

File Ref. No. PUR/IICT/0481/24-25/EQPTDt: 18-07-2024
CPPP Tender ID : 2024_CSIR_200927_1

Minutes of Pre-Bid Conference (PBC) held on 18-07-2024 for proposed procurement of "Supply, installation and commissioning of "AUTO CLAVE REACTOR SYSTEM – 3 Nos."

Chairpersons / Members of the Technical Sub Committee (TSC) present during PBC including domain experts present during PBC:-

1. Dr. N.Lingaiah, Chairman
2. Dr.PratyayBasak, Member
3. Dr.G.Jithender Reddy, Member
4. Sri. D. Venkateswara Rao, Member
5. Dr.SreepriyaVedantam, Member
6. IO Sri. B. Vijaya Thomas
7. PL –Dr. L. Ravithej Singh

Representatives of the following firm attended the PBC:

1. M/s Amar Equipment Pvt. Ltd Mumbai (Personal & Mail)
2. M/s KLB Instruments Co. Pvt Ltd. New Delhi (Mail)
3. M/s —
4. M/s —
5. M/s —

The following points were discussed during the PBC:

Query raised by M/s. Amar Equipment Pvt. Ltd and response of CSIR-IICT:

Query-1: IICT asked for belt drive & Pulley system, which is an outdated one.

Response: IICT preferred only Belt drive & pulley system only and which is suitable for their R&D.

Query-2: MOC of non-wetted parts

Response: All the non-wetted parts SS 316

Query-3: Regarding valves, Should we supply Amar make.

Response: Only Swagelok preferred.

Query-3: Spare parts any items to be supplied

Response: Spare belts four members and four spare valves for each unit.

Queries 4: (online by mail)

1. You have asked for Interchangeable system. In this system, only one autoclave can be used at a time and motor shall be common. Please confirm that this is acceptable.
A) Yes, it is acceptable.
2. You have asked for SS 316 external parts and fittings in Hastelloy C & Inconel autoclaves. Please confirm that this is in line with your requirement.
A) Yes, all the external parts and fittings SS 316 as they will not expose to heating.
3. What should be the material of construction of the wetted parts of Pressure transducer - SS 316 or Hastelloy / Inconel?
A) Pressure transducer is SS 316 as it is external part connected to the autoclave.

Ans. Bottom discharge line for this autoclave not required. It is a typographical error in specifications. Only 2000ml autoclave need discharge line and flush Bottom valve.
Spare and toolkit extra needle valves four required. No bottom valve is essential for these item stated above.

Item:3)Autoclave (Alloy Inconel 600-1000ml) reactor System EQPT(3):

Point No. 13 d. Bottom discharge line. And point no. 15a Spares and toolkit: Extra needle valves 4 numbers and one bottom valve

For proper drain, the stem diameter has to be 3/8" or 10 mm

Small reactor like 500 ml capacity , can be easily detached and drained

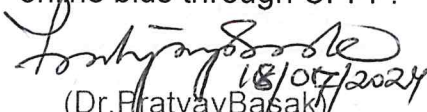
It is very inconvenient to use drain valve in such small reactor.

Also the valve has to be mounted on each vessel, 500 ml and 1000 ml

Ans. Bottom discharge line for this autoclave not required. It is a typographical error in specifications. Only 2000ml autoclave need discharge line and flush Bottom valve.
Spare and toolkit extra needle valves four required. No bottom valve is essential for these item stated above.

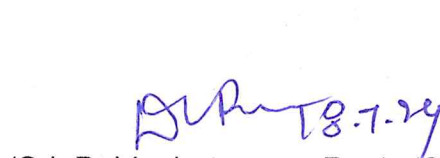
Points clarified by CSIR-IICT Team during PBC:

The representatives of the participating firm/further informed that they do not have any issue or suggestion with respect to other points of tendered specifications and related requirements given in the tender document. Participating bidders have been informed that points raised by them during PBC will be examined by CSIR-IICT's **Technical Sub Committee (TSC)/Technical team** constituted for the purpose of procurement of said equipment and **post PBC changes** in tendered specifications and requirements to be agreed after due consideration of the same by TSC, **if any**, will be uploaded in **CPPP** as part of **revised/amended tendered specifications** along with CSIR-IICT website www.iict.res.in or before 22.07.24. All bidders are requested kindly to take a note of the changes, if any, in tendered specifications subsequent to **PBC** held today, i.e. 08-07-2024 before they start submitting their online bids through CPPP.



(Dr. Pratyay Basak)
Member


(Dr. Jithender Reddy)
Member


(Dr. Sreepriya Vedantam)
Member


(Sri. D. Venkateswara Rao)
Member


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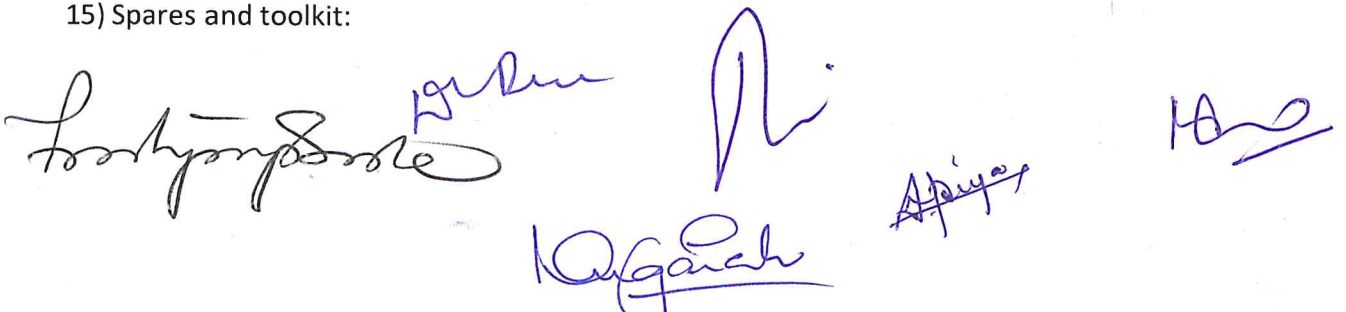

(Dr N Lingaiah)
Chairperson

Chairperson

Subsequent to PBC, the "revised /amended" specifications under chapter 4 for the tendered Autoclave units with ID no: 2024_CSIR_200927_1 are as of the tender documents specification autoclave (PUR/IICT/0481/24-25/EQPT).

1) Autoclave (Alloy C276-1000ml/500ml) reactor System(PUR/IICT/0481/24-25/EQPT(1)):

- 1) Autoclave MOC : Alloy C276 (Autoclave body/vessel and all the wetted parts)
- 2) Volume : 1000 ml vessel and also 500 ml vessel interchangeable (with all the internal parts/ provisions)
- 3) All Needle valves : Swagelok needle valves
- 4) Operating pressure : 100 bar
- 5) Operating Temperature : 250- 350 °C
- 6) Head gasket PTFE
- 7) All external parts and external fittings of SS316(**all non wetted parts SS 316**)
- 8) Safety rupture disc and Pressure transducer
- 9) Cart/ trolley with heavy duty
- 10) Ceramic band heater with 1500W, 230V
- 11) Position counter for real time rpm display
- 12) Magnetic Drive :
 - a. Agitator Shaft & impeller
 - b. Magnetic drive SS316 Torque 20- 25 Kg-Cm
 - c. Mounted with metal gasket sealing
 - d. Cooling jacket with inlet and outlet
 - e. Drive belt and pulley to control stirrer speed up to 800 rpm
- 13) Inlets & outlets:
 - a. One inlet feed for gas & Liquid.
 - b. One outlet for gas sampling.
 - c. One outlet for liquid sampling (dip length)
 - ~~d. Bottom discharge line.~~
 - e. Pressure gauge line.
- 14) Control Box:
 - a. PID temperature controller with programmable features
 - b. Thermowell with 'K' type thermocouple
 - c. Heating temperature display
 - d. Rpm display indicator
 - e. Pressure display
 - f. Safety cutoff for over temperature
 - g. Audible alarm for over temperature
- 15) Spares and toolkit:

The bottom of the page contains several handwritten signatures in blue ink. From left to right, there is a large signature, a smaller one above it, a signature that looks like 'Ri', a signature that looks like 'Ajay', and a signature that looks like 'Hao'. Below the 'Ri' signature is another signature that looks like 'Kaggarah'.

- a. Extra needle valves 4 numbers and one bottom valve
- b. Metal lines/ flexible gas lines hose with NRV about 4 meters
- c. Two numbers of Bearings , O rings, bush, gaskets, and head gasket
- d. Spanners and tool kit set/ drive repair kit

2)Autoclave (Alloy C276-2000ml) reactor System (PUR/IICT/0481/24-25/EQPT(2)):

- 16) Autoclave MOC : Alloy C276 (Autoclave body/vessel and all the wetted parts)
- 17) Volume : 2000 ml vessel(with all the internal parts/ provisions)
- 18) All Needle valves : Swagelok needle valves ~~or equivalent~~
- 19) Operating pressure : 100 bar
- 20) Operating Temperature : 250-350 °C
- 21) Head gasket PTFP
- 22) All external parts and external fittings of SS316(**all non wetted parts SS 316**)
- 23) Safety ruptures disc and Pressure transducer.
- 24) Cart/ trolley with heavy duty
- 25) Ceramic band heater with 1500W, 230V
- 26) Position counter for real time rpm display
- 27) Inlets & outlets:
 - a. One inlet feed for gas & Liquid.
 - b. One outlet for gas sampling.
 - c. One outlet for liquid sampling (dip length)
 - d. Bottom discharge line **with Flush bottom valve(Rising stem valve)**
 - e. Pressure gauge line.
- 28) Magnetic Drive :
 - a. Agitator Shaft & impeller
 - b. Magnetic drive SS316 Torque 20- 25 Kg-Cm
 - c. Mounted with metal gasket sealing
 - d. Cooling jacket with inlet and outlet
 - e. Drive belt and pulley to control stirrer speed up to 800 rpm
- 29) Control Box:
 - a. PID temperature controller with programmable features
 - b. Thermowell with 'K' type thermocouple
 - c. Heating temperature display
 - d. Rpm display indicator
 - e. Pressure display
 - f. Safety cutoff for over temperature
 - g. Audible alarm for over temperature
- 30) Spares and toolkit:

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- a. Extra needle valves 4 numbers and one bottom valve
- b. Metal lines/ flexible gas lines hose with NRV about 5 meters.
- c. Two numbers of Bearings , O rings, bush, gaskets, and head gasket
- d. Spanners and tool kit set/ drive repair kit

3)Autoclave (Alloy Inconel 600-1000ml) reactor System (PUR/IICT/0481/24-25/EQPT(3)):

- 1) Autoclave MOC : Alloy Inconel 600 (Autoclave body/vessel and all the wetted parts)
- 2) Volume : 1000 ml vessel and also 500 ml vessel interchangeable (with all the internal parts/ provisions)
- 3) All Needle valves : Swagelok needle valves ~~or equivalent~~
- 4) Operating pressure : 100 bar
- 5) Operating Temperature : 300-350 °C
- 6) Head gasket PTFE
- 7) All external parts and external fittings of SS316(**all non wetted parts SS 316**)
- 8) Safety rupture disc and Pressure transducer
- 9) Cart/ trolley with heavy duty
- 10) Ceramic band heater with 1500W, 230V
- 11) Position counter for real time rpm display
- 12) Inlets & outlets:
 - a. One inlet feed for gas & Liquid.
 - b. One outlet for gas sampling.
 - c. One outlet for liquid sampling (dip length)
 - ~~d. Bottom discharge line~~
 - e. Pressure gauge line.
- 13) Control Box:
 - a. PID temperature controller with programmable features
 - b. Thermowell with 'K' type thermocouple
 - c. Heating temperature display
 - d. Rpm display indicator
 - e. Pressure display
 - f. Safety cutoff for over temperature
 - g. Audible alarm for over temperature
- 14) Magnetic Drive :
 - a. Agitator Shaft & impeller
 - b. Magnetic drive SS316 Torque 20- 25 Kg-Cm
 - c. Mounted with metal gasket sealing
 - d. Cooling jacket with inlet and outlet

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e. Drive belt and pulley to control stirrer speed up to 800 rpm

15) Spares and toolkit:

- a. Extra needle valves 4 numbers ~~and one bottom valve~~
- b. Metal lines/ flexible gas lines hose with NRV about 6 meter length
- c. Two numbers of Bearings , O rings, bush, gaskets, and head gasket
- d. Spanners and tool kit set/ drive repair kit

Handwritten signatures in blue ink:
Sathyanarayana
R. Aggarwal
Apari
M. S.