


CLAUSE NO.	INTENT OF SPECIFICATION																		
<p>1.0</p> <p>1.1</p> <p>1.2</p>	<p>SECTION-B</p> <p>PROVENNESS</p>																		
	<p>The Bidder / Bidder's sub-vendor(s) is required to meet the provenness criteria and/or qualification requirement for the items/ services listed below as per the stipulated criteria indicated in the respective clauses. For the purpose of qualification of Bidders / Sub-vendor(s), experience shall be reckoned as on the date of consideration for approval but not later than six months to award date of contract to the Main bidder unless otherwise specified in the respective clauses.</p> <p>Provenness Criteria/Qualifying Requirements for Equipments/Systems</p> <p>The Bidder / Bidder's sub-vendor(s) is required to meet the provenness criteria and/or qualification requirement for critical equipments, auxiliaries, systems and bought out items as per criteria stipulated below:</p> <p>Booster Fans, Slurry Recirculation Pumps, Oxidation Blowers, Wet Limestone Grinding Mills, Slurry Pumps, Agitators & Vacuum Belt Filters for the Wet Limestone based Flue Gas Desulphurisation (FGD) System offered by the Bidder shall be only from such manufacturer(s) who has previously designed (either by itself or under collaboration / licensing agreement), manufactured / got manufactured the respective equipment(s) of the type, application and minimum equipment rating as stipulated below such that the respective equipment(s) should have been in successful operation in at least one (1) plant for a period not less than one(1) year.</p>																		
<p><u>Type and Rating for Qualification</u></p>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Sl. No.</th> <th style="width: 20%;">Name of Equipment</th> <th style="width: 20%;">Type of Equipment</th> <th style="width: 20%;">Application</th> <th style="width: 30%;">Equipment Rating</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">(a)</td> <td style="text-align: center;">Booster Fans</td> <td style="text-align: center;">Axial type with variable pitch control</td> <td style="text-align: center;">Coal fired power plant</td> <td> Unit size of 500 MW – Flow 400 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.) Unit size of 210 MW & Below – Flow 225 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.) </td> </tr> <tr> <td style="text-align: center;">(b)</td> <td style="text-align: center;">Slurry Recirculation Pumps</td> <td style="text-align: center;">Centrifugal type</td> <td style="text-align: center;">Wet Limestone based FGD application in Coal fired</td> <td style="text-align: center;">Unit size of 500 MW & Above – Flow 10200 m3/hr (min.) with Head 16</td> </tr> </tbody> </table>					Sl. No.	Name of Equipment	Type of Equipment	Application	Equipment Rating	(a)	Booster Fans	Axial type with variable pitch control	Coal fired power plant	Unit size of 500 MW – Flow 400 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.) Unit size of 210 MW & Below – Flow 225 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.)	(b)	Slurry Recirculation Pumps	Centrifugal type	Wet Limestone based FGD application in Coal fired	Unit size of 500 MW & Above – Flow 10200 m3/hr (min.) with Head 16
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(a)	Booster Fans	Axial type with variable pitch control	Coal fired power plant	Unit size of 500 MW – Flow 400 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.) Unit size of 210 MW & Below – Flow 225 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.)															
(b)	Slurry Recirculation Pumps	Centrifugal type	Wet Limestone based FGD application in Coal fired	Unit size of 500 MW & Above – Flow 10200 m3/hr (min.) with Head 16															
<p>LOT-3 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE</p>	<p>TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(3)-9</p>	<p>SUB-SECTION-I INTENT OF SPECIFICATION</p>	<p>PAGE 7 OF 19</p>																

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Sl. No.	Name of Equipment	Type of Equipment	Application	Equipment Rating
			power plant	Meters of Liquid Column (min.) Unit size of 210 MW & Below - Flow 5680 m3/hr (min.) with Head 16 Meters of Liquid Column (min.)
(e)	Oxidation Blowers	Centrifugal/ positive displacement type blower	Wet Limestone based FGD application in Coal fired power plant or any other process application	Unit size of 500 MW & Above - Flow 7300 Nm3/hr Dry Basis (min.) with Head 8500 mmwc (min.) for spray tower process Or Head 3500 mmwc (min.) for bubbling type process Unit size of 210 MW & Below - Flow 5000 Nm3/hr Dry Basis (min.) with Head 6500 mmwc (min.) for spray tower process Or Head 3500 mmwc (min.) for bubbling type process
(d)	Wet limestone Grinding mills	Horizontal Wet Ball mill	Wet Limestone based FGD application in Coal fired power plant	Station size of 2001 MW - 2600 MW Capacity 40 T/hr (min.) with pulverizing fineness not less than 90% thru 325 mesh Station size of 1501 MW - 2000 MW Capacity 30 T/hr (min.) with pulverizing fineness not less than 90% thru 325 mesh

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Sl. No.	Name of Equipment	Type of Equipment	Application	Equipment Rating
				Station Size of 1000 MW -1500 MW Capacity 20 T/hr (min.) with pulverizing fineness not less than 90% thru 325 mesh
(e)	Slurry Pumps	Centrifugal type	Wet Limestone based FGD application or ash slurry application in Coal fired power plant	Unit size of 500 MW & Above - Flow 50 m3/hr (min.) with head 30 Meters of Liquid Column (min.) Unit size of 210 MW & Below - Flow 25 m3/hr (min.) with head 30 Meters of Liquid Column (min.)
(f)	Agitators	Vertical/Horizontal	Wet Limestone based FGD application in Coal fired power plant	Agitator rating not less than that supplied for 500 MW or higher size unit for similar application
(g)	Vacuum Belt filters	Belt type	Wet Limestone based FGD application in Coal fired power plant or in any other process application	Station size of 2001 MW- 2600 MW Capacity 65 T/hr (min.) Station size of 1501 MW-2000 MW Capacity 50 T/hr (min.) Station Size of 1000 MW - 1500 MW Capacity 35 T/hr (min.)

~~The provenness criteria for equipment (Booster Fans) stipulated at Sl. No. 1.2 (a) above shall also be considered acceptable provided the rating parameters (i.e., flow, head and rated rpm) is covered within the operating regime of the respective fan performance curve of the reference plant equipment.~~

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1.3	<p>The provenness criteria for equipment (Slurry Recirculation Pumps) stipulated at Sl. No. 1.2 (b) above shall also be considered acceptable provided the rating parameters (i.e., flow and head) is covered within the operating regime of the respective Slurry Recirculation Pump performance curve of the reference plant equipment.</p> <p>In case the Bidder or the proposed sub vendor is not manufacturer of proven Booster Fans as per clause 1.2 (a) above but is a manufacturer of such equipment for units of at least * MW rating, the Bidder or the proposed sub vendor shall be considered qualified for manufacturing such equipment for ** MW units also, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such equipment in India with such manufacturer who meets the requirements stipulated at clause 1.2 (a) above for the Booster Fans.</p> <p>For value of * and ** refer table below.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">*</th> <th style="width: 50%; text-align: center;">**</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">195 MW</td> <td style="text-align: center;">195 MW – 500 MW</td> </tr> <tr> <td style="text-align: center;">500 MW</td> <td style="text-align: center;">660 MW</td> </tr> </tbody> </table>	*	**	195 MW	195 MW – 500 MW	500 MW	660 MW
*	**						
195 MW	195 MW – 500 MW						
500 MW	660 MW						
1.4	<p>A JV / Subsidiary Company formed for manufacturing and supply of equipment(s) as listed at clause no. 1.2 above in India, shall also be considered qualified for manufacturing such equipment(s), provided that it has a valid collaboration or licensing agreement for design, engineering, manufacturing of such equipment(s) in India with a qualified equipment manufacturer who meets the requirements stipulated at clause 1.2 above (or the technology provider of the qualified equipment manufacturer) for the respective equipment(s). Before taking up the manufacturing of such equipment(s), the bidder/ his sub vendor(s) must create /have created manufacturing facilities at his works as per collaborator's/licenser's design, manufacturing and quality control system for such equipment(s).</p> <p>Further, in such a case, such qualified equipment manufacturers should have, directly or indirectly through its holding company/ subsidiary company, at least 26% equity participation in the Indian Joint Venture Company/ Subsidiary Company, which shall be maintained for a lock in period of seven (7) years from the date of incorporation of such Joint Venture/ Subsidiary or upto the end of defect liability period of the contract, whichever is later.</p>						
1.5	<p>In case the Bidder or the proposed sub vendor is not manufacturer of proven Oxidation Blowers as per clause 1.2 (c) above but is a manufacturer of Blowers/compressors for minimum 50 NM³/min capacity, the Bidder or the proposed sub vendor shall also be considered qualified for manufacturing Oxidation Blowers, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such Oxidation Blowers in India with such manufacturer who meets the requirements stipulated at clause 1.2 (c) above for the Oxidation Blowers. Before taking up the manufacturing of such equipment, the bidder/ his sub vendor must create /have created manufacturing facilities at his works as per collaborator's /licenser's design, manufacturing and quality control system for such equipments.</p>						

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1.6	<p>(i) In case the Bidder or the proposed sub-vendor is not manufacturer of proven Wet limestone Grinding mills as per clause 1.2 (d) above but is a manufacturer of dry Grinding mills for power or cement industry of minimum 20 T/h capacity, the Bidder or the proposed sub-vendor shall also be considered qualified for manufacturing Wet limestone Grinding mills, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such Wet limestone Grinding mills in India with such manufacturer who meets the requirements stipulated at clause 1.2 (d) above for the Wet limestone Grinding mills. Before taking up the manufacturing of such equipment, the bidder/ his sub-vendor must create /have created manufacturing facilities at his works as per collaborator's /licensor's design, manufacturing and quality control system for such equipments.</p> <p>In addition, the Bidder shall be required to furnish a letter of support from Collaborator(s) / Licensor / Technology provider for successful performance of the equipment valid up to the end of defect liability period of the contract as per the format enclosed in the bidding documents, at the time of placement of order on the approved sub-vendor.</p> <p>OR</p> <p>(ii) In case, the bidder or proposed sub-vendor is not a manufacturer of proven Wet Limestone Grinding Mills as per clause 1.2 (d) above, but have designed, manufactured & supplied dry Grinding Ball Tube mills for at least 500 MW pulverized coal fired power plant, the Bidder or the proposed sub-vendor shall also be considered qualified for manufacturing Wet limestone Grinding Mills provided it has a licensing agreement with a Wet limestone Grinding mills manufacturer who meets the requirements stipulated at clause 1.2 (d) above for the Wet limestone Grinding mills and provides extended warranty of three (3) years for the Wet Limestone Grinding Mills.</p>	
1.7	<p>In case the Bidder or the proposed sub-vendor is not manufacturer of proven Agitators as per clause 1.2 (f) above but is a manufacturer of Agitators for similar process/duty application in petrochemical or metals and mining industry, the Bidder or the proposed sub-vendor shall also be considered qualified for manufacturing Agitators, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such Agitators in India with such manufacturer who meets the requirements stipulated at clause 1.2 (f) above for the Agitators. Before taking up the manufacturing of such equipment, the bidder/ his sub-vendor must create /have created manufacturing facilities at his works as per collaborator's /licensor's design, manufacturing and quality control system for such equipments.</p>	
1.8	<p>In case the Bidder or the proposed sub-vendor is a manufacturer of Slurry Pumps who meets the requirements stipulated at clause 1.2 (e) above, the Bidder or the proposed sub-vendor shall also be considered qualified for manufacturing Slurry Recirculation Pumps, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such equipment in India with such manufacturer who meets the requirements stipulated at clause 1.2 (b) above for the Slurry Recirculation Pumps. Before taking up the manufacturing of such equipment, the bidder/ his sub-vendor must create /have created manufacturing facilities at his</p>	
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CLAUSE NO.	INTENT OF SPECIFICATION		
<p>1.9</p> <p>1.10</p> <p>1.11</p> <p>2.0</p> <p>2.1</p> <p>2.2</p> <p>2.3</p>	<p>works as per collaborator's /licenser's design, manufacturing and quality control system for such equipment.</p> <p>Before taking up the manufacturing of such equipment(s) as per clause 1.3, 1.4, 1.5, 1.6(i), 1.7 & 1.8 above, the Bidder / its sub vendor(s) must create (or should have created) manufacturing and testing facilities at its works as per Collaborator / licenser's design, manufacturing and quality control system for such equipments duly certified by the Collaborator / licensor. Further, the Collaborator / Licensor shall provide (or should have provided) all design, design calculation, manufacturing drawings and must provide (or should have provided) technical and quality surveillance assistance and supervision during manufacturing, erection, testing, commissioning of equipments.</p> <p>Bidder shall offer and supply only the type of the above equipment(s) for which it, itself or the manufacturer / Collaborator(s) / Licensor(s) proposed by the Bidder for the above equipment(s) is qualified.</p> <p>The Employer reserves the right to fully satisfy himself regarding capability and capacity of Bidder / its sub-vendor(s) and the proposed arrangement and may prescribe additional requirement before allowing manufacture of the equipment listed above for this contract.</p> <p>Note to clause 1.2</p> <p>(1) Whenever the term 'coal fired' is appearing above, "Coal" shall be deemed to also include bituminous coal/brown coal/Anthracite Coal/lignite.</p> <p>Sub QR for Civil Works:</p> <p>Bidder or its agency should have in past executed civil and structural works for * or higher capacity (applicable for project having ** MW unit rating) coal based/Lignite based power plant including earthwork in filling involving mechanical compaction and cutting in hard rock, piling, foundations, Bulk material handling plant involving underground storage hopper and underground tunnels.</p> <p>Bidder can engage more than one agency, in case the Bidder itself is not able to meet the requirement at 2.1. The agency being engaged for a particular work should have in the past executed such works of * or higher capacity plant (applicable for project having ** MW unit rating).</p> <p>For Chimney, Bidder or its agency should have in the past built at least one (1) reinforced concrete chimney of minimum 100m height.</p>		
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