



Desing doo Beograd is announcing open offer call for equipment procurement

The subject of procurement: Pilot reactor system for enzymatic conversion (Pilot reactor system for production of enzymatically derived prebiotic-containing food preparations)

VERTICAL REACTOR SYSTEM FOR ENZYMATIC CONVERSION

Purpose:

- Heating and mixing;
- maintaining the temperature;
- degassing;
- Vacuum evaporation.
- Temperature range: 0-100°C
- Batch capacity: 800 liters

Technical details:

- Vertical reactor vessel with conical bottom suitable to assure the efficient discharge of high viscous products;
- Thermal insulation of the reactor vessel
- steam feeding group and condensates discharge composed of steam inlet valve, Y filter, pneumatic valve for steam control adjusted by a pressure transducer
- Impeller inner stirrer with scraping paddles and stainless steel inner profiles for product moving.
- Counter-rotating inner stirrer with paddles made of stainless steel to enable the product moving.
- Stirrer driven by motorized-gearboxes with frequency changers to adjust the speed;
- swinging loading hopper should be made in such a way as to receive the ingredients directly from trays and put them into the bowl through the manhole;
- Vertical shell and tubes condenser sideways installed to the bowl. Should be provided with CIP balls, connections for cooling water inlet and output, centrifugal pump for condensates' extraction with relevant valves and switcher;
- Liquid ring vacuum pump
- Visual observatory of vessel with lamp;
- CIP balls;
- Container for small ingredients' admission;
- Automatic product discharge valve;
- Samples-intake;
- Vacuum breaking valve;
- Temperature detector;
- Pressure detector



The material specification: All steel surfaces in contact with product have to be of stainless steel AISI 316/304. All other have to be made from stainless steel AISI 304/316, except certain components such as gear, bearings, etc.

Pneumatic panel

Stainless steel cabinet.

It will be used to control the pneumatic devices.

The offer should include the pneumatic material for the connection of the users (valves, etc.) supplied by the contractor to the panel.

Supporting and inspection panel frame

Made of AISI 304 stainless steel, it is used for positioning the bowl

Material: AISI 316/AISI 304

Electrical command and management panel of the line

The plant is composed of the main cabinet, plus secondary panels placed near the main machines.

The main cabinet is made of AISI 304 and is mainly composed of:

- module with devices to command the power gears, motors and frequency changers, provided with magneto thermic switches, control switches, and button panel;
- Module to manage the plant, including Hardware and PLC. The PLC performs the single process phases (each phase has to be started by the operator);
- Frequency changes to adjust the speed of the motorizations (if foreseen)
- Electrical material (raceways, cables, clamps, etc.) for the connection of the users (motors, valves, etc.) supplied by the Contractor to the panel.

The offers must be sent via email (sjovanovic@desing.rs) and/or by post duly signed and stamped to the following address (DESING doo, Partizanske avijacije 18a, 11070 Belgrade, Serbia).

Offers must include following data:

- **Exact name of the equipment**
- **Purpose**
- **Method of payment**
- **Validity of the offer**
- **Lead time**
- **Technical drawing**
- **Price**

Deadline for offer submission: **06th December 2019** at 12.00 AM.

Offer evaluation criteria: compliance with technical requirements, price/financial evaluation and quality.

Publication date: **28th November, 2019.**