

<b>PURCHASE DEPARTMENT</b>			
<b>NOTICE INVITING TENDER</b>			
<b>ITEM ANNEXURE-I</b>			
<b>Enquiry No. 2720093E</b>			
<b>Design, Manufacture, Supply, Erection, Commissioning and Performance prove out of Special Purpose Roll Forming Machine as per Technical Specification</b>			
<b>SNo</b>	<b>Name of Item</b>	<b>Specification</b>	<b>Tender Qty (No)</b>
1.0	<b>Supply of ROLL FORMING MACHINE as per technical specification</b>	BHEL Specification as attached	1
2.0	<b>Erection and Commissioning of ROLL FORMING MACHINE as per technical specification</b>	BHEL Specification as attached	1
<b>Note:</b>			
<b>1. Quantity Tolerance: NIL</b>			
<b>2. Evaluation of offers will be on Total Cost Basis.</b>			
<b>3. Delivery Terms: F.O.R. DESTINATION (Destination: BHEL Stores, Ranipet). Packing, Forwarding, Freight, Insurance charges, E&amp;C charges and all applicable taxes to be included in quoted price.</b>			
<b>4. Supplier must mention Make and Model Number of quoted item in their quotation.</b>			
<b>5. Item Annexure-I, BHEL Specification should be submitted duly signed and stamped.</b>			
<b>6. Price for Spares or Accessories(if any) shall be quoted separately and will not be part of evaluation.</b>			
<b>SDGM/Purchase</b>			



BHARAT HEAVY ELECTRICALS LIMITED  
BOILER AUXILIARIES PLANT  
RANIPET - 632 406  
TAMIL NADU

Ref: BHEL/BAP/RFL  
Rev.No: 00

Design, Manufacture, Supply, Erection, Commissioning and Performance prove out of Special Purpose Roll Forming Machine required for manufacturing of Air-Pre Heater Heating Elements

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
1	<b>PRE-QUALIFICATION CRITERIA :</b>	
1.1	Only those bidders who have designed, manufactured, installed and commissioned at least 1 No. of Special Purpose Machine in last 15 years (Automated continuous profile formation using coiled sheets - Preferably Air Pre Heater Heating Elements) as on the initial date of opening of tender are only eligible to quote. (Reference PO copy / any other document as a proof must be submitted alongwith technical bid)	Bidder to confirm & submit us the relevant documents.
1.2	Bidder should submit at least one Performance Certificate from any of their customer (especially from Heavy Engineering / Fabrication, Public/ Private Sector companies) for satisfactory performance of the installed Automated Special Purpose Machine for a minimum period of One Year from the date of commissioning (as on the initial date of opening of tender). For obtaining performance certificate, a suggestive format is enclosed as <i>Annexure-A</i>	Bidder to confirm & submit us the relevant documents.
1.3	Only the original equipment manufacturer OR their authorized Agents / Distributors / Dealers are eligible to quote. Along with the offer, valid authorization certificate from the original equipment manufacturer should be submitted if the offer is submitted by an Agent / Distributor / Dealer.	Bidder to confirm & submit us the relevant documents.
1.4	The Offer shall contain a comparative statement of Technical Specifications given by BHEL and the Offer Details submitted by the Bidder, against each clause. A mere 'CONFIRMED' or 'COMPLIES' or 'YES' or 'NO- DEVIATION' or similar words in the technical comparative statement without any supporting technical write ups, photos, datasheets may lead to disqualification of the technical offer.	Bidder to confirm.
2	<b>INFORMATION TO BE PROVIDED BY THE VENDOR</b>	
2.1	Bidder shall provide their full contact details with Phone No. & Email ID including the address of his Agents / Service Centres (if any) in India.	Bidder to provide.

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
2.2	Number of similar kind of Automated Continuous Roll Forming Machine supplied & commissioned till date (as on the initial date of opening of tender).	Bidder to specify.
2.3	Details of Roll Forming Machine supplied to any BHEL units.	Bidder to specify.
2.4	Along with technical offer, Bidder has to furnish us few Customer Reference List including PO details, Qty, Make/ Model, Year of supply & commissioning and contact details to whom such machines/ equipments has been supplied.	Bidder to submit.
2.5	The technical offer shall be supported by complete Technical details with data sheets / Literature for the quoted Roll Forming Machine.	Bidder to submit.
2.6	BHEL reserves the right to verify the information provided by vendor, in case the information is found to be false /incorrect, the offer shall be rejected.	Bidder to confirm
2.7	Bidder should submit the filled in form as per <i>Annexure-F</i> (supplier details) attached.	Bidder to submit.
2.8	BHEL reserves the right to accept OR reject the BIDDER / VENDOR (OEM) offer based on the assessment of their technical capability.	Bidder to confirm
3	<b>TECHNICAL DETAILS:</b>	
3.1	<b>Purpose:</b> Roll forming line for continuous production (Round the clock operation) for manufacturing of Air Pre-Heater Heating Elements as per the details provided in attached Annexure-B.	Bidder to note
3.2	<b>About the Product:</b> Heating Elements (HE) are the heat transfer members of Air-Preheater and Baskets are the outer cover in which these heating elements are filled in such a way that to ensure effective heat transfer. There are different types of heating elements profiles (Refer <i>Annexure-B</i> ) and different shapes of baskets (Refer <i>Annexure-C</i> ). The length of heating elements get varied depends on its location in APH and basket shape, heat transfer characteristics etc. Two successive sheets decide the flow area through which the flue gas/ air passes. Pile up of these pair of sheets in various types of baskets constitutes the rotating part of the Air Pre Heater.	Bidder to note
3.3	<b>Heating Elements</b>	

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
3.3.1	<b>Material:</b> Carbon Steel IS 513 DD with Yield Strength 220 MPa. Corten-A (ASTM A 606) with Yield Strength 310 Mpa EN10209 with Yield Strength 270 Mpa	Bidder to note and confirm
3.3.2	<b>Size:</b> a) Thickness : Varies from 0.5mm to 1.5mm b) Coil Width : Varies from 150mm to 1250mm c) Cut Length : Varies from 140mm to 2100 mm	Bidder to note and confirm
3.4	<b>Profile Details:</b>	
3.4.1	Presently, BHEL is having 17Nos. of different Heating Element Profiles	Bidder to note
3.4.2	The machine should be capable to produce any other profiles by changing the die/rollers which will be developed in future.	Bidder to note and confirm
3.4.3	For sample profile details, refer attached <i>Annexure-B</i> .	Bidder to note and confirm
3.4.4	All details related with profiles along with drawings shall be shared with the successful bidder after placement of Purchase Order and execution of Non-Disclosure Agreement (NDA).	Bidder to note and confirm
3.5	<b>Basket Details:</b>	
3.5.1	There are various types of HE baskets having different shapes and dimensions. For Basket details, refer attached <i>Annexure-C</i>	Bidder to note and confirm
3.5.2	Max. weight of filled basket : 2 Ton	Bidder to note and confirm
3.6	<b>Raw Coil Details:</b>	
3.6.1	<b>Material:</b> Carbon Steel IS 513 DD with Yield Strength 220 MPa. Corten-A (ASTM A 606) with Yield Strength 310 Mpa EN10209 with Yield Strength 270 Mpa	Bidder to note & confirm.
3.6.2	Coil Weight : Maximum 20 Tons	Bidder to note & confirm.
3.6.3	Sheet Thickness : 0.5 mm to 1.5 mm	Bidder to note & confirm.
3.6.4	Coil Width : 150 to 1250 mm	Bidder to note & confirm.

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3.6.5	Coil Inner Diameter : 500 MM + 20 mm	Bidder to note & confirm.
3.6.6	Coil Outer Diameter : Max. 1500 mm	Bidder to note & confirm.
3.7	<b>Rolling Process</b>	
3.7.1	<p>Following activities are involved in Roll Forming Line:</p> <ul style="list-style-type: none"> <li>a) Loading of Raw Coil.</li> <li>b) Decoiling.</li> <li>c) Sheet Straightening.</li> <li>d) Shearing of each sheet to the required length.</li> <li>e) Formation of sheet profile by cold forming process.</li> <li>f) Filling the basket with pair of profiled sheets.</li> <li>g) Pressing the sheets over the basket with basket top cover.</li> <li>h) Welding of basket top cover.</li> </ul>	Bidder to note & confirm.
3.8	<b>Basic System</b>	
3.8.1	<p>The following basic components form Roll Forming Line: ( from point (a) to (k) is applicable for rolling both top and bottom sheet)</p> <ul style="list-style-type: none"> <li>a) Coil Car</li> <li>b) Decoiler</li> <li>c) Sheet Straightening System.</li> <li>d) Servo sheet feeding system to Shearing machine</li> <li>e) Hydraulic Shearing Machine</li> <li>f) Oriented start servo sheet feeding system from shearing machine to crimping station</li> <li>g) Oriented start servo crimping station</li> <li>i) Hassel free Die/roller changing facility.</li> <li>k) Exit motorized conveyor system to transport the cut sheets to basket filling area.</li> <li>l) Automated basket filling system.</li> <li>m) Hydraulic Press to press the profiled sheets in baskets.</li> <li>n) Welding system to weld basket top cover after pressing the sheets.</li> </ul>	Bidder to note & confirm.
3.9	<b>Operation</b>	

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
3.9.1	Each sheet has to be sheared first to the pre-determined length before roll forming the profile.	Bidder to note & confirm.
3.9.2	Length of HE pair is determined by the basket type. The first pair is to be sheared/cut to the required length of bottom of the basket. All the subsequent pairs are to be sheared progressively by incrementing the cut length, based on the basket shape.	Bidder to note & confirm.
3.9.3	Each cut sheet has to be fed to the respective crimping roller (profile formation unit) in such a way that there should not be any change in profile orientation. In all profiles, start point should always be same for every cut sheet. (Refer <i>Annexure-B</i> )	Bidder to note & confirm.
3.9.4	The profile of top sheet and bottom sheet are different. The top sheet & bottom sheet are to be rolled in separate roll forming line. However, while filling the basket, the pair of profiled sheets should be placed in the basket one over the other in line with start point.	Bidder to note & confirm.
3.10	<b>Configuration of Roll forming line</b>	
3.10.1	Two separate roll forming line (in opposite direction) and cut the each sheet before profile formation. For schematic, refer attached <i>Annexure-D</i>	Bidder to confirm & furnish us the details alongwith Detailed layout drawing.
3.11	<b>Mode of Operation : Automatic and Manual</b>	Bidder to Confirm
3.12	<b>Quality Requirements</b>	
3.12.1	The start point of each and every pair always need to be same for all profiles.	Bidder to note & confirm.
3.12.2	The length of each cut sheet need to be accurate with tolerance of +0/-1 mm	Bidder to note & confirm.
3.12.3	The profiled sheet shall be flat (without camber) and the length & diagonol accuracy required is +0/-1 mm	Bidder to note & confirm.
4	<b>COMPONENT DETAILS FOR ROLL FORMING LINE</b>	
4.1	<b>Coil Car</b>	
4.1.1	Coil car used to lift and transport the raw coil to decoiler unit ( clause 4.2)	Bidder to note.
4.1.2	Maximum Loading Capacity :20 Tons	Bidder to note and confirm
4.1.3	Mode of Operation : Hydraulic system	Bidder to note and confirm
4.2	<b>Decoiler</b>	

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
4.2.1	Decoiler is required to uncoil the raw coils and feed the coil sheet into the further roll forming line process. The decoiler is designed to keep the coil in the right working position and automatic synchronized with speed of the machine.	Bidder to note and confirm
4.2.2	operation in manual mode with emergency stop function near decoiler shall be provided for initial feeding.	Bidder to note and confirm
4.2.3	The decoiler shall be of fixed type, single mandrel. Arm expansion is hydraulic operated.	Bidder to note and confirm
4.2.4	Max. Loading Capacity: 20 Tons.	Bidder to note and confirm
4.2.5	Decoiler Expansion Range: 450 mm - 550 mm	Bidder to note and confirm
4.3	<b>Sheet Straightening System</b>	
4.3.1	It is required to feed the sheet into the profile formation unit and minimize plate deformation caused by the coil shape. Besides that, the straightner also eliminates internal stresses caused by winding the sheet into a coil.	Bidder to note and confirm
4.4	<b>Sheet Feeding System</b>	
4.4.1	Sheet feeder with Servo system with length programming shall be provided by the supplier at the suitable location as per clause 3.8	Bidder to note and confirm
4.5	<b>Automated Loop control for Sheet Feeding System</b>	
4.5.1	Automated Loop control shall be provided by the supplier for maintaining the uniform feeding of the sheet to the shearing machine	Bidder to note and confirm
4.5.2	Suitable sheet support system shall be provided for initial feeding	Bidder to note and confirm
4.6	<b>Shearing Machine:</b>	
4.6.1	Type: Hydraulic Shearing Machine	Bidder to note and confirm
4.6.2	Max. Coil width: 1250 mm	Bidder to note and confirm
4.6.3	Max. Sheet thickness: 1.5 mm	Bidder to note and confirm
4.6.4	Shearing Speed: Bidder to design and submit detail to match with the machine output.	Bidder to confirm and furnish
4.6.5	Capacity	Bidder to specify.
4.7	<b>Crimping Stations</b>	

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
4.7.1	The crimping (Roll Forming) machine mainly consists of embossing rolls for obtaining desired heating element profiles.	Bidder to note and confirm
4.7.2	The machine shall be capable of fitting different types of rollers with ease & quick changeover	Bidder to confirm
4.7.3	Safety feature to be provided for ensuring the safe minimum distance between rollers.	Bidder to confirm
4.7.4	For all 17 type of profiles, separate roller sets (top and bottom roller) are to be supplied by vendor	Bidder to note and confirm
4.7.5	For sample roller profiles details are attached in <i>Annexure B</i> . However complete details shall be provided at the time of Purchase order placement.	Bidder to note and confirm
4.7.6	Detailed drawing of all rollers are to be submitted to BHEL at the time of commissioning	Bidder to note and confirm
4.8	<b>Crimping stations with Servo system:</b>	
4.8.1	Crimping stations shall be provided with Servo system (Servo system with Encoder feedback) to ensure the start of the each profile sheet be the same called Oriented start	Bidder to note and confirm
4.8.2	This has to ensure the accuracy in length and diagonal as well as camber free in profiled sheet in addition to the oriented start.	Bidder to note and confirm
4.9	<b>CNC/PLC Control systems</b>	
4.9.1	Programmable system with 10" HMI (Touch Panel) with Siemens/Fanuc make CNC/PLC controls.	Bidder to confirm
4.9.2	The servo motor controls and encoders shall be used for length measurements.	Bidder to confirm
4.9.3	Length of the profile, speed of the machine, crimper speed, profile parameters etc. shall be displayed in HMI.	Bidder to confirm
4.9.4	The following operational controls shall be provided - (i) modes of operation (auto & manual) (ii) Shift wise production output	Bidder to note and confirm
4.9.5	Production output shall be recorded shift wise and day wise. Production data Storage option shall be provided for a period of atleast one month.	Bidder to confirm
4.10	<b>Exit Motorized Conveyor System:</b>	
4.10.1	Suitable conveyor system shall be designed to transport the cut sheets from roll forming line to basket filling area.	Bidder to note and confirm

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
4.11	<b>Automatic Basket Filling System</b>	
4.11.1	Profiled sheets carried by exit motor conveyor system has to be filled automatically in various types of baskets.	Bidder to note and confirm
4.11.2	Option for manual filling shall also be provided in case of failure of auto system.	Bidder to note and confirm
4.11.2	Min. and Max. dimensions of various types of baskets are indicated in attached <i>Annexure-C</i> .	Bidder to note and confirm
4.12	<b>Filled Baskets Transport System</b>	
4.12.1	Suitable motorised roller stands with sufficient length to transport filled baskets before and after Hydraulic Press shall be provided.	Bidder to confirm
4.12.2	Bidder shall decide the length of transport system before hydraulic press according to their roll forming line design.	Bidder to specify.
4.12.3	After hydraulic press, bidder shall provide transport system upto 10m length.	Bidder to confirm
4.13	<b>Hydraulic Pressing and Welding</b>	
4.13.1	After filling of baskets with pair of elements, the top cover shall be placed manually and then hydraulic press is used to press the top cover along with filled sheets in the baskets. After pressing, the top cover shall be tack welded.	Bidder to note and confirm
4.13.2	The hydraulic press shall be provided with motorised roller bed loading platform arrangement.	Bidder to confirm
4.13.3	Hydraulic pressing machine shall be provided with suitable press tools to suit the top profiles of baskets as given in <i>Annexure-D</i>	
4.13.4	Bidder shall offer a suitable capacity of hydraulic press to meet the element pressing requirement of all basket sizes and weight.	Bidder to specify.
4.13.5	After tack welding, the basket assembly shall be moved through roller transport system and welding shall be completed there.	Bidder to note and confirm
4.13.6	No. of Pressing/ Welding Station to be decided by the bidder according to the rate of production.	Bidder to specify.
4.14	<b>OPTIONAL: Automatic pressing and welding of basket top cover.</b>	Bidder should mandatorily quote separately (every option) for this optional requirement.

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
4.14.1	Automated transport system to move the filled baskets to the Hydraulic Press.	
4.14.2	Automated Hydraulic pressing system.	
4.14.3	Automated fillet welding of basket top cover after compression in hydraulic press.	
4.14.4	Automated weighing system to measure the weight of the completely filled baskets (after welding top cover) - capacity of 2 Tons and the accuracy shall be $\pm 0.2$ kg	
4.14.4	No. of Pressing/ Welding Station to be decided by the bidder according to the rate of production.	
4.15	<b>Production output:</b>	
4.15.1	Min 30 meter/minute of Raw Coil sheet roll to be decoiled for 1000 mm cut length of Heating element sheets	Bidder to note and confirm
4.15.2	Automatic measurement system shall be placed before the shearing machine to measure the production output.	Bidder to specify and confirm
4.15.3	The daily/weekly shift output shall be displayed on PLC/CNC control system	Bidder to confirm
<b>5</b>	<b>HYDRAULIC AND LUBRICATION SYSTEM</b>	
5.1	Separate Hydraulic system shall be provided for Coil Car, Decoiler, Shearing Machine and Hydraulic Press.	Bidder to confirm and submit the details.
5.2	The system shall be of Re-circulating type. All hydraulic system shall be designed to avoid any leakage or spillage.	Bidder to confirm and specify the make.
5.3	Hydraulic elements like Pumps, Valves and Switches shall be of Rexroth / Vickers/ Parker/ucan make acceptable to BHEL.	Bidder to confirm.
5.4	Filtration System: Sufficient no. of filters (with electric clogging indicator and alarm on PLC) shall be used to avoid frequent clogging of the filters and other maintenance related problems.	Bidder to confirm and furnish us the details.
5.5	Pressure Gauges and Pressure switches shall be provided to monitor failures and indication/interlock shall be given in PLC/CNC.	Bidder to confirm and furnish us the details.
5.7	Necessary overload protection shall be provided in the hydraulic system.	Bidder to confirm and furnish us the details.

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
5.8	Suitable cooling system of sufficient capacity to maintain complete Hydraulic System, hydrostatic oil etc. at a temperature not exceeding 40 deg C irrespective of the ambient conditions. Complete details should be submitted.	Bidder to confirm and furnish us the details.
5.9	Hydraulic pump capacity (flow / pressure) for every system	Bidder to specify
5.10	Each pump should have an independent motor. Tandem pumps should not be used.	Bidder to confirm.
5.11	Hydraulic, Pneumatic & Oil pipings should be preferably metallic except places where flexible pipings are essential. All the pipes required for the same shall be included in the standard scope of the machine.	Bidder to confirm.
5.12	First filling of all required Oil & Grease, etc. to be supplied by the vendor. Indigenous (Indian) source or Indian equivalent and specifications of oils/ greases are also to be provided by the vendor.	Bidder to confirm.
5.13	The lubrication system shall be centralized and forced feed lubrication. Lubrication methods for various parts shall be explained by the vendor.	Bidder to confirm and furnish us the details.
6	<b>CONTROL SYSTEM</b>	
6.1	Programmable control units (CNC/PLC/HMI) for Feeding, Shearing, Crimping, etc.. Shall be programmed by vendor for all its operations.	Bidder to confirm.
6.2	Manual Control: Complete manual control of machine with required ON/OFF switch for all operations, emergency switches, etc. shall be provided on operator's panel .	Bidder to confirm.
6.3	The CNC/HMI shall have LAN Port, USB Port, VGA/DVI/HDMI, and other industrial ports for data/Program transfers.	Bidder to confirm.
6.4	Tele-diagnosis System shall be offered to monitor, control and rectify the sytem from remote location(OEM).	Bidder to confirm.
7	<b>ELECTRICAL SYSTEM</b>	
7.1	An electric control panel including wiring, electric and electronic components shall be provided for convenient, efficient and safe operation of the machine.	Bidder to confirm
7.2	Electrical panel shall be wired neatly with DIN rails in Rittal or Equivalent make Electrical panel. Adequate capacity of Rittal or equivalent Make panel Air Conditioner shall be provided in electrical panel.	Bidder to confirm

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
7.3	Swiveling type operator's panel having complete HMI/CNC and machine control system with all displays, Controls, switches, ect.. of required configuration shall be provided and suitably located for convenient and safe operation of the machine/operator.	Bidder to confirm
7.5	Adequate air circulation using Fans/Filters shall be provided in operator panels	Bidder to confirm
7.6	Additional Operator Panels shall be considered based on convience of operation	Bidder to confirm
7.7	415V $\pm$ 10%, 50HZ, 3 Phase AC (3 wire system with out neutral) electrical power supply will be provided by BHEL at a single point near the machine. .	Bidder to note
7.9	All types of cables, connections, circuit breakers, etc. required for connecting BHEL's power supply point from isolator provided near the machine to panel and to different parts of the machine/control cabinets, shall be the responsibility of the vendor	Bidder to note and confirm
7.10	Requirement of grounding /earthing with required material details is to be informed by vendor well in advance so that same could be incorporated during construction of foundation.	Bidder to confirm.
7.11	All switches with suitable interlocks should be made avaiable within the reach of operator.	Bidder to confirm.
7.12	All displays/ indicators should also be conveniently placed accordingly.	Bidder to confirm.
7.13	Layout showing complete details, etc. shall be submitted after ordering.	Bidder to confirm.
7.14	All Motors shall conform to IEC or Indian Standards.	Bidder to confirm.
7.15	All electrical & electronic control cabinets & panels should be dust and vermin proof.	Bidder to confirm.
7.16	All cables and cable trays required shall be provided for safe layout	Bidder to confirm.
7.17	All cables/ wirings shall be of plug in type for easy maintenance wherever possible.	Bidder to confirm.
7.18	Vendor should ensure the proper earthing for the machine and its peripherals. Double earthing for panels shall be provided	Bidder to confirm.
7.19	The electrical components used shall be from a reputed international makes such as Siemens / Telemechanique / Merlin Gerin / GE/ ABB and shall be accordance with DIN/IEC Standards.	Bidder to confirm.
7.20	Adequate light fittings for electrical panels, adapters/ receptacles shall be provided which is compatible to Indian standards. 230V AC 50Hz shall be offered.	Bidder to confirm.
7.21	Tower lamp (Flashing) to identify the operation status of the machine shall be provided.	Bidder to confirm.
7.22	Total connected Load (KVA)	Bidder to Submit Details.
<b>8</b>	<b>FAULT DIAGONOSTIC SYSTEM</b>	

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
8.1	Fault Diagnostic parameters (Alarms, Messages etc.) shall be integrated with HMI/CNC/PLC	Bidder to confirm.
8.2	Tele-diagnosis System shall be offered to monitor, control and rectify the sytem from remote location(OEM).	Bidder to confirm.
<b>9</b>	<b>UNINTERRUPTED POWER SUPPLY</b>	
9.1	UPS shall be offered for safe shutdown of HMI/CNC controls during electrical power cuts with a backup time of 10 mins.	Bidder to confirm.
<b>10</b>	<b>SAFETY ARRANGEMENT</b>	
	Following safety features in addition to other standard safety features should be provided on the machine:	
10.1	Machine shall have adequate and reliable safety interlocks/ devices to avoid damage to the machine, workpiece and the operator due to the malfunctioning/mistake. Machine functions shall be continuously monitored for fault diagnosis. Alarms / Warnings / Messages/ Indications through HMI / CNC / Lamps / Alert numbers shall be provided.	Bidder to confirm.
10.2	A detailed list of all safety alarms / indications provided on the machine should be submitted by the supplier.	Bidder to confirm.
10.3	All pipes, cables, etc. on the machine should be well supported and protected. These should not create any hindrance to the movement of machine/operator.	Bidder to confirm.
10.4	All the rotating parts in the machine shall be gaurded.	Bidder to confirm.
10.5	Oil & water pipe lines shall be seperated from electrical cables in cable trenches/trays.	Bidder to confirm.
10.6	Emergency Switches at suitable locations as per International Norms shall be provided with details.	Bidder to confirm.
<b>11</b>	<b>ENVIRONMENTAL PERFORMANCE OF THE MACHINE :</b>	
11.1	Maximum noise level shall be 85 dB(A) at normal load condition, 1 meter away from the machine with correction factor for back ground noise, if necessary. This will be measured as per international standards like DIN 45635-16. Supplier to demonstrate compliance to noise level, if so required.	Bidder to confirm.
11.2	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.	Bidder to confirm.

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11.3	Paint of the machine should be oil / coolant resistant and should not peel off and mix up with coolant.	Bidder to confirm.
<b>12</b>	<b>LAY OUT AND FLOOR AREA</b>	
12.1	The approximate available area for the proposed machine is 50 m length x 10 m width.	Bidder to note
12.2	Vendor shall submit the preliminary layout drawing for getting BHEL's approval within one month from the date of Letter of Intent (LOI) / P.O. whichever is earlier.	Bidder to note and confirm
12.3	The layout should consist of all requirements pertaining to complete machine including space requirement	Bidder to confirm.
12.4	Soil condition data will be furnished by BHEL along with the approval.	Bidder to note
<b>13</b>	<b>FOUNDATION AND ANCHORING</b>	
13.1	Complete Foundation Design including details viz. static / dynamic load details etc. and Final Layout drawings shall be submitted by the supplier within three months after getting BHEL's approval	Bidder to note and confirm
13.2	BHEL shall construct complete foundation for the machine under supervision of supplier.	Bidder to confirm.
13.3	Vendor should arrange equipments required for the testing of foundation, if required	Bidder to confirm.
13.4	The vendor shall also indicate detailed specifications of grouting compound and Grouting procedure etc. for foundation bolts of the machine.	Bidder to confirm.
13.5	Complete anchoring system including foundation bolts, anchoring materials, leveling shoes etc. should be supplied by the machine supplier.	Bidder to confirm.
13.6	Rails required for horizontal traverse will be laid by BHEL. Supply do not include rails. Supplier to provide civil requirements for laying rails.	Bidder to confirm.
<b>14</b>	<b>PRE DESPATCH INSPECTION</b>	
14.1	The equipment shall be offered for inspection & functional prove out test. This shall be witness by BHEL / Third Party Agency at suppliers works for performance evaluation prior to despatch. However, Final acceptance will be given by BHEL after successful prove out test at BHEL works.	Bidder to confirm.
14.2	<b>The following documents shall be verified by BHEL team during before despatch</b>	
14.2.1	Motors data sheet	Bidder to confirm.

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
14.2.2	Internal routine test report	Bidder to confirm.
14.2.3	Material test certificates and heat treatment certificates for rollers/tools	Bidder to confirm.
14.2.4	Hydraulics functional test certificates	Bidder to confirm.
14.2.5	All electrical and insulation (IP54) related test certificates	Bidder to confirm.
14.2.6	Test plan for final factory inspection for BHEL review	Bidder to confirm.
14.3	<b>The following prove out trials shall be verified by BHEL team before despatch</b>	
14.3.1	Equipment shall be tested for its full capacity. The machine shall be tested with Corten coil of 1250 mm width and 1.5 mm thick. Raw material required for functional prove out shall be bidder's scope of supply	Bidder to submit.
14.3.2	Demonstration of all features of the machine, control system & accessories	Bidder to confirm.
14.3.3	Demonstration of the machine with all types of rollers at rated speed.	Bidder to confirm.
14.3.4	The quality of the formed profile shall be verified by BHEL team at supplier's work for acceptance	Bidder to confirm.
<b>15</b>	<b>PACKING</b>	
15.1	Sea worthy (if sailing) & rigid packing for all items of complete machine, CNC System, all Accessories and other supplied items to avoid any damage/ loss in transit. When machine is dispatched in containers, all small loose items shall be suitably packed in boxes.	Bidder to confirm.
15.1	The container shall be of top opening type and packing list shall be furnished container wise with weight.	Bidder to confirm.
<b>16</b>	<b>ERECTION AND COMMISSIONING</b>	
16.1	Installation, Commissioning and Performance prove out of the offered equipment at BHEL works are completely the scope of the bidder.	Bidder to confirm.
16.2	Transport, Boarding & Lodging charges for supplier's representative shall also be taken care by the vendor.	Bidder to confirm.
16.3	The supplier's Service Engineer shall give training in the Operation and Maintenance of the Machine to BHEL Staff, during commissioning of the machine.	Bidder to confirm.

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
16.4	Tools, Tackles, Instruments and other necessary equipments required to carry out installation & commissioning activities should be brought by the supplier.	Bidder to confirm.
16.5	All Cover Plates required for the machine and its peripherals including pits, if any, shall be supplied and installed by the vendor. The plates should be sourced from India	Bidder to confirm.
16.6	All commissioning spares required for commissioning of the machine within stipulated time shall be brought by the supplier on returnable basis.	Bidder to confirm.
16.7	Portion of the machine, accessories and other supplied items where paint has rubbed off or peeled off ( if any) during transit or erection should be repainted and merged with the original surrounding paint by the vendor. For this purpose, the vendor should supply sufficient quantity of touch-up paint of various colors of paint used.	Bidder to confirm.
16.8	Schedule, duration, terms & conditions for Erection and Commissioning shall be submitted with the offer.	Bidder to confirm.
16.9	Erection & Commissioning charges shall be quoted separately by the vendor along with their offer.	Bidder to confirm.
16.10	<b>Tests/Activities should be carried out during commissioning of the machine.</b>	
16.10.1	Equipment shall be tested for its full capacity. The machine shall be tested with BHEL supplied materials. Raw material required for functional prove out shall be bidder's scope of supply.	Bidder to confirm.
16.10.2	Demonstration of all features of the machine, control system & accessories to the satisfaction of BHEL for efficient and effective use of the machine.	Bidder to confirm.
16.10.3	Training of BHEL machine operators in operation of complete machine & accessories etc. by the supplier's engineers during their stay at BHEL works.	Bidder to confirm.
16.10.4	Demonstration by actual use of all supplied attachments and accessories to their full capacity	Bidder to confirm.
16.10.5	Demonstration of the machine with all types of rollers at rated speed.	Bidder to confirm.
16.10.6	The quality of the formed profile shall be verified by BHEL team at supplier's work for acceptance	Bidder to confirm.
17	<b>GUARANTEE</b>	
17.1	24 months from the date of commissioning of the machine at BHEL works	Bidder to confirm.

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
<b>18</b>	<b>SPARES</b>	
18.1	Mandatory mechanical, hydraulic, electrical , electronic spares and consumables required for 2 years of trouble free operation on three shift continuous running should be offered separately by the bidder.	Bidder to note and furnish
18.2	The unit cost of each spares/consumables shall also be provided in the recommended mandatory spares. The cost of the spares shall be freezed for 2 years subsequent to the Gurantee period.	Bidder to note and furnish
18.3	Tool kit required for operation and maintenance of the machine shall be provided by the supplier	Bidder to confirm
18.4	The bidder shall ensure continuous support for all types of spares and services required for total machine for atleast Five (05)years from the date of commissioning at BHEL works. If machine OR control is likely to become obsolete in this period, the vendor should inform BHEL sufficiently in advance and provide drawings of parts/details of spares & suppliers to enable BHEL to procure these in advance, if required.	Bidder to confirm
<b>19</b>	<b>DOCUMENTATION</b>	
	Five (05) sets of following documents (Hard copies) and soft copy in English language should be supplied along with the machine	
19.1	Operating manuals of machine & CNC system.	Bidder to confirm
19.2	Programming manuals of Machine & CNC system.	Bidder to confirm
19.3	Detailed maintenance manual of machine with all drawings of machine assemblies/ sub-assemblies/ parts including Electrical/ Pneumatic/ Coolant / Hydraulic circuit diagrams.	Bidder to confirm
19.4	Maintenance, Interface & Commissioning manuals for CNC system, spindle & feed drives to be provided.	Bidder to confirm
19.5	Catalogues, O&M Manuals of all bought out items including drawings, wherever applicable to be provided.	Bidder to confirm
19.6	Complete Master List of parts used in the machine shall be submitted by the vendor in English language.	Bidder to confirm
19.7	Bidder to submit full technical literature and Data Sheet of the offered Roll Forming Line.	Bidder to confirm

CL. NO.	DESCRIPTION: BHEL REQUIREMENT	BIDDER'S RESPONSE
20	GENERAL	
20.1	Machine Model No. and Make	Bidder to specify
20.2	Overall approx. dimension / Floor area required (Length, Width, Height) for complete machine & accessories	Bidder to specify
20.3	Painting of Machine / Electrical Panels : RAL 6011 Apple Green (Polyurethane Paint)	Bidder to confirm
20.4	Total weight of the machine	Bidder to specify
20.5	Weight of heaviest part of machine	Bidder to specify

**SUGGESTIVE FORMAT OF PERFORMANCE CERTIFICATE**

The Performance certificate should be certified by the customer on Customer's Letter Head. and submitted along with the TECHNICAL OFFER positively.

*(On Customer's letter head)*

**PERFORMANCE CERTIFICATE**

1. Name of the machine supplier (OEM):
2. PO No. & Date :
3. Make & Model of the Equipment :
4. Month & Year of Commissioning :
5. Quantity :
6. Equipment Details
  - a) Type :
  - b) Capacity of Roll Forming M/c :
7. Application :
8. Performance of the Equipment : Very Good/ Satisfactory / Not Satisfactory  
(Strike off whichever is not applicable)
9. After sales service : Satisfactory / Not Satisfactory  
(Strike off whichever is not applicable)
10. Any Other remarks :

Date:

Signature & Seal of the Authority  
Issuing the Performance Certificate

**Contact details of Issuing Authority**

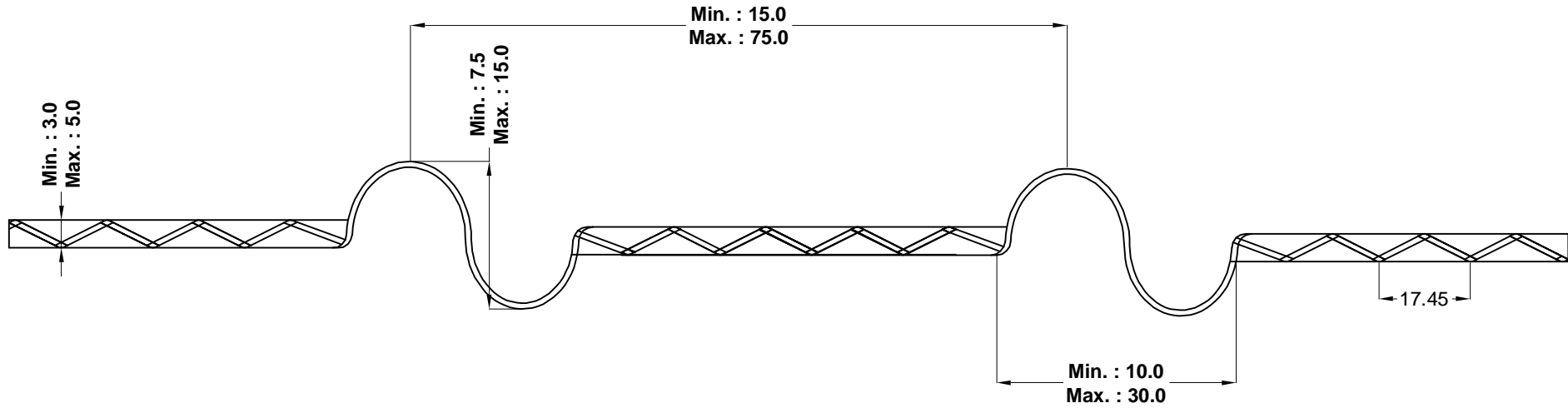
Name & Designation :

Company :

Contact No. :

Email ID :

**ANNEXURE - B**



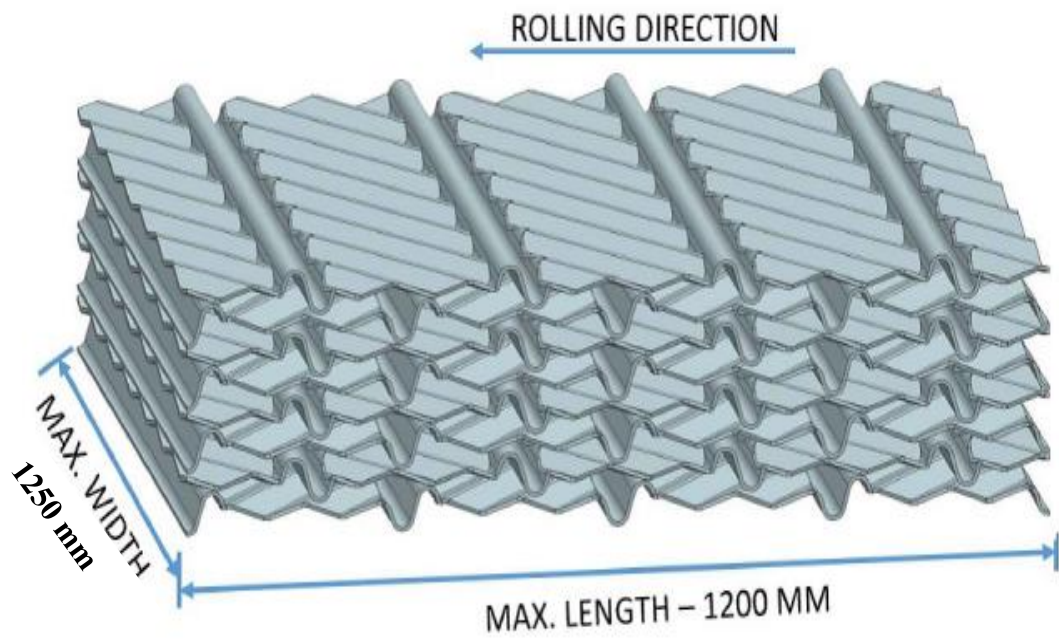
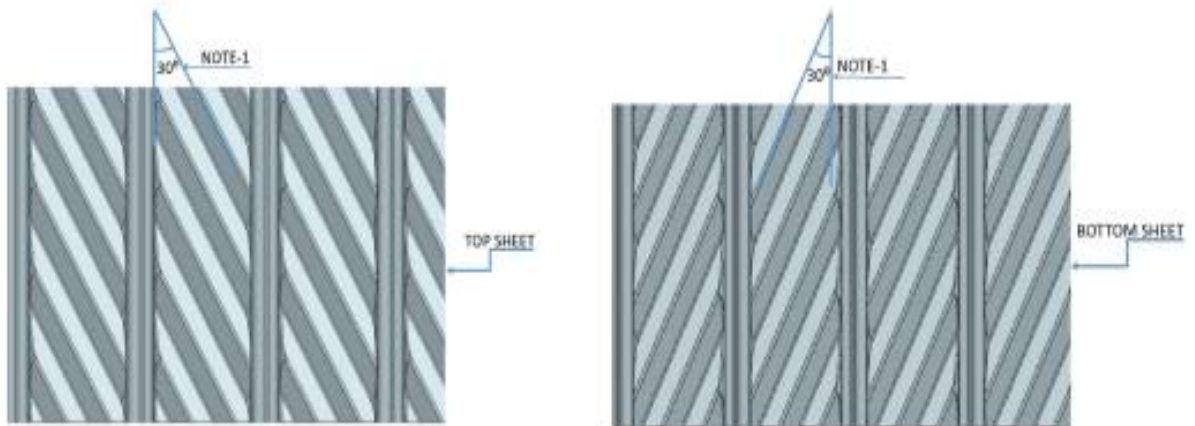
Width of sheet to be shear : Min. : 150.0  
Max. : 1250.0

Length of cut sheet : Min. : 140.0  
Max.: 2100.0

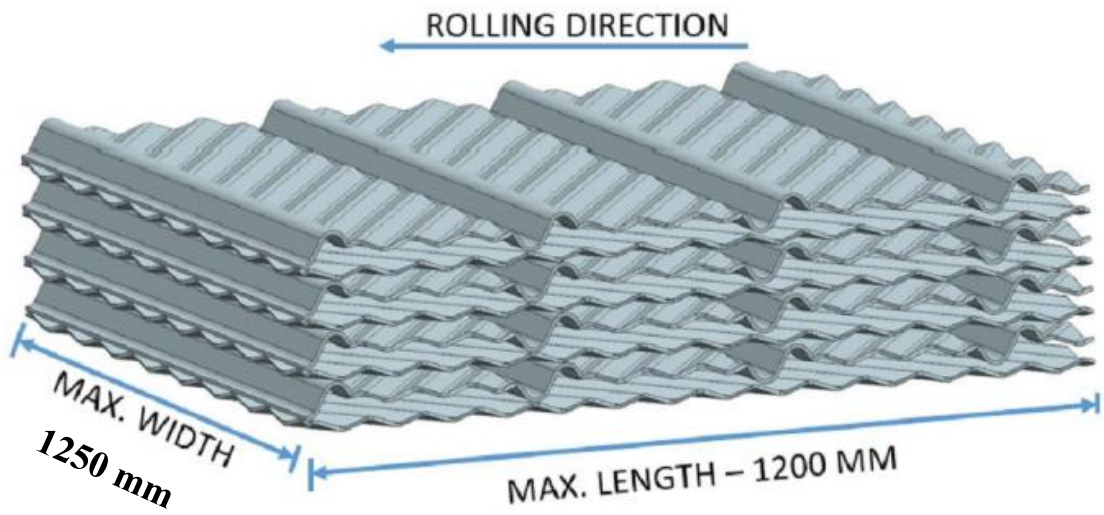
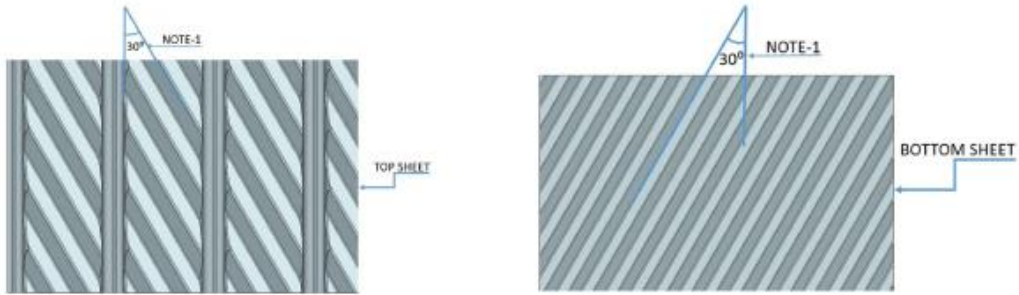
Sheet Thickness : 0.5 to 1.5

All dimensions are in MM.

Profile: A



**Profile:B**



ANNEXURE - C

Basket Details:

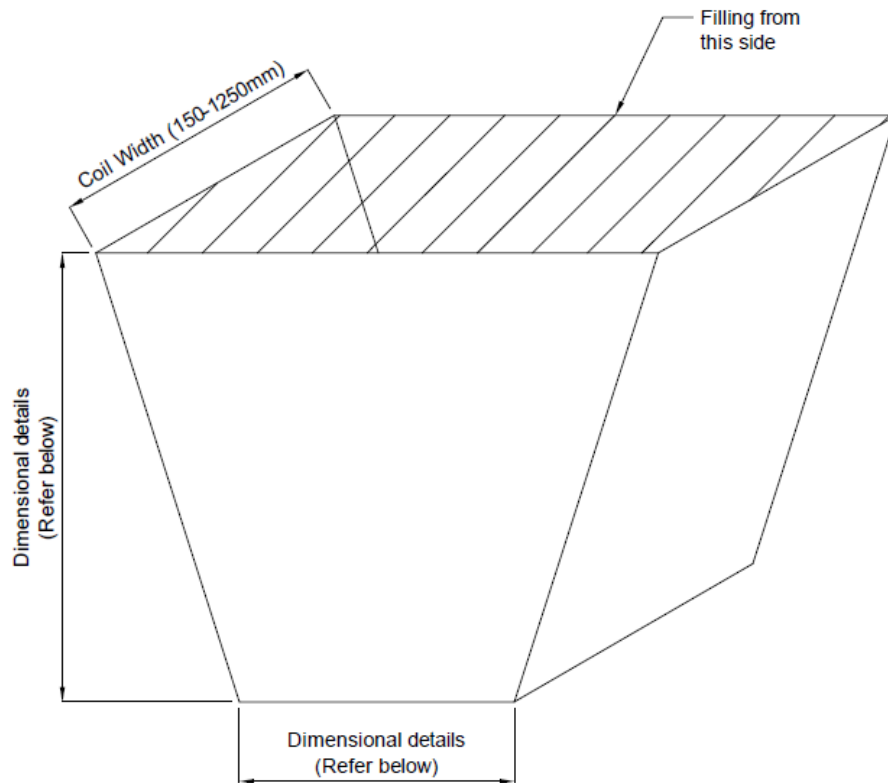
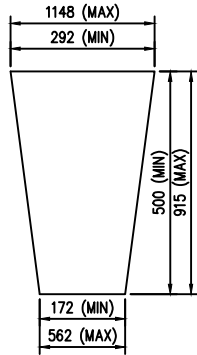


Image of Sample Basket with Top Cover

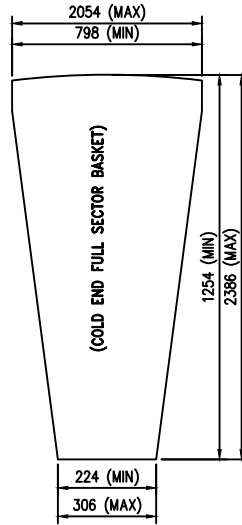


# DETAILS OF VARIOUS TYPES OF BASKETS

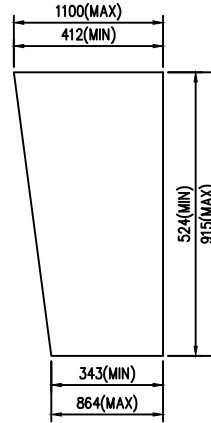
ALL DIMENSIONS ARE IN MILLIMETRES



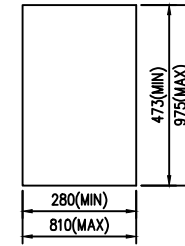
**BASKET TYPE-1**



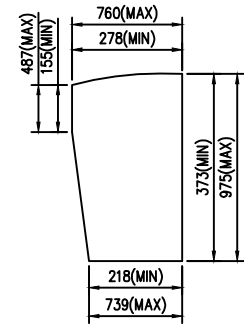
**BASKET TYPE-2**



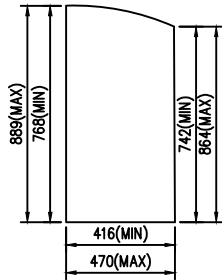
**BASKET TYPE-3**



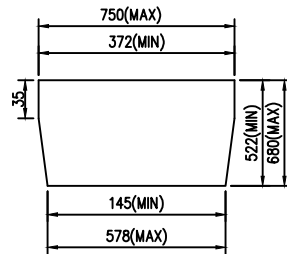
**BASKET TYPE-4**



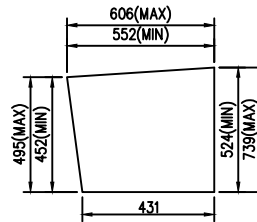
**BASKET TYPE-5**



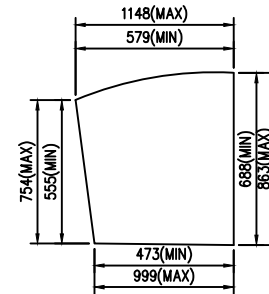
**BASKET TYPE-6**



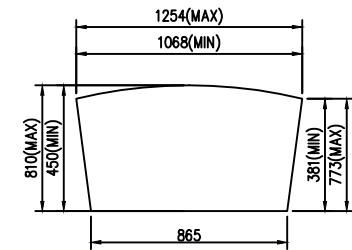
**BASKET TYPE-7**



**BASKET TYPE-8**



**BASKET TYPE-9**



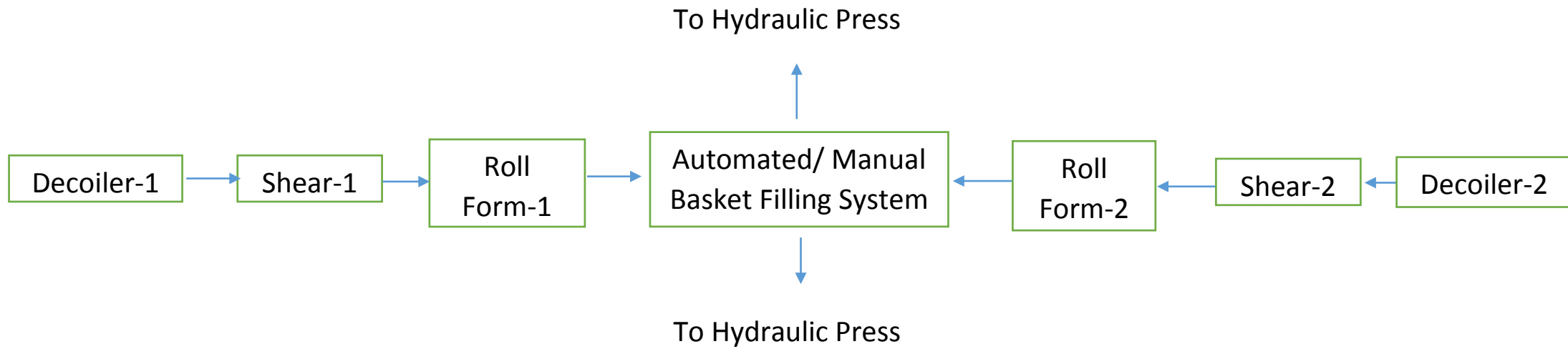
**BASKET TYPE-10**

**NOTES:**

- 01. ALL BASKETS ARE REVERSIBLE.
- 02. ALL ARC RADIUS MAY VARY FROM 1700 TO 10000 MM.

# ANNEXURE - D

## ROLL FORMING LINE – LAYOUT ARRANGEMENT





# Bharat Heavy Electricals Limited

Boiler Auxiliaries Plant  
RANIPET – 632 406, Tamil Nadu, India

Ref.: Enq. No. 2720093E

Date : 26.04.2022

## PRE-QUALIFICATION REQUIREMENT (QR) FINANCIAL SOUNDNESS

Sl. No.	BHEL REQUIREMENT	VENDOR (SELLER) CONFIRMATION
1	The bidder has to submit financial accounts (audited, if applicable comprising of Audit report, Balance Sheet, Profit & Loss A/c Statement and Notes/Schedules pertaining to Turnover/Sales/Revenue), for last three years (or from the date of incorporation, whichever is less) as on tender due date to review the above criteria. In case the incorporation of vendor is less than 3 years, average annual financial turnover shall be calculated based on available information as below:-	
i	If the accounts are available for $\leq 1$ Financial Year, the Average Annual Turnover shall be calculated based on available information divided by 1 (One).	
ii	If the accounts are available for $>1$ but $\leq 2$ Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 2 (Two).	
iii	If the accounts are available for $>2$ but $\leq 3$ Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 3 (Three).	
2	Foreign bidders to submit a latest report from reputed third party business rating agency like Dun & Bradstreet, Credit reform etc. for review of above criteria.	
3	While calculating Annual Turnover / Sales, other operating income and other income shall not be considered.	
4	For evaluation of foreign bidder, exchange rate (TT selling rate of SBI) as on scheduled date of tender opening (Part- I bid in case of two part bid) shall be considered.	
5	Average annual financial turnover during the Three Financial Years ending 31.03.2021 <b>should not be less than 8 Crores from 2016 (At least any three years from 2016).</b>	
6	Net worth of the vendor should be positive. *	
7	The current ratio should be $>1$ as per latest audited balance sheet	
8	Vendor should be profit earning company / firm (Profit / Earnings before depreciation & amortization, Interest and Tax) at least once in the last 3 years.	

**Note : For any Supplier the above said documents is Mandatory and without which submitted offer is liable for rejection.**

\*.....As per section 2 (57) of The Companies Act, 2013, net worth means the aggregate value of the paid up share capital and all reserves carried out of the profit and security premium after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off as per the audited balance sheet, but does not includes reserves created out of revaluation of assets, write back of depreciation and amalgamation.

**Signature, Seal & Date of Bidder**



## Earnest Money Deposit

**Earnest Money Deposit:** --- Tenderers will have to submit Earnest Money Deposit (EMD) for **Rs. 2,00,000/- (Rupees Two Lakh only)**. This EMD is to be submitted in the form of Demand Draft in favour of "BHARAT HEAVY ELECTRICALS LIMITED, RANIPET" payable at Ranipet. **E-payment may be accepted by bidder to the BHEL account as follows;**

NAME OF BANK	<b>STATE BANK OF INDIA</b>
BANK BRANCH ADDRESS	<b>STATE BANK OF INDIA BHEL PROJECT BRANCH MUKUNDARAYA PURAM BHEL TOWNSHIP RANIPET-632406</b>
ACCOUNT NO	<b>10664849171</b>
MICR CODE	<b>632002003</b>
IFSC CODE	<b>SBIN0007013</b>
SWIFT CODE	<b>SBININBB450</b>

**Non submission of EMD along with the offer will lead to rejection of offer.** EMD may be waived for Micro and Small Enterprises on request provided they submit notarized copies of **Udyam Aadhar** in their Techno-commercial bid.

**Note:**

- i. EMD by the Tenderer will be forfeited if, the successful bidder / vendor refuses to honour the Order after award of the same on him and/or withdraws his bid and/or unilaterally changes the offer and/or any of its terms & conditions within the validity period.
- ii. EMD given by all unsuccessful Tenderers shall be refunded on acceptance of award / LOI / PO by successful tenderer. The EMD of the successful bidder will be returned after submission of Contract Execution Bank Guarantee (CEBG) if applicable / Performance Bank Guarantee (PBG).

EMD shall not carry any interest

**INTEGRITY PACT****Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

**and**

\_\_\_\_\_, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

**Preamble**

The Principal intends to award, under laid-down organizational procedures, contract/s for \_\_\_\_\_

\_\_\_\_\_ (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint panel of Independent External Monitor(s) (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

**Section 1- Commitments of the Principal**

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
  - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
  - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
  - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

**Section 2 - Commitments of the Bidder(s)/ Contractor(s)**

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.

- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and shall await their decision in the matter.

### **Section 3 - Disqualification from tender process and exclusion from future contracts**

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process, terminate the contract, if already awarded, exclude from future business dealings and/ or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

### **Section 4 - Compensation for Damages**

- 4.1 If the Principal has disqualified the Bidder (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above, the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

**Section 5 - Previous Transgression**

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

**Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)**

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor(s) and ensure that all Sub-contractors also sign the Integrity Pact.
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

**Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors**

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

**Section 8 -Independent External Monitor(s)**

- 8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact.
- 8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.

- 8.5 The advisory role of IEMs is envisaged as that of a friend, philosopher and guide. The advice of IEMs would not be legally binding and it is restricted to resolving issues raised by a Bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some Bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process or during execution of Contract, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to the CMD, BHEL at the earliest. They may also send their report directly to the CVO, in case of suspicion of serious irregularities requiring legal/ administrative action. Only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Commission. IEMs will tender their advice on the complaints within 30 days.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code / Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs. Issues like warranty/ guarantee etc. shall be outside the purview of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

## **Section 9 - Pact Duration**

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties till the final completion of contract for successful Bidder, and for all other Bidders 6 months after the Contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

**Section 10 - Other Provisions**

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.
- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.
- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract. The fees/expenses on dispute resolution through mediation shall be shared by both the parties. Further, the mediation proceedings shall be confidential in nature and the parties shall keep confidential all matters relating to the mediation proceedings including any settlement agreement arrived at between the parties as outcome of mediation. Any views expressed, suggestions, admissions or proposals etc. made by either party in the course of mediation shall not be relied upon or introduced as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the dispute that is the subject of mediation proceedings. Neither of the parties shall present IEMs as witness in any Alternative Dispute Resolution or judicial proceedings in respect of the dispute that was subject of mediation.

-----  
 For & On behalf of the Principal  
 (Office Seal)

-----  
 For & On behalf of the Bidder/ Contractor  
 (Office Seal)

Place \_\_\_\_\_  
 Date \_\_\_\_\_

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_  
 \_\_\_\_\_

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_  
 \_\_\_\_\_

**Clause on IP in the tender****“Integrity Pact (IP)**

- (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SI	IEM	Email
1.	Shri Arun Chandra Verma, IPS (Retd.)	<a href="mailto:acverma1@gmail.com">acverma1@gmail.com</a>
2.	Shri Virendra Bahadur Singh, IPS (Retd.)	<a href="mailto:vbsinghips@gmail.com">vbsinghips@gmail.com</a>

- (b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
- (c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

**Note:**

*No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:*

Details of contact person(s):

(1)  
 Name: \_\_\_\_\_  
 Deptt: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: (Landline/ Mobile) \_\_\_\_\_  
 \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Fax: \_\_\_\_\_

(2)  
 Name: \_\_\_\_\_  
 Deptt: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: (Landline/ Mobile) \_\_\_\_\_  
 \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Fax: \_\_\_\_\_

## **Competent Authority Certificate**

As per the specification requirement and compatibility reason, the item in this tender is required from a single source. This is non-split able item. Therefore, purchase preference will be given for 100% quantity to MSE/MII (if applicable).

**Sd/-**

**SDGM/SCF and Capital**



**Make in India form-I\*\* (To be submitted In the company letter head by Indian supplier only)**

**\*\***

## **Declaration of Local Content by Local supplier**

**Subject:** Public Procurement (Preference to Make In India)

### **References:**

Preference to Make in India including counter offering will be as per the Public Procurement (Preference to Make in India), Order 2017 available in the following links <https://dipp.gov.in/public-procurements>

[http://dipp.nic.in/sites/default/files/publicProcurement\\_MakeinIndia\\_15June2017.pdf](http://dipp.nic.in/sites/default/files/publicProcurement_MakeinIndia_15June2017.pdf)

[http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017\\_28052018.pdf](http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017_28052018.pdf)

[https://dipp.gov.in/sites/default/files/PPP-MII%20Order%20dt%2029th%20May%2019\\_0.pdf](https://dipp.gov.in/sites/default/files/PPP-MII%20Order%20dt%2029th%20May%2019_0.pdf)

<https://dipp.gov.in/sites/default/files/PPP%20MII%20Order%20dated%204th%20June%202020.pdf>

We hereby declare with reference to above subject and references that

M/s ----- (Tick whichever is applicable as below)

"Class-I local supplier" meeting the requirement of minimum local content equal to 50% (fifty percent) or more defined in the above government notification for the goods and services

(or)

"Class-II local Supplier" meeting the requirement of local content 20% to less than 50% (fifty percent) defined in the above government notification for the goods and services

(or)

Non Local supplier (If not belonging to Class-I & Class-II)

Please mention the details against the following:

Enquiry no:----- dated. -----

Type of Supplier (Class-I/Class-II) .....

Product:-----

Project:.....

Details of location at which local value addition will be made is as follows:

We also understand that the false declarations will be in breach of the code of Integrity under rule 175(1)(i)(h) of the General financial rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Authorized Signature M/s-----

(Signature and seal)

Place:.....

Date:.....



**Make in India form-II**

**\*\* (To be submitted In the company letter head by all supplier) \*\***

**Subject: Public Procurement (Insertion of Rule 144 xi in the General Financial Rules 2017)**

**References:**

[https://doe.gov.in/sites/default/files/OM%20dated%2023.07.2020.pdf](https://doe.gov.in/sites/default/files/OM%20dated%202023.07.2020.pdf)

<https://doe.gov.in/sites/default/files/Clarification%20to%20order%20public%20Procurement%20NO%201%20dated%202023%20July%202020.pdf>

<https://doe.gov.in/sites/default/files/Exclusion%20from%20restrictions%20under%20Rule%20144%20xi%20of%20the%20General%20Financial%20Rules%202017.pdf>

**From.**

M/s \_\_\_\_\_

Address: \_\_\_\_\_

I/we are bidder from \_\_\_\_\_ (country). We does not belong to any of the below category mentioned.

1. Any of entity/office/workshop of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.
  2. Any of subsidiary of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.
  3. Any of entity/office/workshop of your organisation/incorporation, controlled in a country sharing land border with India, If yes, provide the full address of all such locations.
  4. Any of entity whose beneficial owner is situated in a country sharing land border with India, If yes, provide the full name, address of all such locations.
  5. Any Indian Agent available, If so, Provide details of address and contacts.
  6. Any employee/directors who is/are citizen of country sharing land border with India, If yes, provide the full name, employee code and address of all such locations.
-



7. Any of consortium/joint venture of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.

Meaning of beneficial owner

- 1) In case of a company or limited liability partnership, beneficial owner is the natural person, who, whether acting alone or together, or through one or more judicial person, has a controlling ownership interest or who exercises control through other means.

Explanation

- a) Controlling ownership interest means ownership of or entitlement to more than twenty-five percent of shares or capital or profits of the company.  
b) “control” shall include the right to appoint majority of the directors or to control the management rights or shareholder’s agreement or voting agreement.
- 2) In case or a partnership firm the beneficial owner is the natural person (s) who whether acting alone or together or through one or more judicial person, has ownership of the entitlement to more than fifteen percent of capital or profits of the partnership.
- 3) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more judicial person, has ownership of the entitlement to more than fifteen percent of the property or capital or [profits of such association or body of individual.
- 4) Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.

5) In case of a trust, the identification of beneficial owner (s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust and any other natural person exercising the ultimate effective control over the trust through a chain of control of ownership.

6) An agent is a person employed to do any act for another, or to represent another in dealing with third person.

We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India, we hereby declare that we do not belongs to any such country and are eligible to be considered.

In case, any of information is found to be false, even after bid acceptance, immediate termination may happen and action will be taken as per law.

Format is being filled without altering any of the clause mentioned in the given format

\*\*

Dated: \_\_\_\_\_

Authorised Sign and stamp \_\_\_\_\_