



ITEM: SIGMA MIXER for Ceramic paste

Sl.No.	Parameters	Specification
1	Type of mixer	High shear, heavy duty, double arm, sigma blade (Z-blade) mixer
2	Use/applications	Mixing and kneading of high viscous ceramic materials to make extrudable paste. The mixer shall be able to produce homogeneous ceramic paste within 30 min
3	Material to be mixed	Ceramic powders such as Clay, Alumina, TiO ₂ , etc with sp. gravity of material ranging from 2 to 4 gm/cc. Particle size of powder range from submicron to 50 microns
4	Moisture content of mixed paste	10 to 20 %
5	Mixing time	15 to 30 min
5	Mixing capacity	Min 300 litres (water volume)
7	Mixing chamber/Container Type	Double trough "U" type container Details to be provided
3	Sigma Blades / Rotors	Two "Z" arm/shaped blades rotating in opposite direction with variable RPM to be provided Gap between the Sigma Blades and the Container shall be maintained as minimum as possible not more than 2mm Details of ensuring this minimum gap to provided
1	Materials of Construction	Both container and blades/rotors are to be made of SS 316 . Sigma blade shall be made of heavy duty castings. Radiography report from accredited lab to be provided
0	Dimension of mixer	Overall dimension, weight and any foundation required to be specified.
1	Machine frame/Stand	MS heavy duty structural stand free from vibration and properly levelled for holding the mixer system
2	Motor Capacity	Min 20 HP , 3 phase, 440 V AC, with suitable reduction gear box & VFD Motors & drive shall be of reputed make

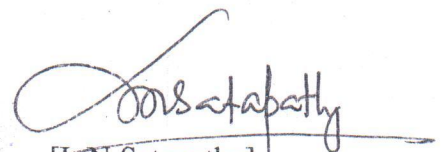
		(Siemens, ABB, NGEF, Kirlosker, PGL for motors & ABB, L&T Yasakawa, Mitsubishi, Seimens, Toshiba for VFD)
13	Jacket arrangement	The machine is to be provided with Jacket for heating or cooling the container with necessary inlet, outlet and drain sockets
14	Discharge of materials	Hydraulically operated hand liver to be provided to tilt the container for discharging materials with separate hydraulic system.
15	Lid	Top cover with locking bolts with suitable hinge fixing, manual operation in SS316 construction
16	Control panel	On/Off push button, emergency off push button, timer, speed control & indicator, Indicators for Temperature of mixing chamber to be provided
17	Safety features	All the required safety features are to be provided and incorporated in the machine
18	Installation & Commissioning	The equipment is to be installed & commissioned at our plant at Bangalore by the Vendor within 2 weeks after acceptance at BHEL store, Bangalore Installation charges shall be quoted separately in lumpsum including all expenses of Installation engineers (travel, stay, food etc)
19	Pre dispatch inspection (PDI)	BHEL representative will inspect the mixer at supplier's site before dispatch. Mixing of ceramic paste to be demonstarted during PDI.
20	Warranty	One year warranty of the equipment from the date of commissioning



[C D Madhusoodana]



[T L Thyagara]



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