Central Glass & Ceramic Research Institute
KOLKATA (WEST BENGAL) INDIA

CORRIGENDUM

REFERENCE NO. :- P/NC/123/AA (NARODA)/DB/GTE/21-22

DATE: 28/02/2022

NAME OF EQUIPMENT: SIMULTANEOUS TG-DTA (AMBIENT TO 1500^{o} C ALONGWITH STANDARD ACCESSORIES

CONSEQUENT TO THE PRE-BID MEETING HELD ON 18.02.2022, THE REVISED SPECIFICATION OF "SIMULTANEOUS TG-DTA (AMBIENT TO 1500^{o} C ALONGWITH STANDARD ACCESSORIES" IS GIVEN OVERLEAF:

With reference to the tender enquiry **P/NC/123/AA (Naroda)/DB/GTE/21-22**, following clauses may be read as follows instead as mentioned in the tender document.

Page No. 8 under TERMS AND CONDITIONS of our Tender Document

Para: Firm must submit:
Point No. IV may be read as follows:

Existing Clause	New Clause
The bidders will have to provide the details of Indian Customers with whom the quoted model or substantially equivalent models have been supplied mentioning the customers contact, address, phone, e-mail etc.	**The bidders will have to provide the details of Indian Customers with whom the quoted model or substantially equivalent models meeting to tender specifications (at least 5 systems) have been supplied in last 5 years mentioning the customers contact, address, phone, e-mail etc.**

Revised technical specifications of "SIMULTANEOUS TG-DTA (AMBIENT TO 1500^{O} C ALONGWITH STANDARD ACCESSORIES" after Pre-bid meeting held on 18/02/2022.

Detailed specification of Simultaneous TG-DTA (Ambient to 1500°C) along with standard accessories.			Quantity
a.	Temperature measuring range	Ambient to 1500°C	**1**each
b	Type of Furnace	Suitable furnace design with **Pt-Rh** heating elements. The furnace movement, opening and closing shall be controlled through software or push button or **manual**	
c	Temperature accuracy	± 1°C or better	
d	Heating rate	0.1 to 50°C /min or more up to max. Temperature.	
e	Balance resolution	0.2 µg or better	
f	TG Balance drift/balance stability	<40 µg	
g	TGA Balance Accuracy	≤± 1% or better.	
h	Measurable range TG	± 200 mg or better	
i	Measurable range DTA	±1000micro V or better	
j	Atmosphere-	Air, oxygen and inert gases Should be able to perform measurements under Air, oxygen and inert gases in Dynamic or Static.	
k	Flow controller	The system should have the facility to purge inert gases for protecting balance as well as to purge 2 gases to sample chamber during analysis if we have to do part of the experiment in inert gas and other in air/oxygen with automatic gas purging and sweeping during sample runs with necessary built in **Mass Flow controller (Software controlled)** to control the flow rates. Provision for control gases (inert gas and air/ oxygen) through software for gas flow setting and auto switch over at set time or temperature. Flow rate- 0.1 – 100 ml/min.	
l	Software for measurement, data collection and analysis	**Measurement** – All the parameters like TGA, DTG, DTA could be measured and displayed on the screen. The software should have the flexibility to measure data with respect to temp and/or time. Measuring condition input, temperature programming (20 steps or more) Measurement start, hold, end, option for Stepwise isothermal analysis, Dynamic rate	1 each

		control method, Constant rate control method. **Analysis-** Various calculations like mass change (mg/%), derivative calculations, peak area, on set point, on set temp, endpoint, peak point, base line correction, add, subtract, display of more curves on the screen, smoothening of data, slope adjustment, overlay of curves should be built in. Option for export data in excel or other suitable format. The system shall have provision for calculated DSC in software and additional features if any.	
Scope of supply & incidental services: **As per above tech specification and items mentioned below.**			
a. **Standard accessories**: At least 3 Calibration standards for temperature calibrations from RT to maximum temperature and one calibration standard for mass loss calibration (Calcium oxalate/Calcium carbonate) along with standard alumina required.			**1 set**
b. **Platinum or Pt-Rh cylindrical Sample pans** suitable for clay, ceramic, glaze or frit.			**10 nos.**
c. **Consumables- Cylindrical alumina sample pans**			**20 nos.**
d. **Installation, commissioning, demonstration** and training to 2 to 3 persons (For 3-5 days) should be performed **at CSIR-CGCRI, Naroda Centre, Ahmedabad** by factory trained Engineer.			
e. **Complete operational and service manual in English** for main instrument and accessories.			
f. **Following items also required to be supplied by the firm along with the main equipment**			
i) **Computer** : **Window 10** based computer compatible with all applications using supplied TG-DTA (Min. Configuration of **i5 or above, Screen Size, 19 inch, 1 TB, 8GB RAM, USB ports min.2 nos. or more, Additional drive CD/DVD for software installation, Video card as per the requirement**)			**1 No.**
ii) **Colour Laser jet Printer**			**1No.**
iii) **5 KVA UPS with at least 30 minutes back up.**			**1No.**
iv) **iv**. Necessary **Gas cylinders (Air & N_2- suitable Grade for indented application), suitable regulators, pressure gauges, tubing's** (for Conducting experiments in air & N_2).			**1 each**

The above amendments shall amount to amendments of the relevant terms of our Bid Document for CGCRI Tender No. **P/NC/123/AA (NARODA)/DB/GTE/21-22 .**

All the other Tender terms remain unchanged.

(Anjani Kr. Pandey)
Stores & Purchase Officer

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