCTIONAL CONDITIONS.
- CHECK THE E-STOP AND WARNING DEVICES FUNCTIONAL.
- VISUAL EXAMINATION OF THE MOTION PARTS TO CHECK FOR ANY INTERFERENCE.
- CHECK THE MECHANICAL / ELECTRICAL COMPONENTS FOR ANY ABNORMAL NOISE DURING THE TESTING.
- CHECK THE FUNCTIONAL CONDITIONS OF THE CONTROLLER.
- CHECK MOTIONS SPEED CONTROLLING CONDITIONS.
- CHECK THE FUNCTIONALITY OF THE BRAKES.

E) PERFORMANCE CONDITIONS BY TESTING WITH THE RATED LOADING:

- VISUAL EXAMINATION OF THE STRUCTURE (INCLUDING ITS WELDS) LOAD PATH MEMBER AND FCM (FRACTURE CRITICAL MEMBER) CONDITIONS AT THE LOAD TESTING.
- SPOT CHECK THE GIRDER VERTICAL DEFLECTION AGAINST EXISTING "REPORT OF EXAMINATION".
- CHECK BRAKE'S PERFORMANCE AT THE LOAD TESTING.
- CHECK IF THE MECHANISM IS FREE OF OIL LEAKAGE DURING THE LOAD TESTING.
- CHECK FOR ABNORMAL NOISE IN REDUCER'S AT THE LOAD TESTING.
- CHECK IF MOTOR'S NOISE AND TEMPERATURE RISE IS ABNORMAL AT THE LOAD TESTING.

	<ul style="list-style-type: none"> · SPOT CHECK IF POWER CABLE TEMPERATURE RISE IS ABNORMAL DURING THE LOAD TESTING. · CHECK IF THERE IS ELECTRICAL OVER-CURRENT PHENOMENON AT THE LOAD TESTING. · CHECK IF THE LOAD INDICATOR, OVER-LOAD PROTECTOR IS EQUIPPED ON THE EXISTING CRANE. <p>F) STRUCTURAL CONDITION SURVEY (COVERING WELDED, BOLTED AND RIVETED JOINTS):</p> <ul style="list-style-type: none"> · STRUCTURAL MEMBERS LIKE GIRDERS, END TRUCKS, BRIDGE DRIVE WHEEL, RUNWAY RAILS, BUMPERS, FOOT WALKS, TRAP DOORS, LADDERS, HAND RAILS, TROLLEY FRAME, MAINTENANCE CAGE, ETC. SHALL BE INSPECTED BOTH VISUALLY AND SUPPORTED BY NDT METHODS LIKE DPT & MPI OF WELD JOINTS. JOINT OF RAIL, ROPE CONTROL MECHANISM, SHEAVE BLOCK, BUFFERS, TROLLEY, ROPE PULLEY, WALK WAY SHALL ALSO BE INSPECTED. · TROLLEY CONSISTS OF: TYPICAL JOINT OF GEAR, JOINTS OF SAFETY LUG, JOINT OF ROPE SHEAVE, TYPICAL JOINTS OF TROLLEY, <p>G) MECHANICAL SYSTEMS INSPECTION:</p> <ul style="list-style-type: none"> · CHECK THE MAIN HOIST / BOOM HOIST SYSTEM IF THERE IS ANY ABNORMALITY WHEN RUNNING. · CARRY OUT INSPECTION ON MOTOR / REDUCER / DRUM / COUPLING OF BOOM HOIST SYSTEM AND MAIN HOIST SYSTEM WHEN REMOVE THE COVER OF THE REDUCER AND DISMANTLE THE COUPLING. · CHECK THE MECHANICAL MOTION PARTS (ROPE, GEARS AND REDUCERS) LUBRICATION CONDITIONS. · CHECK THE MECHANICAL COMPONENTS WEAR CONDITIONS (BRAKE, GEAR, DRUM, ROPE, WHEEL). · IDENTIFY ANY OIL LEAKAGE TRAILS ON THE CRANE. · CHECK THE MECHANICAL BOLTING FIXTURE CONDITIONS (ROPE / RAIL CLAMPS, HOOK ASSEMBLY, ETC.) · CHECK THE MECHANICAL COMPONENTS TO IDENTIFY IF THERE IS ANY DAMAGE OR COMPONENTS MISSING ON THE CRANE. · CHECK THE SAFETY GUARD EQUIPMENT FOR MECHANICAL MOTION PARTS. · REPORT ON FINDINGS. <p>H) NON-DESTRUCTIVE TESTING "NDT" (SUITABLE METHOD)</p> <ul style="list-style-type: none"> · THOROUGH VISUAL EXAMINATION 	
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- DYE PENETRANT TESTING / MAGNETIC PARTICLE TESTING OF WELD JOINTS BASED ON DRAWING
- THERMOGRAPHY OF THE ELECTRICAL MOTORS, PANELS ETC
- VIBRATION ANALYSIS OF MOTOR, GEAR BOX ETC
- STRAIN GAUGE MEASUREMENT OF CRITICAL STRUCTURES
- REVIEW OF REPAIRS RECORDS (IF ANY);
- NDT SHALL BE CARRIED OUT AT THE DESCRIPTION OF THE SURVEYOR;
- ALL WELDMENTS/SPECIMENS SHALL BE CLEANED FROM PAINTS AND ANY IMPURITIES PRIOR TO THE TEST.

I) VIBRATION SURVEY

- VIBRATION CHECK ON FOUNDATIONS;
- VIBRATION CHECK ON GEAR BOXES;
- VIBRATION CHECK ON MOTORS;
- VIBRATION CHECK ON COUPLINGS;
- VIBRATION CHECK ON SHAFTS
- VIBRATION CHECK ON IMBALANCE;
- VIBRATION CHECK ON BEARING

J) NOISE SURVEY

- NOISE CHECK ON FOUNDATIONS;
- NOISE CHECK ON GEAR BOXES;
- NOISE ON CHECK ON MOTORS;
- NOISE CHECK ON COUPLINGS;
- NOISE CHECK ON IMBALANCE;
- NOISE CHECK ON BEARINGS.
- NOISE CHECK ON CONTROL ROOM;
- NOISE CHECK ON OPERATOR CABIN.

K) TEMPERATURE SURVEY BY THERMOGRAPH

- ELECTRICAL PANEL INSPECTION THROUGH INFRARED THERMOGRAPHY CAMERA.
- VISUAL EXAMINATION THROUGH INFRARED THERMOGRAPHY CAMERA;
- DETECTION OF THERMOGRAPHY ANOMALIES AND MEASUREMENT OF THE SURFACE TEMPERATURE;
- ANALYSIS OF IMAGES;
- REPORTING

THE FOLLOWING OUTLINES THE STEPS OF THE SURVEY :

- MEETING WITH APPROPRIATE STAFF ON SITE AND REVIEW THE SERVICE ORDER COVERING WHAT WILL BE INSPECTED, WHO WILL ACCOMPANY THE THERMOGRAPHY, PERMIT TO WORK, AND WHAT TYPE OF REPORTING IS EXPECTED .
- PREPARATION FOR INSPECTION WITH THE DESIGNATED STAFF MEMBER OR ELECTRICAL CONTRACTOR. PANELS TO BE REMOVED TO PREPARE ACCESS TO COMPONENTS.

· EACH TYPE OF COMPONENT TO BE DISCUSSED TO DETERMINE HOW IT WILL BE INSPECTED. TO DETERMINE (WITH CLAMP ON AMMETER) THAT ELECTRICAL CIRCUITS ARE OPERATING AT 50% OF RATED LOAD OR MORE, IF POSSIBLE.

· COMPONENTS (BUS BARS, CABLE TERMINATIONS, AC B'S ...), ONCE EXPOSED AFTER SCREENS/COVERS REMOVAL, WILL BE INSPECTED WITH INFRARED CAMERA.

DETAILED RECORDS OF LOAD READING TO BE KEPT AS WELL AS TEMPERATURE MEASUREMENTS, AND ALL INFRARED IMAGES OF ANY SUSPECT COMPONENTS FOUND.

· REPORTING.

L) HARDNESS TEST WHERE APPLICABLE
INDENTATION HARDNESS. THIS HARDNESS TYPE REFERS TO THE RESISTANCE TO PERMANENT DEFORMATION WHEN SUBJECTING A MATERIAL TO A CONTINUOUS LOAD.

· REBOUND OR DYNAMIC HARDNESS;

M) DIMENSIONAL CHECK

THE DIMENSIONAL CHECK SHALL BE VERIFIED BY AS PER THE APPROVED DRAWING.

· SPAN LENGTH;

· SPAN WIDTH;

· SPAN HEIGHT;

· LIFTING HEIGHT;

· RUNWAY LENGTH;

· WHEEL DIMENSIONS;

· RAIL SIZE

N) DEFLECTION

THE BRIDGE SHALL BE DESIGNED SO THAT THE VERTICAL DEFLECTION CAUSED BY THE SAFE WORKING LOAD AND THE WEIGHT OF THE HOIST IN THE CENTRAL POSITION SHALL BE MEASURED AND IT SHALL NOT EXCEED AS SPECIFIED BELOW:

· EOT CRANE: 1/750;

· GANTRY CRANE: 1/600;

· MONORAILS: 1/500 SIMPLY SUPPORTED BEAM;

· MONORAILS: 1/250 CANTILEVER;

O) RAIL ALIGNMENT

· TRACK STRAIGHTNESS

· LINE AND LEVEL SURVEYS

P) STRUCTURAL STABILITY ANALYSIS

THE FINITE ELEMENT METHOD (FEM), SOMETIMES REFERRED TO AS FINITE ELEMENT

ANALYSIS (FEA), IS A NUMERICAL TECHNIQUE USED FOR FINDING THE

APPROXIMATE SOLUTION TO THE COMPLEX ENGINEERING PROBLEMS. THE METHOD

ESSENTIALLY CONSISTS OF ASSUMING THE PIECEWISE CONTINUOUS FUNCTION FOR THE SOLUTION AND OBTAINING THE PARAMETERS OF THE FUNCTIONS IN A MANNER THAT REDUCES THE ERROR IN THE SOLUTION. THE PROCESS OF REPRESENTING A PHYSICAL DOMAIN WITH FINITE ELEMENTS IS REFERRED TO AS MESHING, AND THE RESULTING SET OF ELEMENTS IS KNOWN AS THE FINITE ELEMENT MESH. THE FINITE ELEMENT METHOD CAN ANALYZE ANY GEOMETRY, AND SOLVES BOTH STRESSES AND DISPLACEMENTS WITH RESPECT TO THE KNOWN APPLIED LOAD MODEL

GENERATION FOR LEVEL 3 FEA ANALYSIS: -

- 3D CAD MODEL WILL BE AS PER THE 2D DRAWING PROVIDED. 3D MODEL WILL CONSIST OF GIRDERS, HOOK, WHEEL RELEVANT DETAILS.
- ACTUAL THICKNESS WILL BE MODELLED FOR THE ANALYSIS AS PER THE AVAILABILITY.
- 3D MODEL SIMPLIFICATION - 3D MODEL WILL CONSIST OF STRUCTURAL PART OF THE CRANES.
- FEA ANALYSIS WILL BE CARRIED OUT FOR THE DETAILS PROVIDED BY THE CLIENT.
- FEA ANALYSIS WILL BE CARRIED OUT AS PER DESIGN SPECIFICATION OR AS PER THE CODES I.S. 3177:1999, I.S. 807:2006 AND I.S. 800:2007
- FEA ANALYSIS WILL BE CARRIED OUT AS PER DETAILED DESIGN PROVIDED BY THE CLIENT.
- ALL STRUCTURAL PARTS WILL BE MODELLED FOR FEA ANALYSIS.
- ALL LOADS AND LOAD CASES WILL BE CONSIDERED FOR FEA ANALYSIS.
- REMAINING LIFE BASED ON FEM OUTPUTS

RSP SHALL PROVIDE ALL THE DESIGN DATA ALONG WITH DRAWINGS FOR EG. :

- RATED CAPACITY
- SELF WEIGHT OF CRANE
- SELF WEIGHT OF TROLLEY
- SPAN
- MAXIMUM WHEEL LOAD
- LONG TRAVEL SPEED
- CENTRE TO CENTRE OF TROLLEY WHEEL
- CROSS TRAVEL SPEED
- HOISTING SPEED ETC

RSP SCOPE

- TO PROVIDE THE REQUIRED DATA FOR ANALYSIS INCLUDING DRAWINGS
- PREVIOUS INSPECTION REPORT OF THE CRANES

		<ul style="list-style-type: none"> · FAILURE HISTORY IF ANY · ALL THE LOADS REQUIRED FOR PERFORMING THE ASSESSMENT. · CRANE OPERATOR, CLIENT COORDINATOR AND UNSKILLED LABOURS HAS TO BE PROVIDED. · WORK PERMITS TO PERFORM THE SITE INSPECTION ACTIVITIES ALONG WITH PERMISSION FOR PHOTOGRAPHY. · DISSEMBLING AND ASSEMBLE OF COMPONENTS FOR PERFORMING INSPECTION. · ALL SURFACE PREPARATION, REPAINTING AND SCAFFOLDING TO BE PROVIDED BY RSP IF REQUIRED · THE WATER AND POWER SUPPLY TO BE PROVIDED. · ANY SITE SERVICES REQUIRED FOR SMOOTH EXECUTION. <p>1 EA= COMPLETE ACTIVITIES MENTIONED IN THE SCOPE OF WORK OF UCS</p>		
30	4002191421	<p>RESIDUAL LIFE ASSESSMENT (RLA) FOR LIQUID METAL HANDLING EOT CRANE OF 130T CAPACITY (4 GIRDERS)</p> <p>1.THE VENDOR HAS TO ASSESS THE RESIDUAL LIFE OF CRANES AND SUBMIT DETAILED REPORT AS FOLLOWS:</p> <ul style="list-style-type: none"> i. VISUAL INSPECTION REPORTS ii. PHOTOGRAPHS iii. NDT REPORTS iv. VIBRATION & NOISE ANALYSIS REPORTS v. STRAIN GAUGE REPORTS vi. THERMOGRAPHY REPORT vii. FINITE ELEMENT METHOD (FEM) REPORT viii. RESIDUAL LIFE ix. RECOMMENDATIONS. <p>REPORTS SHALL BE ISSUED IN PDF FORM (HARD & SOFT COPIES) WITH COMPANY SEAL & WITH AUTHORIZED SIGNATURES.</p> <p>THE DETAILED METHODOLOGY OF CHECKING & ASSESSING ARE:</p> <p>A) LIFTING EQUIPMENT EOT CRANE (VISUAL INSPECTION, FUNCTIONAL TEST AND LOAD TEST):</p> <ul style="list-style-type: none"> · THOROUGH EXAMINATION; · PREVIOUS CERTIFICATE/DOCUMENTS REVIEW; (DESIGN REVIEW NOT INCLUSIVE) · WITNESS LOAD TEST "IF REQUIRED" (REQUIRED TEST LOAD WILL BE MADE 	EA	3

AVAILABLE BY RSP);

- WITNESS FUNCTIONAL TEST INCLUDING PERFORMANCE TEST TO VERIFY THE SAFETY DEVICES (IF ANY);
- REVIEW OF NDT REPORT (IF ANY);
- ISSUANCE OF INSPECTION CERTIFICATE AND CONDITIONAL ASSESSMENT REPORT.

B) THOROUGH CHECK SAFETY DEVICES INCLUDE/CRANE CONDITION SURVEY:

- OVERLOAD PROTECTION DEVICES,
- STORM LOCKS,
- PARKING DEVICES,
- EMERGENCY
- WARNING LIGHTS,
- WARNING BELLS,
- WARNING TAGS AND SIGNS,
- METERS, WIRE ROPES,
- LOAD CHAINS,
- BRAKES,
- COVERS OF ROTATING EQUIPMENT,
- BUFFERS, LIMIT SWITCHES,
- FIRE EXTINGUISHERS,
- WALKWAYS, RAILINGS,
- LADDERS,
- SERVICE PLATFORMS,
- CABIN CONNECTIONS, RUNWAY STOPS.

C) THOROUGH EXAMINATION OF STRUCTURE:

- WHEELS FOR ANY PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- BOGIES FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- ALL GEAR BOXES FOR ANY LEAKS IN GEAR BOXES, PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- THE TROLLEY GIRDER WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- ALL BRACES / TIE RODS (FORESTAY), MEMBERS WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- THE MACHINE HOUSE WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- HOIST WINCH IN THE MACHINE ROOM WILL BE INSPECTED & VERIFIED FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL

DAMAGE, PROPER SPOOLING OF THE WIRE ROPE & FUNCTIONALITY WILL BE CHECKED,

- MAIN TROLLEY AND CATENARY TROLLEYS WILL BE INSPECTED & VERIFIED FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE.

- CABLE AND HOSE REELS WILL BE CHECKED PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE & FUNCTION TEST WILL BE DONE.

- THE WHOLE TROLLEY RAIL WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,

- ALL THE SHEAVES AND PULLEYS, WILL BE CHECK FOR ANY ANOMALIES.

- ALL SERVICE CRANES (EOT CRANE, JIB CRANE WILL BE THOROUGHLY EXAMINED FOR GENERAL CONDITION & FUNCTIONALITY WILL BE VERIFIED,

D) FUNCTIONAL CONDITIONS BY RUNNING TEST WITHOUT LOADING (OPERATOR FOR RUNNING THE CRANE WILL BE PROVIDED BY RSP).

- VISUAL EXAMINATION OF THE GANTRY TRAVELING, TROLLEY TRAVELING AND HOISTING MOTION CONDITIONS.

- VISUAL EXAMINATION OF THE GANTRY/TROLLEY WHEELS RUNNING CONDITIONS ON THE RAIL (OSCILLATION AND ALIGNMENT).

- CHECK THE TRAVELING LIMIT SWITCHES FUNCTIONAL CONDITIONS.

- CHECK THE E-STOP AND WARNING DEVICES FUNCTIONAL.

- VISUAL EXAMINATION OF THE MOTION PARTS TO CHECK FOR ANY INTERFERENCE.

- CHECK THE MECHANICAL / ELECTRICAL COMPONENTS FOR ANY ABNORMAL NOISE DURING THE TESTING.

- CHECK THE FUNCTIONAL CONDITIONS OF THE CONTROLLER.

- CHECK MOTIONS SPEED CONTROLLING CONDITIONS.

- CHECK THE FUNCTIONALITY OF THE BRAKES.

E) PERFORMANCE CONDITIONS BY TESTING WITH THE RATED LOADING:

- VISUAL EXAMINATION OF THE STRUCTURE (INCLUDING ITS WELDS) LOAD PATH MEMBER AND FCM (FRACTURE CRITICAL MEMBER) CONDITIONS AT THE LOAD TESTING.

- SPOT CHECK THE GIRDER VERTICAL DEFLECTION AGAINST EXISTING "REPORT OF EXAMINATION".

- CHECK BRAKE'S PERFORMANCE AT THE LOAD TESTING.
- CHECK IF THE MECHANISM IS FREE OF OIL LEAKAGE DURING THE LOAD TESTING.
- CHECK FOR ABNORMAL NOISE IN REDUCER'S AT THE LOAD TESTING.
- CHECK IF MOTOR'S NOISE AND TEMPERATURE RISE IS ABNORMAL AT THE LOAD TESTING.
- SPOT CHECK IF POWER CABLE TEMPERATURE RISE IS ABNORMAL DURING THE LOAD TESTING.
- CHECK IF THERE IS ELECTRICAL OVER-CURRENT PHENOMENON AT THE LOAD TESTING.
- CHECK IF THE LOAD INDICATOR, OVER-LOAD PROTECTOR IS EQUIPPED ON THE EXISTING CRANE.

F) STRUCTURAL CONDITION SURVEY (COVERING WELDED, BOLTED AND RIVETED JOINTS):

- STRUCTURAL MEMBERS LIKE GIRDERS, END TRUCKS, BRIDGE DRIVE WHEEL, RUNWAY RAILS, BUMPERS, FOOT WALKS, TRAP DOORS, LADDERS, HAND RAILS, TROLLEY FRAME, MAINTENANCE CAGE, ETC. SHALL BE INSPECTED BOTH VISUALLY AND SUPPORTED BY NDT METHODS LIKE DPT & MPI OF WELD JOINTS. JOINT OF RAIL, ROPE CONTROL MECHANISM, SHEAVE BLOCK, BUFFERS, TROLLEY, ROPE PULLEY, WALK WAY SHALL ALSO BE INSPECTED.
- TROLLEY CONSISTS OF: TYPICAL JOINT OF GEAR, JOINTS OF SAFETY LUG, JOINT OF ROPE SHEAVE, TYPICAL JOINTS OF TROLLEY,

G) MECHANICAL SYSTEMS INSPECTION:

- CHECK THE MAIN HOIST / BOOM HOIST SYSTEM IF THERE IS ANY ABNORMALITY WHEN RUNNING.
- CARRY OUT INSPECTION ON MOTOR / REDUCER / DRUM / COUPLING OF BOOM HOIST SYSTEM AND MAIN HOIST SYSTEM WHEN REMOVE THE COVER OF THE REDUCER AND DISMANTLE THE COUPLING.
- CHECK THE MECHANICAL MOTION PARTS (ROPE, GEARS AND REDUCERS) LUBRICATION CONDITIONS.
- CHECK THE MECHANICAL COMPONENTS WEAR CONDITIONS (BRAKE, GEAR, DRUM, ROPE, WHEEL).
- IDENTIFY ANY OIL LEAKAGE TRAILS ON THE CRANE.
- CHECK THE MECHANICAL BOLTING FIXTURE CONDITIONS (ROPE / RAIL CLAMPS, HOOK ASSEMBLY, ETC.)
- CHECK THE MECHANICAL COMPONENTS TO IDENTIFY

IF THERE IS ANY DAMAGE OR COMPONENTS MISSING ON THE CRANE.
· CHECK THE SAFETY GUARD EQUIPMENT FOR MECHANICAL MOTION PARTS.
· REPORT ON FINDINGS.

H) NON-DESTRUCTIVE TESTING "NDT" (SUITABLE METHOD)
· THOROUGH VISUAL EXAMINATION
· DYE PENETRANT TESTING / MAGNETIC PARTICLE TESTING OF WELD JOINTS BASED ON DRAWING
· THERMOGRAPHY OF THE ELECTRICAL MOTORS, PANELS ETC
· VIBRATION ANALYSIS OF MOTOR, GEAR BOX ETC
· STRAIN GAUGE MEASUREMENT OF CRITICAL STRUCTURES
· REVIEW OF REPAIRS RECORDS (IF ANY);
· NDT SHALL BE CARRIED OUT AT THE DESCRIPTION OF THE SURVEYOR;
· ALL WELDMENTS/SPECIMENS SHALL BE CLEANED FROM PAINTS AND ANY IMPURITIES PRIOR TO THE TEST.

I) VIBRATION SURVEY
· VIBRATION CHECK ON FOUNDATIONS;
· VIBRATION CHECK ON GEAR BOXES;
· VIBRATION CHECK ON MOTORS;
· VIBRATION CHECK ON COUPLINGS;
· VIBRATION CHECK ON SHAFTS
· VIBRATION CHECK ON IMBALANCE;
· VIBRATION CHECK ON BEARING

J) NOISE SURVEY
· NOISE CHECK ON FOUNDATIONS;
· NOISE CHECK ON GEAR BOXES;
· NOISE ON CHECK ON MOTORS;
· NOISE CHECK ON COUPLINGS;
· NOISE CHECK ON IMBALANCE;
· NOISE CHECK ON BEARINGS.
· NOISE CHECK ON CONTROL ROOM;
· NOISE CHECK ON OPERATOR CABIN.

K) TEMPERATURE SURVEY BY THERMOGRAPH
· ELECTRICAL PANEL INSPECTION THROUGH INFRARED THERMOGRAPHY CAMERA.
· VISUAL EXAMINATION THROUGH INFRARED THERMOGRAPHY CAMERA;
· DETECTION OF THERMOGRAPHY ANOMALIES AND MEASUREMENT OF THE SURFACE TEMPERATURE;
· ANALYSIS OF IMAGES;
· REPORTING
THE FOLLOWING OUTLINES THE STEPS OF THE SURVEY
:
· MEETING WITH APPROPRIATE STAFF ON SITE AND REVIEW THE SERVICE ORDER

COVERING WHAT WILL BE INSPECTED, WHO WILL ACCOMPANY THE THERMOGRAPHY, PERMIT TO WORK, AND WHAT TYPE OF REPORTING IS EXPECTED .

- PREPARATION FOR INSPECTION WITH THE DESIGNATED STAFF MEMBER OR ELECTRICAL CONTRACTOR. PANELS TO BE REMOVED TO PREPARE ACCESS TO COMPONENTS.
- EACH TYPE OF COMPONENT TO BE DISCUSSED TO DETERMINE HOW IT WILL BE INSPECTED. TO DETERMINE (WITH CLAMP ON AMMETER) THAT ELECTRICAL CIRCUITS ARE OPERATING AT 50% OF RATED LOAD OR MORE, IF POSSIBLE.
- COMPONENTS (BUS BARS, CABLE TERMINATIONS, AC B'S ...), ONCE EXPOSED AFTER SCREENS/COVERS REMOVAL, WILL BE INSPECTED WITH INFRARED CAMERA.
- DETAILED RECORDS OF LOAD READING TO BE KEPT AS WELL AS TEMPERATURE MEASUREMENTS, AND ALL INFRARED IMAGES OF ANY SUSPECT COMPONENTS FOUND.
- REPORTING.

L) HARDNESS TEST WHERE APPLICABLE
INDENTATION HARDNESS. THIS HARDNESS TYPE REFERS TO THE RESISTANCE TO PERMANENT DEFORMATION WHEN SUBJECTING A MATERIAL TO A CONTINUOUS LOAD.

- REBOUND OR DYNAMIC HARDNESS;

M) DIMENSIONAL CHECK
THE DIMENSIONAL CHECK SHALL BE VERIFIED BY AS PER THE APPROVED DRAWING.

- SPAN LENGTH;
- SPAN WIDTH;
- SPAN HEIGHT;
- LIFTING HEIGHT;
- RUNWAY LENGTH;
- WHEEL DIMENSIONS;
- RAIL SIZE

N) DEFLECTION
THE BRIDGE SHALL BE DESIGNED SO THAT THE VERTICAL DEFLECTION CAUSED BY THE SAFE WORKING LOAD AND THE WEIGHT OF THE HOIST IN THE CENTRAL POSITION SHALL BE MEASURED AND IT SHALL NOT EXCEED AS SPECIFIED BELOW:

- EOT CRANE: 1/750;
- GANTRY CRANE: 1/600;
- MONORAILS: 1/500 SIMPLY SUPPORTED BEAM;
- MONORAILS: 1/250 CANTILEVER;

O) RAIL ALIGNMENT

- TRACK STRAIGHTNESS

· LINE AND LEVEL SURVEYS

P) STRUCTURAL STABILITY ANALYSIS

THE FINITE ELEMENT METHOD (FEM), SOMETIMES REFERRED TO AS FINITE ELEMENT ANALYSIS (FEA), IS A NUMERICAL TECHNIQUE USED FOR FINDING THE APPROXIMATE SOLUTION TO THE COMPLEX ENGINEERING PROBLEMS. THE METHOD ESSENTIALLY CONSISTS OF ASSUMING THE PIECEWISE CONTINUOUS FUNCTION FOR THE SOLUTION AND OBTAINING THE PARAMETERS OF THE FUNCTIONS IN A MANNER THAT REDUCES THE ERROR IN THE SOLUTION. THE PROCESS OF REPRESENTING A PHYSICAL DOMAIN WITH FINITE ELEMENTS IS REFERRED TO AS MESHING, AND THE RESULTING SET OF ELEMENTS IS KNOWN AS THE FINITE ELEMENT MESH. THE FINITE ELEMENT METHOD CAN ANALYZE ANY GEOMETRY, AND SOLVES BOTH STRESSES AND DISPLACEMENTS WITH RESPECT TO THE KNOWN APPLIED LOAD MODEL

GENERATION FOR LEVEL 3 FEA ANALYSIS: -

- 3D CAD MODEL WILL BE AS PER THE 2D DRAWING PROVIDED. 3D MODEL WILL CONSIST OF GIRDERS, HOOK, WHEEL RELEVANT DETAILS.
- ACTUAL THICKNESS WILL BE MODELLED FOR THE ANALYSIS AS PER THE AVAILABILITY.
- 3D MODEL SIMPLIFICATION - 3D MODEL WILL CONSIST OF STRUCTURAL PART OF THE CRANES.
- FEA ANALYSIS WILL BE CARRIED OUT FOR THE DETAILS PROVIDED BY THE CLIENT.
- FEA ANALYSIS WILL BE CARRIED OUT AS PER DESIGN SPECIFICATION OR AS PER THE CODES I.S. 3177:1999, I.S. 807:2006 AND I.S. 800:2007
- FEA ANALYSIS WILL BE CARRIED OUT AS PER DETAILED DESIGN PROVIDED BY THE CLIENT.
- ALL STRUCTURAL PARTS WILL BE MODELLED FOR FEA ANALYSIS.
- ALL LOADS AND LOAD CASES WILL BE CONSIDERED FOR FEA ANALYSIS.
- REMAINING LIFE BASED ON FEM OUTPUTS

RSP SHALL PROVIDE ALL THE DESIGN DATA ALONG WITH DRAWINGS FOR EG. :

- RATED CAPACITY
- SELF WEIGHT OF CRANE
- SELF WEIGHT OF TROLLEY
- SPAN
- MAXIMUM WHEEL LOAD

		<ul style="list-style-type: none"> · LONG TRAVEL SPEED · CENTRE TO CENTRE OF TROLLEY WHEEL · CROSS TRAVEL SPEED · HOISTING SPEED ETC <p>RSP SCOPE</p> <ul style="list-style-type: none"> · TO PROVIDE THE REQUIRED DATA FOR ANALYSIS INCLUDING DRAWINGS · PREVIOUS INSPECTION REPORT OF THE CRANES · FAILURE HISTORY IF ANY · ALL THE LOADS REQUIRED FOR PERFORMING THE ASSESSMENT. · CRANE OPERATOR, CLIENT COORDINATOR AND UNSKILLED LABOURS HAS TO BE PROVIDED. · WORK PERMITS TO PERFORM THE SITE INSPECTION ACTIVITIES ALONG WITH PERMISSION FOR PHOTOGRAPHY. · DISSEMBLING AND ASSEMBLE OF COMPONENTS FOR PERFORMING INSPECTION. · ALL SURFACE PREPARATION, REPAINTING AND SCAFFOLDING TO BE PROVIDED BY RSP IF REQUIRED · THE WATER AND POWER SUPPLY TO BE PROVIDED. · ANY SITE SERVICES REQUIRED FOR SMOOTH EXECUTION. <p>1 EA= COMPLETE ACTIVITIES MENTIONED IN THE SCOPE OF WORK OF UCS</p>		
40	4002191422	<p>RESIDUAL LIFE ASSESSMENT (RLA) FOR LIQUID METAL HANDLING EOT CRANE OF 150T CAPACITY (4 GIRDERS)</p> <p>1.THE VENDOR HAS TO ASSESS THE RESIDUAL LIFE OF CRANES AND SUBMIT DETAILED REPORT AS FOLLOWS:</p> <ul style="list-style-type: none"> i. VISUAL INSPECTION REPORTS ii. PHOTOGRAPHS iii. NDT REPORTS iv. VIBRATION & NOISE ANALYSIS REPORTS v. STRAIN GAUGE REPORTS vi. THERMOGRAPHY REPORT vii. FINITE ELEMENT METHOD (FEM) REPORT viii. RESIDUAL LIFE ix. RECOMMENDATIONS. <p>REPORTS SHALL BE ISSUED IN PDF FORM (HARD & SOFT COPIES) WITH COMPANY SEAL & WITH AUTHORIZED SIGNATURES.</p> <p>THE DETAILED METHODOLOGY OF CHECKING & ASSESSING ARE:</p>	EA	1

A) LIFTING EQUIPMENT EOT CRANE (VISUAL INSPECTION, FUNCTIONAL TEST AND LOAD TEST):

- THOROUGH EXAMINATION;
- PREVIOUS CERTIFICATE/DOCUMENTS REVIEW; (DESIGN REVIEW NOT INCLUSIVE)
- WITNESS LOAD TEST "IF REQUIRED" (REQUIRED TEST LOAD WILL BE MADE AVAILABLE BY RSP);
- WITNESS FUNCTIONAL TEST INCLUDING PERFORMANCE TEST TO VERIFY THE SAFETY DEVICES (IF ANY);
- REVIEW OF NDT REPORT (IF ANY);
- ISSUANCE OF INSPECTION CERTIFICATE AND CONDITIONAL ASSESSMENT REPORT.

B) THOROUGH CHECK SAFETY DEVICES INCLUDE/CRANE CONDITION SURVEY:

- OVERLOAD PROTECTION DEVICES,
- STORM LOCKS,
- PARKING DEVICES,
- EMERGENCY
- WARNING LIGHTS,
- WARNING BELLS,
- WARNING TAGS AND SIGNS,
- METERS, WIRE ROPES,
- LOAD CHAINS,
- BRAKES,
- COVERS OF ROTATING EQUIPMENT,
- BUFFERS, LIMIT SWITCHES,
- FIRE EXTINGUISHERS,
- WALKWAYS, RAILINGS,
- LADDERS,
- SERVICE PLATFORMS,
- CABIN CONNECTIONS, RUNWAY STOPS.

C) THOROUGH EXAMINATION OF STRUCTURE:

- WHEELS FOR ANY PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED, BOGIES FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- ALL GEAR BOXES FOR ANY LEAKS IN GEAR BOXES, PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE WILL BE INSPECTED & VERIFIED,
- THE TROLLEY GIRDER WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
- ALL BRACES / TIE RODS (FORESTAY), MEMBERS WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR

ANY PHYSICAL DAMAGE,
 · THE MACHINE HOUSE WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
 · HOIST WINCH IN THE MACHINE ROOM WILL BE INSPECTED & VERIFIED FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE, PROPER SPOOLING OF THE WIRE ROPE & FUNCTIONALITY WILL BE CHECKED,
 · MAIN TROLLEY AND CATENARY TROLLEYS WILL BE INSPECTED & VERIFIED FOR PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE.
 · CABLE AND HOSE REELS WILL BE CHECKED PROPER MOUNTING, CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE & FUNCTION TEST WILL BE DONE.
 · THE WHOLE TROLLEY RAIL WILL BE INSPECTED & VERIFIED FOR ANY CRACKS, DISTORTION, EXCESSIVE WEAR OR ANY PHYSICAL DAMAGE,
 · ALL THE SHEAVES AND PULLEYS, WILL BE CHECK FOR ANY ANOMALIES.
 · ALL SERVICE CRANES (EOT CRANE, JIB CRANE WILL BE THOROUGHLY EXAMINED FOR GENERAL CONDITION & FUNCTIONALITY WILL BE VERIFIED,

D) FUNCTIONAL CONDITIONS BY RUNNING TEST WITH OUT LOADING (OPERATOR FOR RUNNING THE CRANE WILL BE PROVIDED BY RSP).
 · VISUAL EXAMINATION OF THE GANTRY TRAVELING, TROLLEY TRAVELING AND HOISTING MOTION CONDITIONS.
 · VISUAL EXAMINATION OF THE GANTRY/TROLLEY WHEELS RUNNING CONDITIONS ON THE RAIL (OSCILLATION AND ALIGNMENT).
 · CHECK THE TRAVELING LIMIT SWITCHES FUNCTIONAL CONDITIONS.
 · CHECK THE E-STOP AND WARNING DEVICES FUNCTIONAL.
 · VISUAL EXAMINATION OF THE MOTION PARTS TO CHECK FOR ANY INTERFERENCE.
 · CHECK THE MECHANICAL / ELECTRICAL COMPONENTS FOR ANY ABNORMAL NOISE DURING THE TESTING.
 · CHECK THE FUNCTIONAL CONDITIONS OF THE CONTROLLER.
 · CHECK MOTIONS SPEED CONTROLLING CONDITIONS.
 · CHECK THE FUNCTIONALITY OF THE BRAKES.

E) PERFORMANCE CONDITIONS BY TESTING WITH THE

RATED LOADING:

- VISUAL EXAMINATION OF THE STRUCTURE (INCLUDING ITS WELDS) LOAD PATH MEMBER AND FCM (FRACTURE CRITICAL MEMBER) CONDITIONS AT THE LOAD TESTING.
- SPOT CHECK THE GIRDER VERTICAL DEFLECTION AGAINST EXISTING "REPORT OF EXAMINATION".
- CHECK BRAKE'S PERFORMANCE AT THE LOAD TESTING.
- CHECK IF THE MECHANISM IS FREE OF OIL LEAKAGE DURING THE LOAD TESTING.
- CHECK FOR ABNORMAL NOISE IN REDUCER'S AT THE LOAD TESTING.
- CHECK IF MOTOR'S NOISE AND TEMPERATURE RISE IS ABNORMAL AT THE LOAD TESTING.
- SPOT CHECK IF POWER CABLE TEMPERATURE RISE IS ABNORMAL DURING THE LOAD TESTING.
- CHECK IF THERE IS ELECTRICAL OVER-CURRENT PHENOMENON AT THE LOAD TESTING.
- CHECK IF THE LOAD INDICATOR, OVER-LOAD PROTECTOR IS EQUIPPED ON THE EXISTING CRANE.

F) STRUCTURAL CONDITION SURVEY (COVERING WELDED, BOLTED AND RIVETED JOINTS):

- STRUCTURAL MEMBERS LIKE GIRDERS, END TRUCKS, BRIDGE DRIVE WHEEL, RUNWAY RAILS, BUMPERS, FOOT WALKS, TRAP DOORS, LADDERS, HAND RAILS, TROLLEY FRAME, MAINTENANCE CAGE, ETC. SHALL BE INSPECTED BOTH VISUALLY AND SUPPORTED BY NDT METHODS LIKE DPT & MPI OF WELD JOINTS. JOINT OF RAIL, ROPE CONTROL MECHANISM, SHEAVE BLOCK, BUFFERS, TROLLEY, ROPE PULLEY, WALK WAY SHALL ALSO BE INSPECTED.
- TROLLEY CONSISTS OF: TYPICAL JOINT OF GEAR, JOINTS OF SAFETY LUG, JOINT OF ROPE SHEAVE, TYPICAL JOINTS OF TROLLEY,

G) MECHANICAL SYSTEMS INSPECTION:

- CHECK THE MAIN HOIST / BOOM HOIST SYSTEM IF THERE IS ANY ABNORMALITY WHEN RUNNING.
- CARRY OUT INSPECTION ON MOTOR / REDUCER / DRUM / COUPLING OF BOOM HOIST SYSTEM AND MAIN HOIST SYSTEM WHEN REMOVE THE COVER OF THE REDUCER AND DISMANTLE THE COUPLING.
- CHECK THE MECHANICAL MOTION PARTS (ROPE, GEARS AND REDUCERS)

LUBRICATION CONDITIONS.

- CHECK THE MECHANICAL COMPONENTS WEAR CONDITIONS (BRAKE, GEAR, DRUM, ROPE, WHEEL).
- IDENTIFY ANY OIL LEAKAGE TRAILS ON THE CRANE.
- CHECK THE MECHANICAL BOLTING FIXTURE CONDITIONS (ROPE / RAIL CLAMPS, HOOK ASSEMBLY, ETC.)
- CHECK THE MECHANICAL COMPONENTS TO IDENTIFY IF THERE IS ANY DAMAGE OR COMPONENTS MISSING ON THE CRANE.
- CHECK THE SAFETY GUARD EQUIPMENT FOR MECHANICAL MOTION PARTS.
- REPORT ON FINDINGS.

H) NON-DESTRUCTIVE TESTING "NDT" (SUITABLE METHOD)

- THOROUGH VISUAL EXAMINATION
- DYE PENETRANT TESTING / MAGNETIC PARTICLE TESTING OF WELD JOINTS BASED ON DRAWING
- THERMOGRAPHY OF THE ELECTRICAL MOTORS, PANELS ETC
- VIBRATION ANALYSIS OF MOTOR, GEAR BOX ETC
- STRAIN GAUGE MEASUREMENT OF CRITICAL STRUCTURES
- REVIEW OF REPAIRS RECORDS (IF ANY);
- NDT SHALL BE CARRIED OUT AT THE DESCRIPTION OF THE SURVEYOR;
- ALL WELDMENTS/SPECIMENS SHALL BE CLEANED FROM PAINTS AND ANY IMPURITIES PRIOR TO THE TEST.

I) VIBRATION SURVEY

- VIBRATION CHECK ON FOUNDATIONS;
- VIBRATION CHECK ON GEAR BOXES;
- VIBRATION CHECK ON MOTORS;
- VIBRATION CHECK ON COUPLINGS;
- VIBRATION CHECK ON SHAFTS
- VIBRATION CHECK ON IMBALANCE;
- VIBRATION CHECK ON BEARING

J) NOISE SURVEY

- NOISE CHECK ON FOUNDATIONS;
- NOISE CHECK ON GEAR BOXES;
- NOISE ON CHECK ON MOTORS;
- NOISE CHECK ON COUPLINGS;
- NOISE CHECK ON IMBALANCE;
- NOISE CHECK ON BEARINGS.
- NOISE CHECK ON CONTROL ROOM;
- NOISE CHECK ON OPERATOR CABIN.

K) TEMPERATURE SURVEY BY THERMOGRAPH

- ELECTRICAL PANEL INSPECTION THROUGH INFRARED THERMOGRAPHY CAMERA.
- VISUAL EXAMINATION THROUGH INFRARED THERMOGRAPHY CAMERA;

- DETECTION OF THERMOGRAPHY ANOMALIES AND MEASUREMENT OF THE SURFACE TEMPERATURE;
- ANALYSIS OF IMAGES;
- REPORTING

THE FOLLOWING OUTLINES THE STEPS OF THE SURVEY :

- MEETING WITH APPROPRIATE STAFF ON SITE AND REVIEW THE SERVICE ORDER COVERING WHAT WILL BE INSPECTED, WHO WILL ACCOMPANY THE THERMOGRAPHY, PERMIT TO WORK, AND WHAT TYPE OF REPORTING IS EXPECTED .
- PREPARATION FOR INSPECTION WITH THE DESIGNATED STAFF MEMBER OR ELECTRICAL CONTRACTOR. PANELS TO BE REMOVED TO PREPARE ACCESS TO COMPONENTS.
- EACH TYPE OF COMPONENT TO BE DISCUSSED TO DETERMINE HOW IT WILL BE INSPECTED. TO DETERMINE (WITH CLAMP ON AMMETER) THAT ELECTRICAL CIRCUITS ARE OPERATING AT 50% OF RATED LOAD OR MORE, IF POSSIBLE.
- COMPONENTS (BUS BARS, CABLE TERMINATIONS, AC B'S ...), ONCE EXPOSED AFTER SCREENS/COVERS REMOVAL, WILL BE INSPECTED WITH INFRARED CAMERA. DETAILED RECORDS OF LOAD READING TO BE KEPT AS WELL AS TEMPERATURE MEASUREMENTS, AND ALL INFRARED IMAGES OF ANY SUSPECT COMPONENTS FOUND.
- REPORTING.

L) HARDNESS TEST WHERE APPLICABLE
INDENTATION HARDNESS. THIS HARDNESS TYPE REFERS TO THE RESISTANCE TO PERMANENT DEFORMATION WHEN SUBJECTING A MATERIAL TO A CONTINUOUS LOAD.

- REBOUND OR DYNAMIC HARDNESS;

M) DIMENSIONAL CHECK
THE DIMENSIONAL CHECK SHALL BE VERIFIED BY AS PER THE APPROVED DRAWING.

- SPAN LENGTH;
- SPAN WIDTH;
- SPAN HEIGHT;
- LIFTING HEIGHT;
- RUNWAY LENGTH;
- WHEEL DIMENSIONS;
- RAIL SIZE

N) DEFLECTION
THE BRIDGE SHALL BE DESIGNED SO THAT THE VERTICAL DEFLECTION CAUSED BY THE SAFE WORKING LOAD AND THE WEIGHT OF THE HOIST IN THE CENTRAL

POSITION SHALL BE MEASURED AND IT SHALL NOT EXCEED AS SPECIFIED BELOW:

- EOT CRANE: 1/750;
- GANTRY CRANE: 1/600;
- MONORAILS: 1/500 SIMPLY SUPPORTED BEAM;
- MONORAILS: 1/250 CANTILEVER;

O) RAIL ALIGNMENT

- TRACK STRAIGHTNESS
- LINE AND LEVEL SURVEYS

P) STRUCTURAL STABILITY ANALYSIS

THE FINITE ELEMENT METHOD (FEM), SOMETIMES REFERRED TO AS FINITE ELEMENT ANALYSIS (FEA), IS A NUMERICAL TECHNIQUE USED FOR FINDING THE

APPROXIMATE SOLUTION TO THE COMPLEX ENGINEERING PROBLEMS. THE METHOD

ESSENTIALLY CONSISTS OF ASSUMING THE PIECEWISE CONTINUOUS FUNCTION FOR

THE SOLUTION AND OBTAINING THE PARAMETERS OF THE FUNCTIONS IN A MANNER

THAT REDUCES THE ERROR IN THE SOLUTION. THE PROCESS OF REPRESENTING A

PHYSICAL DOMAIN WITH FINITE ELEMENTS IS REFERRED TO AS MESHING, AND THE

RESULTING SET OF ELEMENTS IS KNOWN AS THE FINITE ELEMENT MESH. THE

FINITE ELEMENT METHOD CAN ANALYZE ANY GEOMETRY, AND SOLVES BOTH STRESSES

AND DISPLACEMENTS WITH RESPECT TO THE KNOWN APPLIED 3D MODEL

GENERATION FOR LEVEL 3 FFS FEA ANALYSIS: -

- 3D CAD MODEL WILL BE AS PER THE 2D DRAWING PROVIDED. 3D MODEL WILL CONSIST OF GIRDERS, HOOK, WHEEL RELEVANT DETAILS.

- ACTUAL THICKNESS WILL BE MODELLED FOR THE ANALYSIS AS PER THE AVAILABILITY.

- 3D MODEL SIMPLIFICATION - 3D MODEL WILL CONSIST OF STRUCTURAL PART OF THE CRANES.

- FEA ANALYSIS WILL BE CARRIED OUT FOR THE DETAILS PROVIDED BY THE CLIENT.

- FEA ANALYSIS WILL BE CARRIED OUT AS PER DESIGN SPECIFICATION OR AS PER THE CODES I.S. 3177:1999, I.S. 807:2006 AND I.S. 800:2007

- FEA ANALYSIS WILL BE CARRIED OUT AS PER DETAILED DESIGN PROVIDED BY THE CLIENT.

- ALL STRUCTURAL PARTS WILL BE MODELLED FOR FEA ANALYSIS.

- ALL LOADS AND LOAD CASES WILL BE CONSIDERED FOR FEA ANALYSIS.

		<ul style="list-style-type: none"> · REMAINING LIFE BASED ON FEM OUTPUTS <p>RSP SHALL PROVIDE ALL THE DESIGN DATA ALONG WITH DRAWINGS FOR EG. :</p> <ul style="list-style-type: none"> · RATED CAPACITY · SELF WEIGHT OF CRANE · SELF WEIGHT OF TROLLEY · SPAN · MAXIMUM WHEEL LOAD · LONG TRAVEL SPEED · CENTRE TO CENTRE OF TROLLEY WHEEL · CROSS TRAVEL SPEED · HOISTING SPEED ETC <p>RSP SCOPE</p> <ul style="list-style-type: none"> · TO PROVIDE THE REQUIRED DATA FOR ANALYSIS INCLUDING DRAWINGS · PREVIOUS INSPECTION REPORT OF THE CRANES · FAILURE HISTORY IF ANY · ALL THE LOADS REQUIRED FOR PERFORMING THE ASSESSMENT. · CRANE OPERATOR, CLIENT COORDINATOR AND UNSKILLED LABOURS HAS TO BE PROVIDED. · WORK PERMITS TO PERFORM THE SITE INSPECTION ACTIVITIES ALONG WITH PERMISSION FOR PHOTOGRAPHY. · DISSEMBLING AND ASSEMBLE OF COMPONENTS FOR PERFORMING INSPECTION. · ALL SURFACE PREPARATION, REPAINTING AND SCAFFOLDING TO BE PROVIDED BY RSP IF REQUIRED · THE WATER AND POWER SUPPLY TO BE PROVIDED. · ANY SITE SERVICES REQUIRED FOR SMOOTH EXECUTION. <p>1 EA= COMPLETE ACTIVITIES MENTIONED IN THE SCOPE OF WORK OF UCS</p>		
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SPECIAL TERMS:-

(1) ON RECEIPT OF THE PO, PARTY TO START THE JOB WITHIN 21 DAYS OF ORDER PLACEMENT OR AS DIRECTED BY THE DEPARTMENT, WHICHEVER IS LATER AFTER OBTAINING GATE PASSES, SAFETY TRAINING, SAFETY CLEARANCE AND SITE CLEARANCE FROM EXECUTING OFFICER.

(2) ALL RSP SAFETY RULES ARE APPLICABLE THROUGHOUT THE EXECUTION OF JOB. SAFETY CLEARANCE TO BE TAKEN BY THE CONTRACTOR FROM RSP SAFETY ENGINEERING DEPARTMENT BEFORE STARTING THE JOB. ON THE JOB SAFETY TRAINING TO BE OBTAINED FROM DSO AND DEPARTMENT SUPERVISORS BEFORE STARTING THE JOB. FOR ANY BREACH OF SAFETY RULES DURING WORK, ACTION WILL BE TAKEN AS PER STANDARD TERMS AND CONDITIONS OF THE PO.

(3) DGM(E),BOF & DGM(E),CCM OR THEIR AUTHORISED REPRESENTATIVE SHALL BE THE CO-ORDINATING AND CERTIFYING AUTHORITY.

(4) PARTY WILL BE REQUIRED TO WORK IN 'A/B/C/G' SHIFT AS PER REQUIREMENT AND AVAILABILITY OF THE WORK PLACE.

(5) THE CONTRACT WILL ALSO BE GOVERNED BY THE GENERAL TERMS AND CONDITIONS OF THE CONTRACT ISSUED ALONG WITH THE WORK ORDER.

(6) SINCE IT IS A SERVICE JOB OF INSPECTION AND TESTING, THE JOB WILL BE CONDUCTED THROUGH NON-CLC PASS. HENCE WAGE ESCALLATION IS NOT ALLOWED.

(7) THE FIRM HAS TO ARRANGE REQUIRED GATE PASS FOR THEIR EQUIPMENTS AND TECHNICAL PERSONS FOR ENTERING INTO THE PLANT. LODGING, BOARDING AND TO & FRO TRANSPORTAION CHARGES ARE ALSO IN THE SCOPE OF THE FIRM.

(8) THE FIRM HAS TO DEPLOY SUFFICIENT MANPOWER/ MATERIAL RESOURCES FOR TIMELY EXECUTION OF THE JOB.

(9) THE FIRM HAS TO EXECUTE ALL THE JOBS PRECISELY MENTIONED IN THE SCOPE OF THE WORK AND PRODUCE THE REPORT TO CONCERNED EXECUTING AUTHORITY BOTH IN HARD AND SOFT FORM. A WRITTEN REPORT MUST BE PROVIDED ON THE COMPLETION OF THE INSPECTION OF THE SITE'S CRANE ALONG WITH AN EQUIPMENT INFORMATION SHEET FOR EACH CRANE SEPARATELY. THIS REPORT SHALL CONTAIN THE MINIMUM OF THE FOLLOWING:-

- * IDENTIFICATION OF THE CRITERIA USED FOR ASSESSMENT.
- * INSPECTION PROCEDURES & TESTS; ITS RESULT & SIGNIFICANT FINDINGS.
- * DETAILED ASSESSMENT REPORT OF DESIGN WORKING PERIOD.
- * REQUIREMENTS OF ANY ACTION TO BE COMPLETED BEFORE USING THE CRANE AGAIN.
- * ASSESSMENT OF DEFECTS AND DAMAGE REQUIRING REPAIR FOR EACH CRANE.
- * RECOMMENDED MAINTENANCE NECESSARY TO ENSURE ITS SAFE CONTINUED OPERATION.
- *IDENTIFY COMPONENTS THAT REQUIRE PARTICULAR ATTENTION IN ROUTINE CHECKS.
- * IMPROVEMENT AND AUTOMATION UPGRADE RECOMMENDATIONS FOR ALL RESPECTIVE SITES.

(10) "THE CONTRACTOR SHALL COVER ALL HIS/HER/THEIR EMPLOYEES/CONTRACT LABOURS DEPLOYED AGAINST HIS/HER/THEIR CONTRACT IN RSP (INCLUDING ODISHA GROUP OF MINES) FOR GROUP PERSONAL ACCIDENT INSURANCE SCHEME FOR A MINIMUM AMOUNT OF RS.10,00,000/- FOR THE PERIOD OF CONTRACT AS AN ADDITIONAL WELFARE MEASURE AND SUBMIT THE PROOF OF THE SAME TO THE EXECUTING DEPARTMENT BEFORE DEPLOYEMENT IN JOB. THE COST OF SUCH INSURANCE SHALL BE COVERED BY THE CONTACTOR IN HIS/HER/THEIR QUOTED PRICE ACCORDINGLY AND NO EXTRA PAYMENT TO THIS EFFECT SHALL BE MADE TO THE CONTRACTOR BY RSP".

(11) PENALTY CLAUSE ATTRIBUTABLE TO CONTRACTOR:--

(I) PARTY HAS TO START THE JOB WITHIN 21 DAYS OF ORDER PLACEMENT OR AS DIRECTED BY THE DEPARTMENT, WHICHEVER IS LATER, FAILING WHICH A PENALTY OF RS.10,000/- PER DAY WILL BE IMPOSED FROM NEXT DAY ONWARDS. THE TOTAL PENALTY SHALL BE LIMITED TO MAXIMUM 10% OF CONTRACT VALUE.

(II) PENALTY OF RS.10,000/- PER INSTANCE PER DAY WILL BE IMPOSED DUE TO DELAY OF MORE THAN ONE DAY IN JOB STARTING AS WELL AS FOR JOB COMPLETION AGAINST THE TIME SCHEDULE INDICATED BY THE DEPARTMENT.

(III) COMPLETE RLA REPORT OF EACH CRANE MUST BE SUBMITTED WITHIN 30 DAYS FROM THE DATE OF COMPLETION OF INSPECTION FAILING WHICH RS.50,000/- PENALTY WILL BE IMPOSED PER WEEK.

ALL PENALTIES ARE EXCLUSIVE OF GST.

UNDER GST, ITC (INPUT TAX CREDIT) WILL BE AVAILABLE TO RSP ONLY IF THE CONTRACTOR UPLOADS ITS INVOICE IN GSTN SITE OF THE GOVERNMENT AND FILES MONTHLY RETURN BY 10TH OF THE SUCCEEDING MONTH. THEREFORE PAYABLE VALUE AND RE-IMBURSEMENT OF TAX TO THE CONTRACTOR WILL BE MADE ONLY AFTER RSP AVAILS CREDIT IN THE GSTN SITE OF THE GOVERNMENT TO SAFEGUARD THE LOSS OF ITC DUE TO NON-UPLOADING OF INVOICE AND NON-FILING OF RETURN BY THE CONTRACTOR.

IN CASE, SAIL, ROURKELA STEEL PLANT IS NOT ABLE TO AVAIL ITC(INPUT TAX CREDIT) DUE TO NON-COMPLIANCE OF ANY OF THE PROVISIONS SPECIFIED UNDER GST ACT/RULES 2017 BY THE CONTRACTOR, ANY INTEREST, PENALTY, TAX PAYABLE BY RSP AND LOSS OF ITC TO RSP SHALL BE RECOVERED FROM ANY BILL OF THE CONTRACTOR PENDING WITH RSP FOR PAYMENT.

10. ALL TOOLS AND TACKLES REQUIRED FOR PERFORMING ABOVE TESTS ARE IN THE SCOPE OF VENDOR.

11. ALL THE DETAILS FOR GATE PASS REQUIREMENT INCLUDING SUB-VENDORS IS TO BE SUBMITTED TO RSP WHICH WILL BE APPROVED AFTER DUE DILIGENCE.

12. ALL THE TOOLS AND TACKLES WHICH ARE TO BE TAKEN INSIDE RSP FOR PERFORMING ABOVE TASKS HAS TO BE REGISTERED AS PER RSP NORMS.

13. PARTY MAY VISIT THE SITE PRIOR TO GIVING THE QUOTATION.

14. SHUTDOWN INFORMATION WILL BE GIVEN 7 DAYS IN ADVANCE AND PARTY HAS TO SEND THEIR ASSESSMENT TEAM ACCORDINGLY.

15. NO OTHER EXTRA CHARGES WILL BE GIVEN TO THE PARTY FOR PRIOR VISITING TO THE SITE. MATERIAL MOBILIZATION TO THE SITE AND HIDDEN CHARGES, IF ANY SHALL BE IN THE SCOPE OF THE PARTY.

16. VENDOR HAS TO PLACE THEIR SHUTDOWN REQUIREMENT 20 DAYS IN ADVANCE. VENDOR SHOULD CLEARLY MENTION NUMBER OF HOURS SHUTDOWN REQUIRED FOR EACH CRANE AND IF IT IS MORE THAN 6 HRS THEN, IT SHOULD BE DIVIDED IN DAYS SO THAT PER DAY MAXIMUM 6 HRS SHUTDOWN CAN BE GIVEN AT A STRETCH.

17. DEPARTMENT RESERVES THE RIGHT TO FORECLOSE THE CONTRACT WITH

A NOTICE PERIOD OF ONE MONTH.

THE VENDOR HAS TO SUBMIT THE RESIDUAL LIFE ASSESSMENT REPORT AS PER TS ALONG WITH THE FOLLOWING INFORMATION:

- 1) THE CRANE RESIDUAL LIFE LEFT, IF THE SUBJECT CRANE CONTINUED TO WORK IN THE SAME CONDITION WITH SAME WORK LOAD WITHOUT ANY STRUCTURAL STRENGTHENING WORK.
- 2) RECOMMENDATION FOR DOING ANY STRUCTURAL STRENGTHENING WORK, IF REQUIRED TO EXTEND THE LIFE OF CRANE.
- 3) HOW MUCH LIFE OF THE CRANE CAN BE EXTENDED BY DOING STRUCTURAL STRENGTHENING WORK AS PER VENDOR'S RECOMMENDATION.
- 4) HOW MUCH ADDITIONAL LOAD IN TONNAGE BEYOND THE CRANE CAPACITY CAN THE CRANE CARRY SAFELY WITHOUT DOING ANY STRUCTURAL STRENGTHENING WORK & AFTER DOING STRUCTURAL STRENGTHENING WORK AS PER VENDOR'S RECOMMENDATION.

INSPECTION TERMS:-

THE JOB WILL BE INSPECTED DURING EXECUTION FOR QUALITY ASSURANCE.

INSPECTION TO BE DONE BY INDENTOR'S REPRESENTATIVE OR AREA IN-CHARGES RESPONSIBLE FOR EXECUTING THE JOB.

PRICE VARIATION CLAUSE:-

PRICE TO REMAIN FIRM TILL CONTRACT VALIDITY.

ELIGIBILITY CRITERIA:-

1. THE PARTY MUST HAVE COMPLETED OR SUBSTANTIALLY COMPLETED JOB IN CARRYING OUT RESIDUAL LIFE ASSESSMENT/HEALTH CHECK UP OF EOT CRANES OF 100T OR ABOVE) AS PER SCOPE OF WORK IN ANY CENTRAL / STATE GOVT. ORGANIZATIONS/ PSUs/JOINT VENTURE COMPANY WHERE AT LEAST ONE OF THE PARTNERS SHALL BE CENTRAL OR STATE GOVERNMENT ORGANIZATION OR PSU/PUBLIC LIMITED COMPANIES DURING LAST 07 YEARS ENDING LAST DAY OF THE MONTH PREVIOUS TO THE ONE IN WHICH APPLICATIONS ARE INVITED SHOULD BE EITHER OF THE FOLLOWING:-

A) THREE SIMILAR COMPLETED WORKS EACH COSTING NOT LESS THAN Rs 66.00 LAKH.

OR

B) TWO SIMILAR COMPLETED WORKS EACH COSTING NOT LESS THAN Rs 82.00 LAKH.

OR

C) ONE SIMILAR COMPLETED WORK EACH COSTING NOT LESS THAN Rs.131.00 LAKH.

FIRM TO SUBMIT THE FOLLOWING DOCUMENTS WITH TENDER

(i) SELF-ATTESTED COPIES OF WORK ORDERS.

(ii) SELF-ATTESTED COPIES OF COMPLETION CERTIFICATE (ISSUED BY THE CONCERNED WORK EXECUTING AUTHORITY)

(iii) SUBSTANTIALLY COMPLETED ONGOING WORK ORDERS HAVING DURATION OF CONTRACT OF MORE THAN

AN ONE YEAR MAY ALSO BE CONSIDERED FOR TECHNICAL EVALUATION UNDER 'SIMILAR WORK' AS PER ELIGIBILITY CRITERIA, IF THE PARTY HAS COMPLETED AT LEAST ONE YEAR OF THE PERIOD OF WORK ORDER AND AT LEAST 50% OF THE WORK AS PER THE WORK ORDER. IN SUCH CASE ALREADY EXECUTED VALUE SHALL BE CONSIDERED FOR EVALUATION.

(iv) IN CASE WORK COMPLETION CERTIFICATE IS ISSUED WITHOUT VALUE OF COMPLETED WORK, RA BILLS PAID OR ANY OTHER DOCUMENT(S) EVIDENCING VALUE OF COMPLETED WORK MAY ALSO BE CONSIDERED.

(v) THE WORK ORDER AND COMPLETION CERTIFICATE / PAID BILLS SO SUBMITTED SHOULD BE IN THE NAME OF PARTICIPATING TENDERER.

2. THE TENDERER MUST HAVE AVERAGE FINANCIAL ANNUAL TURNOVER OF AT LEAST Rs 49.00 LAKH IN LAST THREE CONSECUTIVE FINANCIAL YEARS ENDING ON 31/03/2025. TURNOVER CERTIFICATE FOR THIS MUST BE CERTIFIED BY A PRACTISING CHARTERED ACCOUNTANT WITH VALID UDIN AND MEMBERSHIP NUMBER. TURNOVER SHALL BE SUBMITTED EXCLUSIVE OF GST.

NOTE:- A relaxation of 15% in Financial Turnover criteria is to be provided in the eligibility criteria of tenders for MSEs who are eligible for preference and Startups that are recognized by Department for Industry & Internal Trade (DPIIT). However, both MSE and Startups shall have to meet eligibility conditions for quality & technical specifications/requirement.

PLACE OF INSPECTION:-

AT INDENTER'S SITE.

INSPECTION AGENCY:-

EXECUTING OFFICER IN-CHARGE OR HIS AUTHORISED REPRESENTATIVE WILL BE INSPECTION AGENCY.

WORKMANSHIP REQUIRED:-

AS PER SCOPE OF WORK AND REQUIREMENT OF DEPTT.

MSE & MII preference will be given as per GOI guidelines.

1. The bidders are required to sign & submit Bid Securing Declaration in their company's letter head, as per attached format (Annexure-A).

2. If a tenderer quotes abnormally low bids, i.e. the quoted price is less than the lower limit of the pre-determined price and is considered for placement of order, the firm will be asked to justify the rates quoted, including the detailed price analysis of its bid price in relation to scope, schedule, allocation of risks and responsibilities and any other requirements of the RFQ. After evaluating the price analysis, if RSP determines that the bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, RSP may reject the bid proposal. However, PBG may be sought in specific cases as per clause no.46 of S

standard T&C, Para-2.

In case contract labour are deployed, the contractor shall pay Additional Welfare Amenities (AWA) in the form of allowance (not linked to wages) at the stipulated rate per day of actual attendance with a stipulated maximum amount per month to the contract labour engaged. ESI contribution shall be payable on this allowance by the contractor. Quoted rates shall be considered accordingly and no extra payment shall be made to the contractors on this account. The present AWA rate per day is Rs. 157.69 and the maximum amount of AWA per month is Rs. 4100.00.

In case of any increase in AWA as mentioned above within the period of Contract, the Contractor shall have to pay the revised/increased amount to the Contract Labours to whom AWA was being paid earlier from the date of such increase.

i) SAIL reserves the right to verify any supporting document(s) submitted by a participating tenderer/bidder from its source (document issuing authority).

ii) In the interest of expeditious completion of verification, a participating tenderer/ bidder shall provide a list of each supporting document on its letter-head as per "**Annexure-S**", along with the contact details {postal address, email address,

Landline/mobile number) of the issuing authority of each supporting document for verification.

iii) Non-verification of any supporting document or information, at the sole discretion of SAIL, does not absolve the tenderer/ bidder of its absolute responsibility to provide only genuine document(s) in support of eligibility conditions.

iv) In case a supporting document or information is found to be fake/forged/tampered/ non-genuine at any stage during tendering process & even after placement of Purchase Order/ Work Order, the tenderer/ bidder is liable for punitive actions as per extant guidelines of SAIL.

DOCUMENTS TO BE SUBMITTED

a) COPY OF EPF REGISTRATION CERTIFICATE (FOR FIRMS REGISTERED WITH OTHER THAN RSP ONLY).

b) COPY OF ESI REGISTRATION CERTIFICATE (FOR FIRMS REGISTERED WITH OTHER THAN RSP ONLY).

c) COPY OF VALID "GST" REGISTRATION CERTIFICATE MENTIONING THE NEW GSTIN ALONG WITH SAC/HSN CODES FOR THE ITEMS YOU ARE APPLYING IN THE ABOVE TENDER IN THE "RFQ".

d) DOCUMENTS IN SUPPORT OF TECHNICAL REQUIREMENTS (AS PER ELIGIBILITY CRITERIA ABOVE).

e) COPY OF VALID REGISTRATION CERTIFICATE.

GPAIS Clause:-

The contractor shall cover all his/her/their employees/ contract labors deployed against his/ her/ their contract in RSP (including Odisha Group of Mines) for Group Accident Insurance Scheme for a minimum amount of Rs. 10,00,000/- for the period of Contract as an additional welfare measure and submit the proof of the same.

ame to the executing department before deployment in job. The cost of such insurance shall be covered by the contractor in his/ her/ their Quoted price accordingly and no extra payment to this effect shall be made to the contractor by RSP.

STANDARD TERMS AND CONDITIONS (These terms will have precedence over the GENERAL TERMS & CONDITIONS mentioned SEPARATELY, if at variance)

1.,,The #General terms & conditions of contract# of Rourkela Steel Plant is applicable for this tender. Copy of these General conditions of RSP is available in the Standard documents section of SAIL Website i.e., www.sailtenders.co.in for reference. Firms submitting their tender shall be deemed to have read and understood these conditions and the same shall for all intent and purpose be deemed to form integral part of the contract and shall always be constructed accordingly.

2.1: NA;

2.2.,,If the tenderer resiles from the offer or varies the terms & conditions/rates after submission of tender but before placement of order, unless specifically asked for by RSP, the tender shall be treated as invalid and the EMD (if any) shall be forfeited. Such firms shall not be allowed to participate in any further tender for a period of one year.

3.1.,,NA;

3.2.,,The Item wise labour/Service component and supply component have been specified against each item. However, in case the tenderers assessment differs for any item, this may be declared along with the tender for evaluation accordingly.

4.,,In the event of distribution of order to more than one firm, the order will be distributed in the descending order of price ranking with the lowest tenderer getting the highest share and the highest tenderer getting the lowest.

5.,,The tenderers are advised to quote the following Registration detail in their quotation:

a),,Registration number with Rourkela Steel Plant and date till which Registration is valid.

b),,GST Registration Number.

6.,,The tenderer to indicate the details of their bank account will be included in the payment instruction, viz, Bank Account No., Type of Account (e.g. Cash Credit/ Current A/c etc.), Branch Name & Address, Bank Name & City. Tenderer to note that no change in this clause will be permitted under normal circumstance once the details are incorporated in the order.

The bidders should confirm their registration with RSP for getting E-payment. If the bidder is not registered and also not submitted the E-payment mandate in prescribed format, then they must submit the mandate with required information and document while quoting. The E-payment mandate form and notice is available on <https://www.sailtenders.co.in> against #Notice and Circular# under the #Plant Unit# as Rourkela Steel Plant.

7.,,Order finalized against this invitation to tender is subject to the terms of purchase preference clause applicable for Local Small Scale Units & Central Public Sector Enterprises (CPSE) and Joint Venture with CPSE as per prevalent guidelines.

8.,,Place of Inspection will be as per RSP's requirement.

9.,,In addition to ESI (wherever applicable), the contractor shall cover all his/her/their employees/contract laborers deployed against his/ her/ their contract in RSP (including Odisha Group of Mines) for Group Personal Accident Insurance Scheme for a minimum amount as notified from time to time by PL-CLC for the period of Contract as an additional welfare measure and submit the proof of the same to the executing department before deployment in job. The present insurance coverage amount is Rs. 10,00,000/- minimum. The cost of such insurance shall be covered by the contractor in his/ her/ their Quoted price accordingly and no extra payment to this effect shall be made to the contractor by RSP.

10., Wage payment

.,Contractors shall be required to make payment of wages to their labour/workmen directly to the Bank Accounts of the labour/workmen through electronic mode for which documentary evidence shall be produced.

.,Contractors shall be required to distribute Wage slips to their labour/workmen within stipulated time as per statute.

.,In case contract labour are deployed, the contractor shall pay Additional Welfare Amenities (AWA) in the form of allowance (not linked to wages) at the stipulated rate per day of actual attendance with a stipulated maximum amount per month to the contract labour engaged. ESI contribution shall be payable on this allowance by the contractor. Quoted rates shall be considered accordingly and no extra payment shall be made to the contractors on this account. The present AWA rate per day is Rs. 157.69 and the maximum amount of AWA per month is Rs. 4100.00. In case of any increase in AWA as mentioned above within the period of Contract, the Contractor shall have to pay the revised/increased amount to the Contract Labours to whom AWA was being paid earlier from the date of such increase .

11., The Contractor is required to pay to the workmen, the Minimum Wages notified by the appropriate government and as per circular issued by RSP from time to time and also to comply with the various provisions of the statute/law/circulars/notices applicable to them. In case they default on the payment of wages to the Workmen, RSP reserves the right to pay the workmen the said amount on behalf of the Contractors and recover the same from the Contractors bills including additional 30% administrative charges of said amount as per rules of the company. Further, in case they default on the payment of other dues or violate any other statutory provisions, RSP reserves the right to pay to the workmen/Statutory authorities the said amount on behalf of the Contractors and recover the same from the Contractors bills.

12.,Termination of contract :

If it is observed that the work of the Contract is not being carried out as per the finalized time schedule and /or workmanship/quality of work is considered poor and unsatisfactory, in that event, the Principal reserves the right to terminate the contract under intimation to the contractor and to get the balance work of the contract done through any other Agency at the Principal's option. In such an event, the extra amounts incurred by the Principal shall be recovered from the Contractor.

13., The contractor, before submission of tender/starting of the job shall inspect the site and working conditions thereof and satisfy himself after conducting thorough investigation as to the nature and amount of site work, the responsibility involved thereof and shall collect any other information as he may require from the Supervising Agency.

14., Consumables and other materials required for execution of Repair & Job Contracts (RJC)- (other than materials issued by RSP on non-chargeable basis) :

Consumables & other materials, not specifically identified in the Contract for issue on non-chargeable basis, shall be brought by the Contractor from outside the Plant, after due entry & endorsement of the challan at CISF Gate. For all items not specifically identified for issue on non-chargeable basis by the department and spelt out in the Contract, value shall be recovered from the Contractor's bills if such materials are not brought from outside against proper documents.

Only in exigencies, on case to case basis, loan from other Contractors against prior permission in writing of Head of Deptt, with complete details of such loans shall be allowed.

15.,Stores: After dismantling the Equipments, Contractor shall make his own arrangements to keep the spares or consumables safely to avoid any loss/damage during fitting.

16.,Preparatory Work: The Contractor shall plan his own programme for completing the jobs in such a manner that the entire work of dismantling/installation, fabrication/overhauling etc involved is done within the specified time. For this, the Contractor shall start preparatory work and make all their site arrangements well ahead of shutdown date and he shall be prepared to take up the job immediately after the shutdown is obtained.

17.,Testing: Contractors shall complete their jobs well in advance for testing all the equipments in the presence of the Supervising Agency/his authorized representative. The Contractor shall keep the crew for testing, and rectification, if any, required at the time of testing, till the unit is handed over to Operations. The Contractor shall ensure satisfactory running of the Plant by doing proper job. The Contractor shall follow the sequence for testing various equipments strictly to avoid any delay in

commissioning the main unit.

18.,,Drawing: All the relevant drawings referred in the technical specifications of the tender can be seen in the Planning Office of the Supervisor Agency.

19.,,Quality of Materials and Workmanship: The Workmanship, quality, nature of work rendered by the Contractor will be subject to approval of the Supervising Agency, whose decision shall be final and binding on the Contractor.

20.,,Co-operation with Agencies: There will be a number of Agencies working in the vicinity of the work area like Electrical, Refractory, Mechanical etc and Contractor should be able to adjust to the working and scheduling as per situation.

21.,,Facilities by RSP: Necessary power supply to the welding machine, drinking water connection, lightning etc will be provided to the Contractor on non-chargeable basis by the Supervising Agency at convenient places near the work site.

22.,,Vacation of site & handing over: All consumables like bolts, nuts, packing plates, pipes and structural and spares will be provided to the Contractor unless otherwise stated. However, all the tools and tackles including compressor, if required, and consumables like Oxygen, acetylene, welding rods and cleaning materials like cotton waste, Kerosene etc will have to be arranged by the Contractor at his own cost. All the scrap arising during the course of work is to be removed and shifted to a specified place shown by the Supervising Agency.

23.,,Coordination for execution of Work: The Contractor will station an Authorized Representative at the work site to supervise the job and receive the day to day communication regarding progress/development of the work from the Executing Agency/department/RSP authority and ensure line up of work accordingly.

24.,,Handling & Transportation: Necessary handling/transport facility inside the Plant, like cranes, wagons, winches, truck and scaffolding materials required for dismantling/erection will be provided to the Contractor on non-chargeable basis unless otherwise stated. For any dispute regarding the requirement of any of the above, decision of Supervising Agency shall be final and binding on the Contractor.

25.,, Labour Escalation Claim (Wherever Applicable):

During operation of the contract, if there is an upward revision of minimum wage, DA by any administrative instruction of RSP management, the contractor will be entitled to reimbursement of such additional amount on actuals. The Contractor shall submit his claim for labour wage escalation, if any, to the Executing Agency/Department based on the base date specified at SI no: 40 (escalation clause). The bills shall be verified and certified by the Executing Agency/Department as admissible as per Rules/guidelines of the company and shall be admitted by the executing agency /department and forwarded directly to the paying authority for payment. Except escalation in labour wages, the prices in this contract shall be firm. In case of wage escalation, only the following pertaining to wages paid on monthly basis are to be reimbursed to the contractor on production of supporting documents subject to statutory deductions if any.

i),,Differential basic wages and VDA,

ii),,HRA on differential basic wages.

iii),,ESI & EPF employer contribution on Differential basic wages and VDA payable. No other claim shall be entertained.

26.,,Tax Variation clause

(i) Delay attributable to RSP/Force Majeure :-

Any increase in taxes and duties on account of statutory increase, fresh imposition of any duty or taxes which take place during such extended period shall be admissible/availed of. Reductions, if any, which takes place, shall be passed onto RSP.

(ii) Delay attributable to Supplier/Contractor:-

Increase/ fresh imposition of taxes and duties during the extended period will be to the account of the party. However, the same will be admissible to the extent for which Input Tax Credit (ITC) is admissible against these levies. Any decrease in taxes and duties during the extended period will be availed of.

27.,,Statutory Rules & Regulations: The Contractor shall abide by the provisions of the Factory Act, Orissa Factory Rules, Employees Compensation Act, Contract Labour (R & A) Act and rules, EPF and MP act, ESI act

ct and all other statutory rules and regulations in vogue and keep the Principal Employer indemnified of the provisions of the above Acts and Rules.

28.,,The Contractor is required to maintain statutory/other records like employment card, service certificate etc. as per applicable statutes/directions from RSP authorities issued from time to time in respect of persons deployed at RSP. Further, the records shall be produced before RSP/Statutory authorities as and when required/demanded.

The agency is liable for disciplinary/penal actions in case of default in statutory compliances or non compliance of RSP's circular/guidelines/notices.

29.,,Contractors are required to register for verification of character and antecedents of individuals by police authorities through crime and criminal tracking networks and systems (CCTNS) portals in respect of all contract labour required to enter the RSP premises.

30.,,The contractor(s) has to arrange gate passes for their employees well in advance by complying all the prevailing rules and procedures of the company through contract executing department before start of the job.

31.,,Payment terms Unless otherwise stated, the normal payment terms will be as follows:

a),,If the job duration is more than 90 days, party shall be allowed to raise R/A bill after 30 days of commencement of job and subsequently R/A bill shall be allowed to be raised only 30 days thereafter.

b),,If the job duration is 90 days or less, total number of bills including Final Bill, shall not exceed four (04).

c),,R/A bills may be admitted up to 90% of the Work Order/ A/T value and shall be paid as follows:

i),,1st R/A bill:- 100% of the executed value as certified by the Deptt.

ii),,2nd/subsequent R/A bills:- 100% of the executed value as certified by the Deptt with CLC clearance in original in respect of preceding R/A bill, complying deposit of ESI and EPF dues by the Contractors (where contract labour are engaged).

d),,Final bill:- Balance executed value as certified by the Deptt. with CLC clearance in original, for total executed value (where contract labour are engaged)

e),,Where R/A bill is not applicable, 100% of executed value shall be released against final bill certified by the Deptt. with CLC clearance in original where contract labour are engaged.

f),,Final Bill shall be submitted by the Contractor within six months from the date of expiry of the contract.

g),, All payments shall be released against the documents/certificates issued by executing Deptt. and as per terms of payment stipulated in Work Order/ A/T.

h),,Since 10% security deposit shall be recovered from each bill including final bill, the party shall be paid 90% only of the executed value as certified by the executing deptt.

i),,In case of orders whose quantity is given in lump sum or quantity is given in a single unit, R/A bill will be allowed against the provision of billing schedule.

j),, Payment will be effected after statutory deductions as applicable.

k),,GST, if applicable shall be charged by issue of invoice for recoveries like L.D, Penalty, Hire charges, Testing/Lab charges, Infrastructure facility charges, cost of material etc.

32.,,Security deposit (SD):

Security deposit (SD) at the rate of 10% will be retained from each RA bill and final bill. the SD will be released after guarantee period against 'no dues certificate' jointly signed by the execution department and suppliers/ contractors where in the contractor will certify that," on having completed the works entrusted to us on contract in accordance with the conditions of the agreement/ contract and on having received all payments from RSP due in respect of the contract in full and final settlement except the security deposits, we hereby claim the refund of subject SD amount" and where in the department will certify that the "original CLC clearance has been retained by the department and the above claim has been verified and there are no demand against the contract in respect of stores, water charges, tools and plants" after clearance from Contract Labour Cell of RSP and compliance of statutory

provisions after deductions of any dues from the contractor arising out of any claim by SAIL/RSP on the contractor.

33.,,Liquidated Damages (LD):

If the contractor fails in the performance of contract to fulfill his obligations in time, he shall be liable to any liquidated damage on the period of delay a sum at the rate of 1.25% of the contract value for every completed week or part thereof subject to overall limit of 7.5% of Contract value.

34.,,Submission of Bills:

Bills are to be submitted to the supervising agency complete with all required documents, which may inter alia include wage sheets, ESI/EPF deposit challan/receipts, clearance of concerned departments and statutory authorities etc.

35.,,Timely performance of Contract:

i),,For capital repair jobs, the supervising agency will issue a letter to the contractor to whom the job is awarded intimating his actual start of capital repair one week in advance. The letter will specify the date of start of job and completion date. The contractor should, however, be ready to take up the job immediately after issue of LOI/ Acceptance of Tender without waiting for the letter/work order to be issued in case of urgency. In such cases, the letter/work order may be issued after the job has started.

ii),,The contractor on award of job and starting of job, shall report everyday's progress to the supervising agency and submit plan of work for next day.

36.,,Penalty on non-performance in respect of SI No. 35:

i),,If the supervising agency is not satisfied with the progress of job, he will issue a caution letter to the contractor. If there is no improvement, a reminder will be issued to the contractor. If there is no improvement even after the reminder, action will be initiated against the defaulting contractor to get the job executed at their risk and cost.

ii),,The defaulting contractor in terms of SI No (i) above will also be debarred from participation in future tenders up to a period of 12 months.

iii),,Keeping in view the time-bound nature of capital repairs, RSP reserves the right to get the job at the risk and cost of the defaulting contractor in the shortest possible time without recourse to (i) and with no further reference to a defaulting contractor and the LOI/ A/T issued will be deemed to be the notice to such defaulting contractor in respect of non-performance in such case.

37.,,Terms of delivery for repair/ supply items brought from outside plant premises must be FREE DELIVERY AT INDENTOR'S SITE, freight and insurance paid. Item wise break up of GST with MSN/SAC must be indicated. Tenderers to note that bid evaluation will be on Net Landed Cost basis. Quotations without Firm prices and submitted with Unilateral Price Variation clause are liable to be rejected/loaded suitably for bid evaluation.

38.,,For enabling us to avail GST credit on tendered items, the base rate of GST applicable, is to be indicated against each item.

If firm is quoting for Exemption/Concessional rate of GST, firm to clearly indicate that during execution of contract, if exemption/ concession is withdrawn, the impact of additional Landed cost to RSP will be absorbed by the firm. In case prices quoted are inclusive of GST (e.g. price list based items etc) the item wise GST amount with rate of GST to be clearly indicated with confirmation that necessary documents will be provided for availing GST benefit.

39.,,Engagement of persons other than contract labour :

There are certain jobs (referred to as other operational contracts like AMC etc) for which the contractor will have to engage their skilled personnel without involvement/engagement of any contract labour. In such cases, the contractor will indemnify RSP against any claim arising out of any dispute between their employee and themselves. For such cases clearance of Contract Labour Cell, RSP for payment purpose may be dispensed with. Labour wages/escalation will not be applicable in such cases.

40.,,Escalation(If applicable): During operation of the contract, if there is an upward revision of minimum wages, D.A. by any administrative instruction of RSP management, the contractor will be entitled to reimbursement of such additional amount, on actual basis subject to production of documents showing payment at that rate. The base date shall be the date of issue of NIT. No other claim shall be

entertained.

41.,,For terms not specifically mentioned in the enquiry, RSP#s general terms and conditions governing this contract will apply for any orders placed against this tender.

42.,,Tenderers should satisfy themselves about the scope of work, terms and conditions, working environment, other work in the area, before submitting their offer.

43.,,Guarantee: Unless otherwise stated, the contractor shall stand guarantee for the job executed by the m/ material supplied by them for a period of six (6) months from the date of overall completion of job. The guarantee shall be for any defects arising due to poor workmanship or using substandard material in the work.

44.,,Drawings enclosed (wherever applicable) must be returned with offer. In case, the drawings are too bulky, they can be returned separately to the executive who has signed the Invitation to Tender. RSP reserve the right to cancel the offer if drawings are not returned.

45.,,Safety Rules:

The contract executing department shall certify the usage of desired safety items and tools at the time of processing of final bill. The recoveries if any owing to non usage will also be indicated by the department in the job completion certificate while processing of the final bill.

The Contractor shall abide by the safety regulation of the Principals. He shall take all safety precautions and provide adequate supervision in order to do the job safely and without damages to the equipments. The Contractor shall report to Safety Engg.Deptt. immediately on award of contract along with contract documents and job instructions from the Supervising Agency. Safety Engg.Deptt. shall brief the Contractor on safety precautions, handover the safety rules to the Contractor and explain/clarify the points. The Contractor is not permitted to start the job without reporting to the Safety Engg. Department and without getting their clearance. The Contractor shall take safety precautions and provide adequate supervision in order to do the job safely and without damage to the equipments. He shall engage workers or do the contract job only when he is satisfied that the hazards, if any, of gas/electricity/moving machinery etc. are removed from the area of work. For this purpose, if shut-down is to be taken, he shall process for obtaining the same. The Contractor shall supply required safety appliances like safety shoesboot, ladies safety shoe, helmets, gloves etc. depending on the working condition as advised by the Safety Engg. Department from time to time and as required for the job.

Safety PPE specification

a) Industrial Safety Helmet:

Standard- As per IS 2925: 1984 and 'ISI' mark, fitted with head band with sweat-resistant lining and cotton webbing chin straps. Fitted with fully adjustable and universal fit Ratchet mechanism. Universal slots on both sides to be compatible with head & face PPE accessories.

b) Industrial Safety Shoe:

Design: Black color, design-B (ankle boot) as per IS-15298 part-2(2016) with jug loop and padded collar for comfort. ISI marked. Top protection:-Steel Toe Cap as per IS 15298. Impact resistance shall be 200J+_4J .

Sole (as per application)

1. Acid and alkali resistant, abrasion resistant, water & oil resistant, anti-skid design, shall be in accordance with IS-15298 .

2. Heat resistant: 300 deg C for 1 min.

3. Electrical resistance: not less than 15 KV.

c) FR Jacket:

Quality of cloth should meet test characteristics as per IS: 11871/1986 method-A. Jacket & Trousers material as per IS norm. GSM of cloth: between 350-375.

OR

FR Jacket / Shirt & Trousers made of 330 GSM Fire Resistant Wool & Viscose fabric having inherent fabric flame retardant material for protection against molten metal splashes confirming to latest EN ISO 11612.

d) Safety Goggle, polycarbonate confirming to EN-166 Design type: Wrap around, Optical lens type: single molded, ventilated Side shield including temple Element, light weight, 100% polycarbonate for wearing over user's glasses, Lens system: coated with anti-scratch.

e) RESPIRATOR, DUST, IS: 9473/EN-149

Standard- as per IS 9473:2002, ISI marked and FFP1S Class. Disposable respirator Low breathing resistance provides a more comfortable feel to the wearer.

f) Gloves, different types as per application:-

1. Leather cum Canvas Gloves-12" (Split): for Material handling (General purpose)

2. Leather cum Canvas Gloves-12" (Chrome): for Material handling (Mechanical) Contact with oil, grease, other dirt and General purposes

3. Leather cum Canvas Gloves-14" (Fire Retardant): For working in fire prone areas

4. Leather cum Canvas Gloves-14" (Chrome): for Material handling (Mechanical) Contact with oil, grease, other dirt and General purposes.

5. Leather Gloves-18" :for All welding and gas cutting activities.

6. Leather cum Canvas Gloves-18" Cut Resistant: during for handling of sharp sheets/objects.

7. Gloves (PVC) Acid & Alkali Proof-18": for handling Acid & Alkali.

8. Glove, Type: Non-Asbestos for high temperature resistant, overall length: 450(+/-5) mm. maximum working temperature: 1000degC, should have good mechanical strength, thermal and electrical Insulation, gloves should be comfortable for use.

Other safety terms and conditions as intimated to the Contractor vide terms & conditions of this Tender Enquiry shall also be applicable.

In addition, the for specific jobs, Departments engaging the Contractor shall supply safety appliances like gas masks and respirators for working on gas line to the Contractor, for due compliance by the Contractor's workers. It shall be the responsibility of the Contractor for returning all such safety appliances in good condition, failing which cost recovery will be made from the Contractor's bills.

In case of injury, the contractor shall first take the injured person to the OHSC, RSP. In no case, the contractors are allowed to take the injured person directly outside plant.

45.1. Penalty Clause:

A.,,The Contractor shall abide by the provisions of Factories Act. The Supervisory Agency or the Head of Safety Engg. Deptt. Upon his satisfaction that the Contractor is not conforming to the safety requirement may direct stoppage of work and require the Contractor to remedy the defects or supply the omissions as the case may be. The Contractor shall not proceed with the work until his compliance with such directions to the satisfaction of the supervising agency.

B.,,The Contractor shall be fully responsible for the accident caused due to his or his Agents or Workmen's negligence or carelessness in regard to the observance of the safety requirements and be liable to pay compensation for injuries.

C.,,The firm has to ensure provision of adequate Tools & Tackles and safety items as per IS/BIS/Equivalent standard, of reputed make, of desired quantity, with valid fitness certificate (if applicable, issued by Competent authority).

D.,,Violation if any shall call for imposition of penalty by the Executing department as under and the decision of Executing department shall be final& binding in this regard:

a) for non-use of desired tools & tackles: Rs.1000.00 per individual, per instance, per violation.

b) Rs. 3000.00 for minor violation.

c) Rs. 10000.00 for major violation.

The total penalty shall be limited to 10% of contract value.

d) For repeated violation, the firm shall be liable to be debarred from further contracts up to a period of one year. Suspension of business for a period up to 6 months. The total penalty shall be limited to 10% of contract value.

e) Major violation resulting in permanent disability/death of any person, the penalty shall be banning of business dealing with RSP or deduction of up to 10% of contract value to a minimum of Rs 50000.00 or both.

E. Head of Safety Engg. Deptt. or the Head of Deptt. executing the contract shall assess the gravity of violation and decide as to the nature of minor/major violation and impose penalty which shall be final and binding on the Contractor. The penalty amount shall be recoverable from any bill and/or EMD/SD of the Contract or.

F. Bill Payment: No bill will be forwarded to the Finance Department if a true copy of the safety induction certificate is not enclosed with the bill by the contractor. The original certificate will be kept by the department and a declaration to this effect will be given by the department in the back side of the bill.

46., If required, negotiations will be held with L-1 party only and order on one or more parties will

be placed on the basis of finalised L-1 rate. Post L-1 rate finalisation, other parties will be asked to match the L-1 rate. If a tenderer quotes unworkable rates i.e., if the quoted rate is abnormally low such that it raises material concerns as to the capability of the bidder to perform the contract at the offered rate, the party will be asked to justify the rate quoted. After evaluating the justification provided, if it is felt that the bidder has failed to substantially demonstrate its capability to deliver the contract at the offered rate, the bid / quote may be rejected.

However, under compelling circumstances where the bidder is considered for placement of order despite having quoted abnormally low prices, the bidder will give Performance Guarantee Bond (PGB) (in addition to the security deposit, if applicable) in the form of bank draft / bank guarantee.

In case the tenderers refuse to give the PGB, the following action may be taken against them: (i) If they have submitted Earnest Money Deposit - their Earnest Money Deposit will be forfeited and they will not be considered in re-tendering if order/ contract is not finalized from the present tender.

(ii) If they have submitted Bid Securing Declaration - action may be taken against them as stipulated in the Bid Securing Declaration.

47., RSP's decision regarding acceptance of whole or part or summary rejection of tenders submitted without assigning any reason shall be final and binding.

48., Tenderer should quote his GSTIN in all duty paying documents, viz, invoice/challan, consignment note s/ Rs. Similarly, RSP's GSTIN should also be indicated in the above documents. RSP's GSTIN is 21AAACS7062F2ZP.

49., Packing terms/conditions, if any, are to be mentioned in the offer.

50., In the event of tender opening date being postponed for any reason the same shall be intimated through a notice displayed at the notice board in Contract Cell (works)/ tender opening cell two (2) days in advance. The same shall also be applicable for opening of price bids, if not opened on the scheduled TOD.

51., The tenderers may seek any clarifications in writing at least 72 hours before closing time of tender submission. Otherwise it will be presumed that he is clear about all clauses in the tender conditions.

52., The Tenderer shall sign at the bottom, as token of acceptance, in each page of the tender, terms and conditions and other documents if any. The full set of documents is to be submitted in original after duly signed and stamped, in the tender box.

53., BID SECURING DECLARATION - (In lieu of EMD)

Please refer Annexure A at the end

54., NA

55., NA

56., Compliance to SA 8000 requirements Declaration by Supplier/contractors

RSP has adopted SA 8000, an international standard on Social Accountability introduced by Social Accountability International (SAI) New York, which focuses on nine areas which are useful to meet the basic interests

ts of my employees. I agree to give the following commitment to comply with the requirements of SA8000 given below in my offer.

(A),,The requirements including but not limited to:

No deployment of child labour.

No deployment of forced labour.

Providing a safe and healthy working environment.

Respecting the right of all personnel to form and join trade unions of their choice.

No discrimination based on race, caste, religion, gender, birth, union membership, political affiliation, age, national or social origin, family responsibility or marital status.

Not supporting the use of corporal punishment, mental or physical coercion and verbal abuse.

To comply with all applicable laws on working hours.

To ensure that wages are paid to meet the legal and industry minimum standards.

Control of suppliers/subcontractors, sub suppliers and Home workers.

To establish an effective management system for implementation of SA8000 standard to the extent possible.

(B),,In the event of the order placed on me, I will agree to participate in the monitoring activity by RSP, if any, to verify compliance to SA 8000 requirements.

(C),,I will identify the root cause of non-conformance w.r.t. SA8000 requirements, if any, and take necessary Corrective Action and Preventive Action.

(D),,I will inform RSP about my sub-contractors and sub-suppliers.

(E),,I will ask my supplier/sub-supplier for commitments to adhere to the SA8000 requirements. By agreeing to the terms and conditions of this tender, the tenderer shall be deemed to have agreed to abide by the requirement of SA 8000.

57.,, The tenderer shall also furnish the following details:-

Contact telephone/mobile numbers: #####..

Goods and Service Tax Identification Number (GSTIN): #####.

Income Tax Permanent Account No (PAN): #####..

E-mail Id: #####

Bank Account No: #####..

Bank Branch: #####

Name of the Bank:#####..

[For the purpose of issue of payment (cheques)]

58.,,Conciliation Clause: Any disputes, differences, whatsoever, arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this Contract shall be settled between the Employer and the Contractor amicably. If however, the Employer and the Contractor are not able to resolve their disputes/differences amicably as aforesaid the said disputes/ differences shall be settled by Conciliation, failing which, through Arbitration. Conciliator will be appointed by DIC.

Conciliation shall be resorted to prior to invoking Arbitration. The Arbitration Clause is to be invoked by the parties to the Contract only on failure of conciliation proceedings to amicably settle the disputes.

59.,, Arbitration Clause:

The arbitration shall be governed in accordance with The Arbitration and Conciliation Act 1996 (hereinafter referred to as the #Act#) of India and any amendment thereof. The language of Arbitration shall be English

h. Subject to the stipulations made hereinabove, Arbitration shall be conducted as per forum specified below:

a),,All Contracts, whose value is Indian Rs.5crore and below (for both Indian and Foreign Contractors), Arbitrator shall be appointed by the Chief Executive of the Plant or Unit (whatever designation he may be holding) and the Arbitration shall be held at Rourkela. The court of the competent jurisdiction exercising territorial jurisdiction over Rourkela shall have exclusive jurisdiction in the matter of disputes arising out of the contract.

b),,Arbitration of contracts, with Indian parties, where contract value is more than Indian Rs. 5crore and the contracts with foreign parties for value of more than Indian Rs. 5crore and up to Indian Rs.30crore shall be governed by the #SCOPE Forum of Conciliation and Arbitration# (SFCA). The venue shall be Rourkela.

c),,Arbitration with foreign contractor or in Consortium contracts (including foreign contractor), where the contract value is more than Indian Rs.30crore shall be governed by the Rules of Arbitration of International Chamber of Commerce (ICC), Paris. The venue of the arbitral proceedings shall be New Delhi. The tribunal shall be comprised of three (3) arbitrators, one (1) to be appointed by each of the parties and the third to be appointed by the two (2) arbitrators to act as the presiding arbitrator of the tribunal within one (1) month of their being appointed. In the event the parties fail to appoint their arbitrators or the arbitrators fail to appoint the presiding arbitrator in accordance with the provisions thereof, the arbitrators and / or the presiding arbitrator, as the case may be, shall be appointed in accordance with the provisions of the rules of Arbitration of The International Chamber of Commerce (ICC), Paris.

During the pendency of the Conciliation or Arbitration proceedings both the parties (i.e. the Contractor and the Employer) shall continue to perform their contractual obligations. The arbitral tribunal shall give reasons for its award. The tribunal shall apportion the cost of arbitration between the parties,

the award rendered in any arbitration hereunder shall be final and binding upon the parties. The parties agree that neither party shall have any right to commence or maintain any suit or legal proceeding concerning any dispute under this agreement until the dispute has been determined in accordance with the arbitration proceeding provided for herein and then only to enforce or facilitate

the execution of an award rendered in such arbitration. The court of the competent jurisdiction shall be Rourkela, Dist:- Sundargarh (with exclusion of all other Courts) shall have exclusive jurisdiction over all matters of dispute. Cost for arbitration is to be deposited by the claimant and in case of counter claim by the respondent. As an alternate dispute resolution mechanism, where the disputed amount is above Rs. 2Crores and up to Rs. 250Crores, the Conciliation may be held through SAIL's Scheme for Settlement of Contractual/ Commercial Disputes through Mechanism of Outside Expert Committee (OEC).

Procedure of #Settlement of Contractual/ Commercial Disputes through Mechanism of Outside Expert Committee (OEC)# prevailing at the time of proceedings shall be applicable.

60.,,Instruction to bidders for compliance to Goods and Services Tax [GST].

(i)For the purposes of this clause the following expressions shall have the following meanings:

(a) GST- means any tax imposed on the supply of goods and services under the GST law.

(b) Cess - means any applicable cess, existing or in future on the supply of Goods and Services.

(c)GST LAW- means IGST Act, GST (Compensation to the States for Loss of Revenue) Act, CGST and SGST Act, 2016 and all related ancillary legislations. You are required to provide us the HSN and SAC code of the Goods/ Services being supplied by you, as applicable. Please furnish any additional place of business, in any other State/ States from where goods may be directly supplied to us.

(ii)The tenderer shall quote GST as extra only, if applicable. In case it is not specifically mentioned in the offer, the quoted rate shall still be considered as excluding GST and GST shall be considered extra only. If exempted, the same has to be specified in the techno-Commercial Bid and evaluation shall be done accordingly. The firm, who do not have GSTIN, cannot claim GST extra. SAIL-RSP will evaluate such offers considering liability of SAIL-RSP to pay revenue tax or any tax chargeable as per law for such GST unregistered Vendors/Suppliers/Contractors.

(iii)For the purpose of this contract/agreement, price is exclusive of taxes and such taxes are payable extra, it is agreed between the parties that taxes as per GST rules shall be borne and payable by SAIL-RSP to Vendor/Supplier/Contractor in addition to the [contract price without taxes] at actual. Vendor/Supplier/ Contractor would pass on the tax benefit/savings, if any, on account of output taxes to SAIL-RSP.

(iv) Vendor / Supplier / Contractor agrees to do all things not limited to providing GST invoices or other documentation as per GST law relating to the above supply, payment of taxes, timely filing of valid statutory returns for the tax period on the Goods and Service Tax Portal etc. that may be necessary to match the invoice on GSTN common portal and enable SAIL to claim input tax credit in relation to any GST payable under this Agreement or in respect of any supply under this Agreement.

(v) In case the Input Tax Credit of GST is denied or demand is recovered from SAIL-RSP on account of any non-compliance by the Vendor/Supplier/Contractor, including non-payment of GST charged and recovered. The Vendor/Supplier/Contractor shall indemnify SAIL-RSP in respect of all claims of tax, penalty and / or interest, loss, damages, costs, expenses and liability that may arise due to such non-compliance.

(vi) GST, TDS @1% will be deducted from bills for intra-state purchases by RSP for contract value exceeding Rs.2,50,000/- for which TDS certificate will be issued by RSP as per the GST rules.

(vii) GST, TDS @1% will be deducted from bills for intra-state purchases by RSP for contract value exceeding Rs.2,50,000/- for which TDS certificate will be issued by RSP as per the GST rules. (viii) Contract involving goods and services for building, construction, fabrication, completion, erection, installation, fitting treated as service under GST and accordingly GST shall be payable.

(ix) Clause for additional input tax credit of GST available to Vendor/Supplier/Contractor

For works contract relating to movable property, GST shall be payable treating the transaction at composite supply under GST law at the rate applicable to either goods or services which constitutes the predominant part of contract.

In view of the GST implementation, as additional input tax credit will be available to the bidders, Vendor/ Suppliers/ Contractor are required to pass on the additional input tax credit on the input tax saving to SAIL-RSP.

Vendor / Supplier / Contractor is required to pass on the benefit arising out of introduction of GST, including seamless flow of Input Tax Credit, reduction in Tax Rate on inputs as well as final goods by way of reduction of price. Accordingly, for supplies made under GST, the Vendor/Supplier/Contractor should confirm that benefit of lower costs has been passed on to SAIL-RSP by way of lower prices/taxes and also provide details of the same as applicable. SAIL reserves the right to examine such details about costs of inputs/input services of the Vendor / Supplier / Contractor to ensure that the intended benefits of GST have been passed on to SAIL.

Vendor / Supplier / Contractor shall avail and pass on the benefits and concessions provided in the transitional provisions of the Goods and Service Tax Law with respect to the supplies.

Vendor / Supplier / Contractor shall avail the most beneficial notifications, abetments, exemptions etc., if any, as applicable for the supplies under the Goods and Services Tax.

For the purposes of the above-mentioned requirements, the Vendor/ Suppliers/ Contractor shall provide necessary documents as may be necessary and shall allow inspection of the same to SAIL-RSP.

61. The contractor has to submit the invoice well in advance considering the last date for availment of ITC on GST as per GST act/ rule so that SAIL-RSP will be in a position to avail GST credit. In case SAIL/RSP is not in a position to avail GST credit due to late submission of invoice, GST amount will not be reimbursed to the contractor.

62. The retrenchment benefit shall be reimbursed to the contractor(s), if the same is applicable to the concerned contract based on the engagement of Contract Labour(s) in accordance with the provisions of relevant statute and on submission of proof of payment of the said benefit by the Contractor.

Note:

1., Vendor need to ensure improvement of environmental performance, efficient use of resources, reduction of wastages & compliance to legal requirements.

2., Vendor need to ensure providing a safe work environment, minimizing the risk of downtime through accidents & compliance to legal requirements.

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ANNEXURE-A: -

FORMAT FOR UNDERTAKING TO BE UPLOADED / SUBMITTED BY THE AUTHORIZED SIGNATORY OF
THE BIDDER ON ITS LETTERHEAD ALONG WITH THE TENDER DOCUMENTS

I _____ (Name and Designation) duly authorized to sign the bid for and on
behalf of M/s _____ (herein after called the bidder) for the purpose of Tender

No _____ of (Plant/Unit _____ SAIL, Place _____), do hereby solemnly affirm and
state, on the behalf of the bidder including its constituents, as under:

I/We have read the contents of the above mentioned tender carefully and understand that my/ our offer will
be evaluated based on the documents/ credentials submitted along with the offer and same

shall be binding upon me/us. I/We undertake and warrant that in relation to the aforesaid tender, our

bid was developed genuinely, independently and made with the intention to accept the Contract, if awarded.

1. BID SECURING DECLARATION:

I/ We agree that if I/We withdraw or modify our Bid during the period of validity, or if I / We are awarded the
contract and I/ We fail to sign the contract, or to submit a performance security before the deadline defined
in the request for bids document, I/We will be liable to be suspended for a period of six months from being
eligible to submit bids against all future tenders of Plant/Unit _____ SAIL, Place _____.

2. UNDERTAKING FOR NON-COLLUSIVE TENDERING:

I/We undertake and warrant that our bid was not prepared with any agreement, arrangement, communication,
understanding, promise of undertaking with any person (including any other bidder

or competitor) regarding i)prices; ii) methods, factors or formulas used to calculate prices; iii)an intention or
decision to submit a bid; iv)an intention or decision to withdraw a bid; v)the submission of bid that does not
conform with the requirements of the tender; vi)the quality, quantity, specifications or delivery particulars
of the products or services to which this tender relates; and vii)

the terms of the bid, and we also undertake that we will not, prior to the award of the Contract, enter into
or engage in any of the foregoing.

3. SUB-CONTRACTING, WHEREVER APPLICABLE:

Disclosure in case of Job/ Project Contracts: I/We warrant that we have duly disclosed and will continue to disclose
all intended sub-contracting arrangements relating to the Tender that we are required to disclose, including
those which are entered into after the Contract is awarded.

4. AUTHENTICITY OF DOCUMENTS SUBMITTED FOR BID EVALUATION:

I/We declare that the information and documents submitted along with the tender documents by me/ us are complete and correct and I/we are fully responsible for the authenticity and correctness of the submitted information and documents. I/We declare and certify that I/we have not made any misleading or false representation anywhere in the tender submitted including the annexures thereto.

I/We understand that at any time during process of evaluation of tender or at any time after award of contract, if any information / document submitted by me / us are found to be suppressing facts / forged / false / fabricated / fudged or incorrect, it shall lead to forfeiture of the EMD/SD and Performance Guarantee, if submitted, besides any other action provided in the contract including banning under the extant Guidelines for Banning of Business Dealings of SAIL and initiating any legal action as deemed fit. Further, I/we and all my/ our constituents understand that my/ our offer shall be summarily rejected.

5. REPRESENTATION OF SINGLE / MULTIPLE FIRMS BY THE AUTHORIZED PERSON:

I/We hereby declare that I/we are not representing any other firm participating against this tender.

OR

I/We hereby declare that I/we also represent the following firm(s) participating against this tender:-

Sl No. Name of the firm

1.

2.

(Strike-off the portion which is not applicable)

6. RELATIONSHIP WITH ANY EMPLOYEE WORKING IN PLANT / UNIT CONCERNED OR DIRECTORS OF SAIL INCLUDING ITS SUBSIDIARIES:

a) I/We hereby declare that the Proprietor or any Partner of the Company or Director of our company has no relationship (within the meaning of Section-2 (77) of the Companies Act 2013) with any employee working in Plant/Unit _____ SAIL, Place _____ /any of the Directors of SAIL including its subsidiaries

OR

I/We hereby declare that the following Proprietor/Partner/Director of our company (has relationship (within the meaning of Section-2 (77) of the Companies Act 2013) with following employee working in Plant/Unit _____ SAIL, Place _____ / Directors of SAIL including its subsidiaries:-

Name of Proprietor/ Partner/

Director of our company

Name of SAIL employee/

Director of SAIL

Type of relationship

1.

2.

(Strike-off the portion which is not applicable)

b) I/We further declare that if the contract is awarded to me/us, I/we shall inform if any of my/our relative(s) as defined above, join/joins the Plant/Unit concerned or joins as Director of SAIL including its subsidiaries at any time subsequent to the award and during continuance of the contract.

7. ANTI BRIBERY MANAGEMENT SYSTEM (ABMS) DECLARATION:

I/We undertake that we shall not give or take any financial or non- financial bribe, to or from any one during the tender or during the execution of the contract thereafter and if I/We notice any such incident happening, I/We shall report to SAIL Vigilance.

8. MINIMUM LOCAL CONTENT AS APPLICABLE & LAND BORDER SHARING REQUIREMENTS, IF APPLICABLE

I/ We declare that I/We comply with the provisions of the revised Public Procurement (Preference to Make In India), Order 2017 dated 16.09.2020, as amended from time to time and also comply with the provisions of DoE Order dated 23.07.2020 with respect to the compliance related to land border sharing requirements and subsequent amendments thereto as applicable, on the date of submission of tender and at the time of Placement of Contract.

9. CONFLICT OF INTEREST (IF APPLICABLE):

I/We undertake that we shall not make any improper use of information obtained from the Purchaser with intent to gain unfair advantage in the Tender Process or for personal gain including that of our affiliates and that I/we shall suo-moto proactively declare any conflict of interest (coming under the definition mentioned above - pre-existing or as soon as these arise at any stage) in any Tender Process or execution of the contract. I/We understand that failure to do so shall amount to a violation of the code of integrity.

10. I/We declare that I /We have disclosed any previous transgressions of code of integrity with any entity in any country during the last three years or of being debarred by any other procuring entity in our bid documents. Failure to do so would amount to violation of the code of integrity.

11. I/We undertake that we have read, understood and accepted the General Terms and Conditions of Contract of Purchase (SAIL-P1) or General Terms and Conditions of Contract for Procurement of Services (SAIL S-1), as applicable and shall be binding on us in addition to other terms and conditions mentioned in the tender document.

2. Buyer Added Bid Specific SLA

File Attachment [Click here to view the file.](#)

3. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

अस्वीकरण/Disclaimer

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.
15. Any ATC clause in contravention with GeM GTC Clause 4 (xiii)(h) will be invalid. In case of multiple L1 bidders against a service bid, the buyer shall place the Contract by selection of a bidder amongst the L-1 bidders through a Random Algorithm executed by GeM system.
16. Buyer added ATC Clauses which are in contravention of clauses defined by buyer in system generated bid template as indicated above in the Bid Details section, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by GeM GTC.
17. In a category based bid, adding additional items, through buyer added additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogs or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

All GeM Sellers/Service Providers shall ensure full compliance with all applicable labour laws, including the provisions, rules, schemes and guidelines under the four Labour Codes i.e. the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020 as and when notified and brought into force by the Government of India.

For all provisions of the Labour Codes that are pending operationalisation through rules, schemes or notifications, the corresponding provisions of the pre-existing labour enactments (such as The

Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972, etc. and relevant State Rules) shall continue to remain applicable.

The Seller/ Service Providers shall, therefore, be responsible for ensuring compliance under:

- **All notified and enforceable provisions of the new Labour Codes as mentioned hereinabove; and**
- **All operative provisions of the erstwhile Labour Laws until their complete substitution.**

All obligations relating to wages, social security, safety, working conditions, industrial relations etc. and any other statutory requirements shall be strictly met by the Seller/ Service Provider. Any non-compliance shall constitute a breach of the contract and shall entitle the Buyer to take appropriate action in accordance with the contract and applicable law.

This Bid is governed by the [सामान्य नियम और शर्तें/General Terms and Conditions](#), conditions stipulated in Bid and [Service Level Agreement](#) specific to this Service as provided in the Marketplace. However in case if any condition specified in सामान्य नियम और शर्तें/General Terms and Conditions is contradicted by the conditions stipulated in Service Level Agreement, then it will over ride the conditions in the General Terms and Conditions.

जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।/In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---धन्यवाद/Thank You---