



सीएसआईआर-केंद्रीय खाद्य प्रौद्योगिक अनुसंधान संस्थान
CSIR- CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE
मैसूरु / MYSURU-570 020, भारत / INDIA

(Constituent Laboratory of CSIR, New Delhi (Ministry of Science & Technology)
An ISO 9001:2008, ISO 14001:2004 & ISO 17025:2005, NABL Accredited Laboratory

सं. /No. CFTRI /74186/19-20

दिनांक / Date: 14th February 2020

NOTICE INVITING TENDER

क्रम सं. Sl. No.	निविदा संदर्भ Tender Reference	विवरण / Description
1	CFTRI/74186/19-20	Ragi Processing Line – 1No.

1. Director, CSIR-CFTRI, Mysuru invites tenders for supply, installation & commissioning and satisfactory demonstration of Ragi Processing Line – 1No.
2. **Pre Bid conference is scheduled on 25.02.2020 at 10.30a.m at CSIR-CFTRI, Mysore**
3. Last date for submission of Tender is 2.00 P.M. (IST) on 19 /March/ 2020 on line in etender.gov.in.
4. Bid Security(EMD) Rs. 200,000.00
5. Technical Bid Opening on line in etender portal at 2.30P.M(IST) on 20/March/2020

हस्ता./Sd/-

अनुभाग अधिकारी (भंडार एवं क्रय)

Section Officer (Stores & Purchase)

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CRITICAL DATE SHEET

CRITICAL DATE SHEET:

Tender Ref/No. CFTRI/74186/19-20

Sl.No.	Stage	Date & Time
1	Publish Date & Time	14/02/2020 @ 6.00p.m.
2	Document Download Start Date & Time	14/02/2020 @ 6.00p.m.
3	Pre Bid Conference	25/02/2020 @ 10.30a.m
3	Bid submission Start Date & Time	05/03/2020 @ 10.00a.m.
4	Bid submission End Date & Time	19/03/2020 @ 2.00p.m.
5	Bid Opening Date & Time	20/03/2020 @ 2.30p.m.

TENTATIVE TIME SCHEDULE OF PROCUREMENT PLANNING:

Sl.No.	Stage Tentative Frame Time	Date & Time
1	Date of Bid opening	20/03/2020
2	Date of Completion of Techno-Commercial Bid evaluation	20/03/2020+ 15 Days
3	Date of Communication of Rejection of Bids	20/03/2020+ 25 Days
4	Date of Receipt of Contest, if any, from Bidders	20/03/2020+ 35 Days
5	Notification of Award	20/03/2020+ 50 Days

TECHNICAL SPECIFICATION IN DETAIL

Ragi Processing plant

S. No.	Item	Power Consumption	Quantity
1	<p>Cleaner, grader cum Destoner</p> <p>Pressure type/Vaccum type destoner equipped with complete dust control system and grading system for Ragi.</p> <p>All steel construction deck capable of handling 500kg of Ragi required for high-quality size separation, removal heavier impurities like stone, metal etc and aspiration of dry material such as leaves, straw and other foreign materials.</p> <p>The unit should have feed hopper equipped with magnetic roller and feed control gate for even distribution of material on screen surface, aspiration system at inlet point and grading system at outlet point.</p> <p>Provision to vary the deck vibration, airflow and speed; provision to vary machine conditions while the machine is in operation.</p> <p>1 set of the additional following size of sieves should be provide along with the machine:</p> <ul style="list-style-type: none"> a) Sieve – 0.8 to 1.0 mm b) Sieve – 1.2 to 1.5 mm c) Sieve – 1.6 to 3.0mm <p>The unit should be fitted with appropriate capacity continuous rated TEFC induction motor and starter of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p>Capacity: 500kg/h</p>		1

2	<p>Drawer Magnet Separator system Drawer Magnet is used to remove ferrous contaminants from dry, free-flowing grains. When grains fall down on drawer magnet metal are a clog and other particles go to another section. Generally, it holds and captures ferrous contaminants from flowing food products. They are applied in the cleaning house prior to the milling unit.</p>		<p>Number as per the requirement (1unit in each section i.e. Cleaning, Steaming /drying, polishing, finished material</p>
3	<p>Brushing unit All steel construction, brushing/Scarifier should designed to DE-gloom raw Ragi without damage. Upon entering the Brushing chamber, the seed is brushed against screen by the inside cylinder on which the Nylon brush is mounted. The system should DE-gloom raw Ragi in one operation. Brushing cylinder should have a variable speed drive. The unit should have settling chamber & Exhaust fan, adjustable air control facility and feed control hopper.</p> <p>1 set of the additional following type of Nylon brushes should be provide along with the machine:</p> <ul style="list-style-type: none"> a) Soft b) Medium c) Hard <p>The unit should be fitted with appropriate capacity continuous rated TEFC induction motor and starter of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p>Capacity: 450-500kg/h</p>		1
4	<p>Engelburg Huller sheller Number 1 engelburg huller is required for DE-gloom raw Ragi without damage capable of handling 450-500Kg/h of Ragi</p> <p>The unit should be fitted with all necessary accessories like V-belt, shock absorbing anti-vibration mounts to make the frame vibration free and appropriate capacity continuous rated TEFC induction motor and starter of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p>		1

5	<p>SS Soaking tank with MS structure Soaking tanks 3 to 4 mm body thickness in S.S.304 Construction without cover fitted with suitable fittings and accessories. Strainer Pipe & Discharge Valve in S.S. with holding capacity of 750kg</p> <p>M.S. STRUCTURE: 1 lot The common supporting structure for the above-mentioned soaking/steaming tanks in M.S. construction including Stair Case, ladder, Walkways, Railings and Grating Platform.</p> <p>HDPE storing tank with holding capacity 2000ltrs and supporting structure connect to the pump for filling and recirculating of water in soaking tanks</p>		2 nos.
6	<p>Continuous Vibro Fluidized bed dryer Continuous Vibratory fluid bed dryers Non-GMP type (Contact part only of SS304) is required for drying of Soaked/steamed Ragi. The Ragi to be dried is fed on top of perforated sheet (S.S.304) and the hot air operating (air temperatures 40-80°C) enters from the bottom of the perforated sheet. The fluid bed chambers are to be mounted on springs and fitted with vibratory motors with vibration controller system.</p> <ul style="list-style-type: none"> • The dryer should be equipped with control systems for adjusting vibro fluidization, residence time and product moisture. • The dryer should assure uniform product temperature • Unit should have proper system for temperature/airflow controls to customize the thermal process and maximize the efficiency of heat/mass transfer, assuring drying and cooling of the product within 	13Hp	2

	<p>the best time and temperature range for high-quality output.</p> <ul style="list-style-type: none"> • Unit should ensure explosion proof designs. • CIP (Cleaning in Place) options should be provided for good sanitation. • All the necessary systems like air heating system (Electrical/diesel//thermic fluid) with efficient heat exchangers, fans, cyclone separators, bag filters and scrubbers should be provided for smooth and efficient functioning of dryer. <p>The unit should be fitted with suitable continuous rated TEFC induction electric motor and starter of reputed make to run on 415volts, 50Hz, 3 phase AC supply.</p> <p>Capacity - 500kg/h</p>		
7	<p>Grain Steaming/ Industrial cooker</p> <p>Ragi is fed in the vertical cooker (constructed in S.S.304/316) with cover fitted along with suitable fittings and accessories. Strainer Pipe & Discharge Valve in S.S. withholding capacity of 1ton</p> <p>The unit should be fitted with temperature, moisture & pressure control system with sensors, appropriate capacity continuous rated TEFC squirrel cage induction motor and starter of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p>Capacity - 1ton</p>		1
8	<p>Cooling system PreFab pipe Jacketed vessel for cooling steamed Ragi</p> <p>Ragi is fed in the vertical Jacketed vessel (constructed in S.S.304/316) fitted with suitable recirculating system for cooling water or</p>		1

	<p>refrigerant, fittings and accessories. Strainer Pipe & Discharge Valve in S.S. withholding capacity of 1ton</p> <ul style="list-style-type: none"> • CIP (Cleaning in Place) options should be provided for good sanitation. • All the necessary systems like cooling system (water/refrigent) and temperature-controlled system should be provided for smooth and efficient functioning of Jacket vessel. <p>The unit should be fitted with suitable continuous rated TEFC induction electric motor and starter of reputed make to run on 415volts, 50Hz, 3 phase AC supply.</p>		
9	<p>Tray Dryer</p> <p>Electrically Tray dryer for drying of steam Ragi with holding capacity of 500 kg.</p> <p>Unit should be fitted with electric heaters and blower fans to ensure proper circulation and transfer of heat, proper system for temperature/airflow and controls to customize the thermal process and maximize the efficiency of heat transfer, assuring drying of the product within the best time and temperature range for high-quality output</p> <ul style="list-style-type: none"> • Trays should be fabricated in Stainless Steel 304 • Digital temperature controller cum timer • Interiors are protected with high temperature heat resist aluminium paint • Adjustable exhaust air intake, proper temperature uniformity throughout work chamber 		1

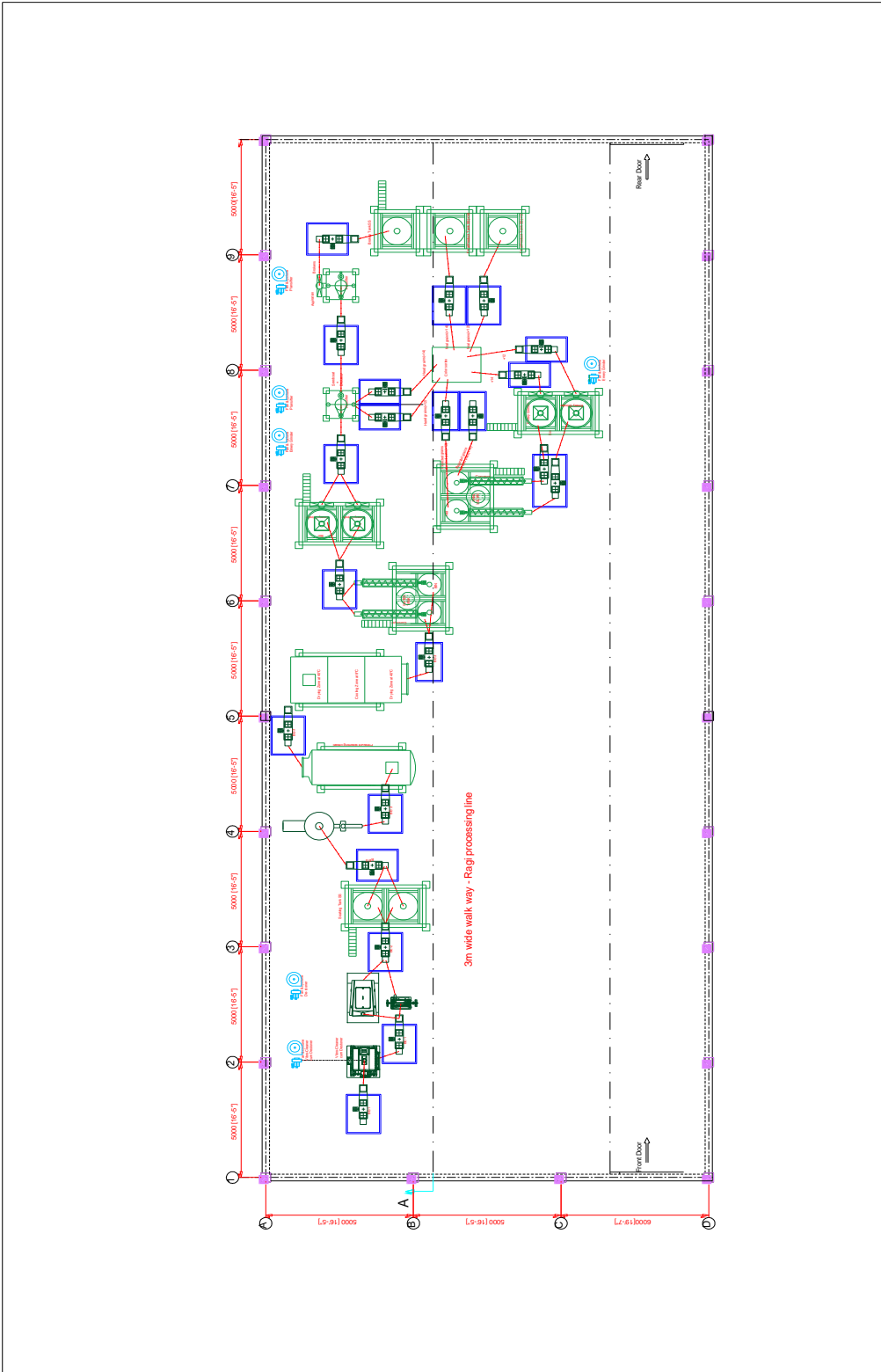
	<ul style="list-style-type: none"> • Safety temperature controller is set to protect overshoot temperature • Adjustable louvers for balanced air flow • Explosion venting latches, static and dynamic blower balancing • Fast acting heating element ensuring rapid heat up • Gasket on door to prevent heat loss <p>The unit should be fitted with suitable continuous rated TEFC induction electric motor and starter of reputed make to run on 415volts, 50Hz, 3 phase AC supply</p>		
10	<p>Horizontal channel type emery stone grinder / abrasive disc grinder</p> <p>Emery stone grinder / abrasive disc grinder for De-branning of ragi grain.</p> <p>The machine should be equipped with a vibrating feeder with a control system, aspirator channel and dust collector systems.</p> <p><u>Emery Stone size – Dia.30” without any grooves or feathering on the grinding surface</u></p> <ul style="list-style-type: none"> • Varied RPM – with variable frequency drive(VFD) controlled • The unit should be equipped with an automatically controlled gap adjustment system <p>The unit should be fitted with suitable continuous rated TEFC squirrel cage induction electric motor and starter of reputed make to run on 415volts, 50Hz, 3 phase AC supply.</p>	30Hp	2 unit
11	<p>Cone polisher</p> <p>Semi-automatic polisher for De-branning of ragi grain with provision to vary machine speed/conditions while the machine is in operation.</p> <p>24inch Vertical abrasive cone polisher with Motor & Feeding hopper having 250 to 350kg/hr Polishing</p>		1

	<p>Capacity with all necessary accessories i.e starter for motor, pulley, belts etc. Machine efficient to remove greyish and reddish layer from ragi with the least breakage and highest output. Balance cone coated with emery composition, revolves, inside a meal-cage of interchangeable segment lined with perforated sheet.</p> <ul style="list-style-type: none"> • Rubber brakes – in order to control the flow of Rice, easily adjustable and can be replaced easily whenever they are worn out without removing the cribs from the machine. • Rigid construction guaranteed trouble-free lifelong service due to TAPER ROLL BEARINGS in Neck with dust protection oil seals and interchangeability in cone and bran cages. • Flat belt and individual motor driven by V-Belts with double bearing drums. • The machine should be equipped with bran collection system. • Capacity 500kg/h <p>The unit should be fitted with suitable continuous rated TEFC induction electric motor and starter of reputed make to run on 415volts, 50Hz, 3 phase AC supply.</p>		
12	<p>Vertical abrasive type polisher/whitener</p> <p>Semi-automatic polisher for De-branning of ragi grain with provision to vary machine speed/conditions while the machine is in operation.</p> <p>Vertical abrasive type Whiteners with Motor & Feeding hopper having 500kg to 1 ton/hr Milling Capacity with all necessary accessories i.e Flow Control Damper, Ampere Meter and Negative Air Pressure Meter Starter for motor, pulley, belts etc.</p>		1

	<p>The machine should be equipped with bran collection system, High-Pressure Bran Blower with motor, Collector Cyclone, Air Lock with Geared motor and supporting stand for cyclone & airlock, piping, bends, clamps etc</p> <p>Capacity: 500kg to 1ton/h</p> <p>The unit should be fitted with suitable continuous rated TEFC induction electric motor and starter of reputed make to run on 415volts, 50Hz, 3 phase AC supply.</p>		
13	<p>Moisture conditioning unit / Dozing system</p> <p>Conditioning unit in S.S.304 Construction with the cover fitted with spray system with a set of adjustable mist nozzles for uniform spraying of water and for uniform mixing of Ragi with water. Control/metering unit to adjust the water flow from water tank (to be supplied - with holding capacity of 500ltr water), Gap between conveyor housing and screw blade should be less than 0.5mm. Geared motor with VFD system to control the conveying/conditioning speed of conveyor, Length & screw Diameter of conveyor should capable of handling 500kg of Ragi for 30min of conditioning.</p> <p>The unit should be fitted with suitable continuous rated TEFC induction electric motor with gearbox and starter of reputed make to run on 415volts, 50Hz, 3 phase AC supply.</p>		4
14	<p>Plansifter</p> <p>The plansifter is required for efficient sifting and grading of Ragi flour/semolina.</p> <p>Automatic machine should be equipped with self-cleaning rubber balls prevent choking and easy replaceable sieves(additional set of sieves for grading different size of semolina & flour(260micron) and</p>		3

	<p>screen tensioning system to be provided).</p> <p>1 set of the additional following size of sieves should be provide along with the machine:</p> <ul style="list-style-type: none"> a) Size of Sieve ; (-)16 BSS b) Size of Sieve ; (-)14+16 BSS c) Size of Sieve ; + 14 BSS d) Size of sieve; (-)16+25 BSS <ul style="list-style-type: none"> • Capacity – 500kg/h <p>The unit should be fitted with suitable continuous rated TEFC squirrel cage induction electric motor and starter of reputed make to run on 415volts, 50Hz, 3 phase AC supply.</p>		
15	<p>Bucket elevator</p> <p>In M.S. construction with food grade polymer Buckets, Pulley & Light Weight Polymer Belting, and geared box with motor.</p> <p>The unit should be fitted with appropriate capacity continuous rated TEFC induction motor and starter of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p>Capacity 1-2ton/h(each)</p> <p>Delivery pipe in S.S.</p>		As per layout requirement for smooth and continuous running of plant
16	<p>Storing tanks with MS structure</p> <p>Polished grain storage tanks 3 to 4 mm body thickness in S.S.304 Construction without cover fitted with suitable Discharge Valve with holding capacity 1ton</p> <p>M.S. STRUCTURE: 1 lot</p> <p>Supporting structure in M.S. construction including Stair Case, ladder, Walkways, Railings and Grating Platform.</p>		7
17	<p>Surge bin with MS structure</p> <p>Storing tanks 3 to 4 mm body thickness in SS 304/GI Construction without cover fitted with suitable Discharge Valve with required holding capacity 15 to 20min.</p> <p>M.S. STRUCTURE: 1 lot</p> <p>Supporting structure in M.S. construction including Stair Case,</p>		As per layout requirement for holding of Ragi at different stage during the continuous running of plant

	ladder, Walkways, Railings, and Grating Platform wherever required		
18	<p>Dust De-collector / Central dust collection system</p> <p>System integrated with all dust collecting point across the mill to collect the dust from bucket elevator/machinery wherever required which includes dust blower, collecting system, motor, and cyclone fitted with airlock and dust collecting bag</p>		1
19	<p>Bag filling machine with SS304 hopper/contact parts,</p> <p>Semi-Automatic high-speed processor-based electronic weighing system with standard load cells, double speed vibratory feeder and Pneumatically operated functions.</p> <p>Bag material: Cloth/gunny bags</p> <p>Range: 5 to 50Kgs with accuracy +30 to 60g</p>		1



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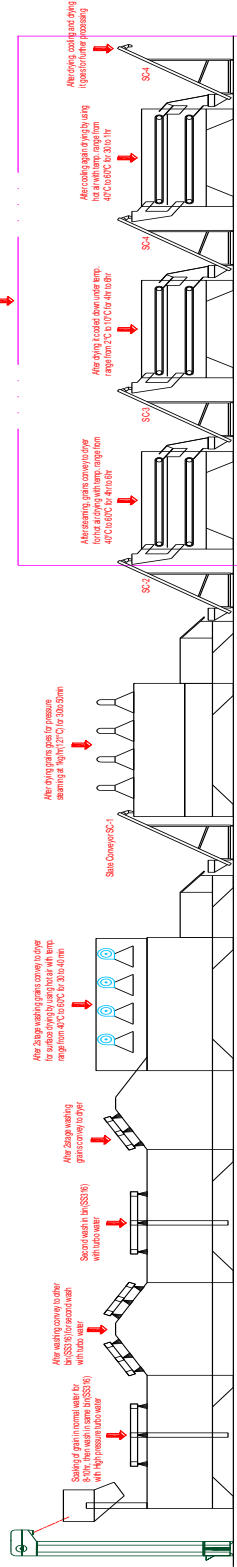
DRN	16.03.2016	16.03.2016	16.03.2016
APPD			
ADDITIONAL			
CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE, MYSURU - 570 020			

DRAWING NUMBER		TITLE	
RAGI PROCESSING PLANT		RAGI PROCESSING PLANT	
SHEET No. of		SHEET No. of	
REV. No.		REV. No.	



Break Sharp Edges

If possible make these three step combine in one system only by using conveyor passing through different heating & cooling zone for said period of time and temperature. Instead of loading and unloading by Bucket elevator



This whole Plant should be of 1ton holding capacity of grain (Dia 1mm) with bulk density of 830Kg/hr

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DATE	NAME	DESIGNATION	TITLE
08/01/2019	DR. JAYAKANTH	RESEARCH INSTITUTE	PROCESSING PLANT
SCALE	1:1		
DATE	NAME	DESIGNATION	TITLE
08/01/2019	DR. JAYAKANTH	RESEARCH INSTITUTE	PROCESSING PLANT
SCALE	1:1		
DATE	NAME	DESIGNATION	TITLE
08/01/2019	DR. JAYAKANTH	RESEARCH INSTITUTE	PROCESSING PLANT
SCALE	1:1		

Rev. 01

INSTRUCTIONS TO BIDDERS

1. The Instructions, Terms & Conditions, General Conditions of Contract (GCC), Special Conditions of Contract (SCC), Annexures and Formats hosted in our website www.cftri.res.in [Path: Home page → Tenders → Standard Tender Document (Scrolling Text)] constitute as integral part of this tender.
2. Bidders should submit their financial bid in the format provided (Price Schedule Format/BOQ) and same has to be uploaded in the above etender.gov.in. It is mandatory for all the bidders to upload duly filled Price Schedule Format/BOQ towards submission of their Financial Bid. No changes or modification to the given format is acceptable. Bidders are required to go through the instructions carefully before filling the Price Schedule Format/BOQ.
3. Please note that CSIR-CFTRI, Mysore is registered with the Department of Scientific and Industrial Research (DSIR) for purpose of availing GST @5% concessional rate as per Central Tax(Rate)/Integrated Tax(Rate) in terms of Notification No. 45/2017-Central Tax (Rate)/No. 47/2017-Integrated (Rate) Dt. 14-11-2017. You are advised to quote accordingly.
4. Bid Security (EMD) is **Rs. 200,000.00** for this tender.
5. **Pre-Bid Conference:**
Pre-Bid Conference on February 25th 2020 at 10.30Hrs (IST) in the Office of the Stores & Purchase Department, CSIR-CFTRI, Mysore.
Prospective bidders are requested to submit their clarifications, questions, queries if any, in writing, so as to reach the office of the Stores & Purchase Officer latest by 20th January 2019 for deliberations. The amendments/clarifications if any, to the Bidding Documents pursuant to the Pre-Bid Conference would be uploaded in etender.gov.in and same will also be hosted on the Website of CFTRI and all the Prospective Bidders are expected to take cognizance of the Proceedings of the Pre-Bid Conference before formulating and submitting their Bids.
6. **Performance Security:** The supplier shall furnish Performance Security of 10% of the contract value valid for warranty period of one year + additional 2 months after the warranty for this tender.
7. Integrity Pact is not applicable for this tender.
8. **Warranty:** One year from the date of supply, installation & Commissioning, demonstration and acceptance by the Purchaser.
9. **Delivery Period:** Delivery should be effected within 4 weeks from the date of issue of Purchase Order.
10. **Terms of Payment:** The method and conditions of payment to be made to the supplier under this Contract shall be as follows:

Payment for Goods and Services supplied from India:

Payment for Goods and Services supplied from within India shall be made in Indian

Rupees, [INR] as follows:

On Delivery, Installation & Commissioning, Demonstration and Acceptance: 90 % (Ninety Percent) of the Contract Price shall be paid on Delivery of the Goods, Installation & Commissioning, Demonstration and Satisfactory Acceptance of Items & upon submission of the documents specified in GCC/SCC and the acceptance certificate issued by the Purchaser. Balance 10% payment will be made to the supplier against submission of Performance Security i.e 10% of contract value valid for warranty period + additional 2 months issued by Commercial Scheduled Bank.

11. COVER DETAILS - DOCUMENTS TO BE UPLOADED:

Cover – 1: PreQual/Technical (Techno-Commercial Details) for Procurement of Ragi Processing Line (Document Type .pdf)

- 1.(a) Catalogue / Brochure of the Model Quoted along with a detailed description of the essential technical and performance characteristics of the goods being offered, with an item by-item commentary on the indented technical specification and documentary evidence of conformity of the goods and services to the bidding documents demonstrating substantial responsiveness of the goods being offered.
- (b) Two (2) latest Purchase Order Copies with price of reputed Govt. Research Institutes/Organisation for the supply & installation and satisfactory functioning of the similar/equivalent equipment to comply with minimum eligibility criteria.
- (c) User list for the quoted model along with contact Numbers and Email Id
- (d) Warranty offered and delivery schedule.
2. Bidder Information Form (Annexure – 1)
3. Manufacturer’s Authorization Form (Annexure – 2)
4. Bid Security Form (Annexure-3) / Bid Security Declaration Form (Annexure-4)
5. Performance Statement Form (Annexure – 5)
6. Deviation Statement Form (Annexure – 6)
7. Bidders must furnish a Compliance Statement of each and every required specification of our tender (Annexure-8)
8. Documents establishing goods eligibility and conformity to bidding document; indicating the Indian Customs Tariff Number (ICT & HSN No.)
9. Schedule of Requirements – (Refer Chapter 5 for Format)
10. Declaration abiding by the Code of Integrity and No Conflict of Interest for Public procurement (Annexure – 11)

Cover – 2: Price Schedule Format/BOQ (Document Type .xl) BOQ uploaded in etenders.gov.in

Please refer to our Standard Terms & Conditions uploaded in www.cftri.res.in under tender (Chapter-7) for above Format of Annexures. Any other supporting documents to avail preference/benefits as per Standard Tender Document must be uploaded with the technical bid for technical qualification.