'Carbonation Reactor', (ii) reuse of residual CO2 from all 'CO2 Autoclave' and 'Carbonation Reactor'. Appropriate arrangement alongside associated pipework and remote operated valves shall be provided towards the aforesaid.

The process description mentioned above is indicative in nature & successful bidder shall have to take approval of process in basic design engineering package. Also, the 'process description' is to be read in conjunction with the 'Process Flow Diagram' and 'Technical Specification' placed elsewhere in this document.

E.3. Mechanical Requirements

PART A **Supply of Raw Material Storage, Automated Batch Weighing & Feeding System**			
S.No		**Name of Equipment**	**Qty.**
1.	**Unloading system for Fly ash & Lime**	○ Type of unloading system: Pneumatic (Compressor based), ○ Compressor - Flyash: 2 x 100%, ○ Compressor - Lime: 2 x 100%, ○ Compressor Type: Twin Lobe (preferred), ○ Pipelines and accessories (long Radius bends, Flanges etc.) for feeding material into silos complete in all aspect.	1 Set.
2.	**Fly Ash Silo**	○ It will comprise of modular / welded structure silo shell unit, bottom cone assembly, heavy duty leg assembly, top cover with safety railing, ladder (Monkey Ladder with Safety cover) with provision of Manhole, Dust remover Hole, Inspection Window, Top Railing, Working Platform at Silo outlet, duly painted with Epoxy Primer and Epoxy Finish Paint, ○ Storage Capacity of each Silo: 200 m3 (Minimum), ○ MOC – Silo Cylinder: IS 2062 E250 (Grade A / B) (SAIL/TATA/JSW/JSPL), ○ MOC – Silo Cone: IS 2062 E350 (SAIL/TATA/JSW/JSPL), ○ Wall Thickness – Silo Cylinder: 10 mm (Minimum), ○ Wall Thickness – Silo Cone: 12 mm (Minimum), ○ Stress Analysis (considering buckling analysis, wind load, seismic load, corrosion allowance etc) to carried out by Qualified Structural Engineer and submitted to NTPC,	4 Nos.

		○ Accessories: Aeration system, dust filter, pressure safety valves, basalt bend, feed box, level probes, discharge gate etc	
3.	**Lime Silo**	○ It will comprise of modular / welded structure silo shell unit, bottom cone assembly, heavy duty leg assembly, top cover with safety railing, ladder (Monkey Ladder with Safety cover) with provision of Manhole, Dust remover Hole, Inspection Window, Top Railing, Working Platform at Silo outlet, duly painted with Epoxy Primer and Epoxy Finish Paint, ○ Storage Capacity of each Silo: 100 m3 (Minimum), ○ MOC – Silo Cylinder: IS 2062 E250 (Grade A / B) (SAIL/TATA/JSW/JSPL), ○ MOC – Silo Cone: IS 2062 E350 (SAIL/TATA/JSW/JSPL), ○ Wall Thickness – Silo Cylinder: 10 mm (Minimum), ○ Wall Thickness – Silo Cone: 12 mm (Minimum), ○ Stress Analysis (considering buckling analysis, wind load, seismic load, corrosion allowance etc) to carried out by Qualified Structural Engineer and submitted to NTPC, ○ Accessories: Aeration system, dust filter, pressure safety valves, basalt bend, feed box, level probes, discharge gate etc	3 Nos.
4.	**Fly Ash & Lime Feed System**	It will feed fly ash and lime into the 'mixer' and shall be complete in all aspects. ○ Type of Feed System: Screw Feeder ○ MOC of Screw / Sleave: Surface hardened Carbon Steel / Carbon Steel with Powder Coating ○ Control: Gearbox & VFD ○ Diameter, Speed & Length: Suitable for capacity 2 Lakh/Day (at least) C-Brick Plant	7 Set (4 Fly Ash+3Lime)
5.	**Water Feed System**	It will feed water into the 'mixer' and shall be complete in all aspects alongside timer based solenoid operated valve, water pump, flow meter, pipework etc ○ Pipes & Valves: Carbon Steel / CPVC ○ Tank Capacity / Material: 5 KL (Minimum) / HDPE ○ Pump: Self Priming	2 Set (1 for Sun and Planetary + 1 attrition mixer)
6.	**Fly Ash & Lime Weighing System**	'Load Cell' based with PLC control	5 Set (Fly Ash Silo-2+Lime Silo-3)
7.	**Pneumatic**	Auto gates for discharging Fly Ash, Lime & Water from	5 Set