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GST Number: 36AAAAI2661J1ZP

Date: 22/11/2022

Clarification02

1. It is notified to all concerned parties that with reference to **Tender No.** IITH/CE/ SURIYAP/2022/O/T069 dated: 07/11/2022, specifications are revised/updated, bidders have to submit the bid for the below specifications.

TECHNICAL SPECIFICATIONS OF 12000 kN COMPRESSION TESTING MACHINE

A ultra-stiff four post load frame-based compression testing machine rated to deliver loads ranging from 100 to 12,000 kN is required. Surface hardness of loading platens should be sufficient to test specimens (columns, walls, bearings) made of ultra-high-performance concrete, composites and steel.

Sr. No.	Description	Specification
A	**1200 TON (min.) HYDRAULIC COMPRESSION TESTING MACHINE (CTM)**	**01 No**
1	Bed Size	Minimum working area 1000 x 1000 mm
2	Day Light Area	2000 mm
3	RAM Stroke	400 mm (min.)
4	Cross head movement	1000 mm (min.)
5	Four Post System	Minimum of 250 mm solid bars of EN 24 grade or better
6	Dimension	1600 x 1600 x 4000 mm or better
7	Weight	A minimum of 30 Ton (Approximately)
B	**Hydraulic Power Pack**	**01 No.**
1	Tank	1500 Ltrs
2	Motor ABB Make Flange Mounted III Phase 415V	50H.P + 3H.P. MOTOR (to bring the piston to home position at higher speed)
3	Polyhydron/Rexroth/Vickers/Parker Make Piston Pump	48 LPM 315 Bar
4	Yuken/Vickers Make Vane Pump	170 LPM 175 Bar
5	Bell Housing	HIC/ Jacktech Make Compatible
6	Extension Bracket	HIC/ Jacktech Make Compatible
7	PCM (Pressure Control Module) or solenoid operated DCV	Polyhydron / Yuken Make
8	Return Line Filter	Hydroline / Hydac Make

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9	Manifold Block	Machined blocks
10	Directional Control Valve	Yuken Make
11	Counter Balancing Valve	Yuken / Polyhydron Make
12	Pilot Operated Check Valve	Polyhydron Make
13	Pressure Switch	Polyhydron Make
14	Limit Switch	Jai Balaji/ Salazar Make
15	Suction Filter	Hydroline Make
16	Gear Coupling	Should be Compatible
17	Air Breather	Hydac/ Hydroline Make
18	Oil Level Indicator	Hydac/ Hydroline Make
19	Fittings	Gem/ Hyfit Make
20	Piping	Gem Make

C	**Hydraulic Main Cylinder (Minimum Specs)**	**01 No.**
1	Cylinder's OD	1000 mm
2	Cylinder's ID	850 mm
3	Cylinder's Rod	850 mm
4	Cylinder's Stroke	400 mm
D	**Electrical Control Panel:** To Operate 50 HP Motor and Solenoid Operated Directional Control Valves. Fully Loaded with all requirements accordingly	**01 No.**
E	**Accessories inbuilt in Power Pack:** Double Bell-Housing, Double Gear Coupling, Double Oil Level Indicator, Air Breather, PressureGauge, Suction Filter etc of reputed make.	**01 Set**
F	**Digital Automation:** Controller and software will be used to control the proportional valve to digitally control the Displacement and Load applications Should be able to take load and displacement data as a current / voltage output and import into an external DAQ unit (HBM, NI or similar) Sampling rate / data acquisition rate (maximum rate of at least 500 Hz) A software interface should be provided to operate the equipment using a laptop or desktop computer. Alphanumeric display with backlite, displaying - Actual Load / Peak load, Rate of loading and Calculated load in N/mm^2 (as soon as sample fails) shall be provided.	

G	**Other Features** • Machine should have displacement control rate of 1 – 10 mm/min and load control rate of 0.1 to 10 kN/s. • Machine should have Chain Sprocket or other equivalent system for movement of cross head to achieve any clearance (day light) up to 1 Meter • Counterbalance valve shall be there at head lift cylinder for safety. • Emergency stop shall be provided at operator panel and power pack for safety. • Proportional valve or a better one for pressure control. Rope switch at machine front side for safety.	

Typical Desirable Arrangements for the Large Scale CTM

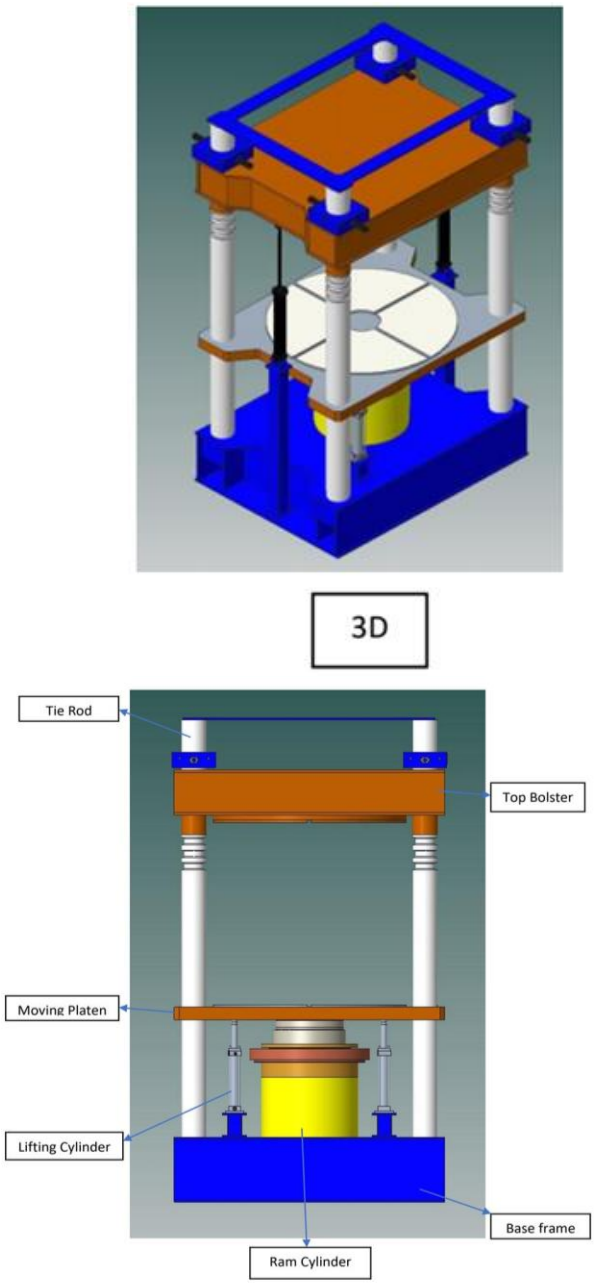

Figure 1: Typical Large Scale CTM with Jack, Base Frame and Top Bolster Arrangements. It can also have

Chain Sprocket System for movement of cross head to achieve any clearance (day light) up to 1 Meter

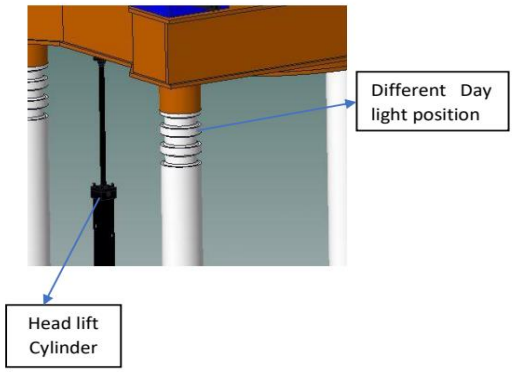

Figure 2: Locking Arrangements at the top to fix different Daylight Position

		Existing	Amended to
	Bid Submission Close Date	29/11/2022 @11:00 hrs	05 / 12/2022, 11:00 hrs
	Opening of Technical Bids	29/11/2022 @11:10 hrs	05 / 12/2022, 11:10 hrs

2. All other terms and conditions of the tender remain unchanged. Bidders, who have already submitted their bids prior to issue of this corrigendum need to submit again if required.