# दि फ़र्टिलाईज़र्स एण्ड केमिकल्स टावनकोर लिमिटेड



# THE FERTILISERS AND CHEMICALS TRAVANCORE LIMITED

(भारत सरकार का उद्यम) / (A GOVERNMENT OF INDIA ENTERPRISE)

CORPORATE MATERIALS

GST No: 32AAACT6204C1Z2 Phone: 0484-2546778

2546629 / 2545222

PD ADMINISTRATIVE BUILDING
UDYOGAMANDAL - 683 501, KOCHI, KERALA, INDIA

निर्घ केलिए अनुरोध/REQUEST FOR QUOTATION

#### **Detailed Specification**

Enquiry:MM/172/G30862

**Contact Details** 

Name: Binduja Menon

Phone: 0484 2568253, 0484 2568204

Email ID: binduja@factltd.com

Please submit your offer for supply of the following items as per the instructions, technical specifications and other terms and conditions specified herein/ attached.

#### Note:

1. The delivery period mentioned in the BoQ is our indicative requirement. You may offer your earliest delivery period.

Please refer our above referred enquiry number in all correspondence.

SL No.	Material Code	Detailed Specification/s	Quantity	Unit of Measure
1	674424430	CONTROL ELECTRONICS STANDARD INCLUDING TERMINALS 32MB C98043-A7100-L3, PART NO.6RY18030AA000AA1	1	Number
2	674424431	SIEMENS make SINAMICS DC DRIVE OF FOUR QUADRANT, MICROPROCESSOR- THYRISTOR BASED DRIVE UNIT WITHOUT ENCLOSURE. MODEL: SIMOREG 6RA80, WITH ADVANCED CU AND BOP ARMATURE RATING: 600A, INPUT VOLTAGE 3PH, 400V,50HZ, OUTPUT VOLTAGE 0 to -/+420V DC. FIELD RATING: 25A, INPUT VOLTAGE 2PH,AC 380V-460V, OUTPUT VOLTAGE 420V DC. PROFIBUS CONNECTIVITY IN BASE BOARD, AUTO MOTOR IDENTIFICTION, AUTO RESTART, WOBBLE GENERATOR, BRAKE OPERATION, FREE FUNCTION BLOCKS AVAILABLE AS LIBRARY etc.	1	Number

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674424432	SIEMENS make SINAMICS DC DRIVE OF FOUR QUADRANT, MICROPROCESSOR- THYRISTOR BASED DRIVE UNIT WITHOUT ENCLOSURE FOR HOLD AND CLOSE MOTOR (SHIPUNLOADER) MODEL: SIMOREG 6RA80, WITH ADVANCED CU AND BOP ARMATURE RATING: 1600A, INPUT VOLTAGE 3PH, 400V,50HZ, OUTPUT VOLTAGE 0 to -/+420V DC. FIELD RATING: 40A, INPUT VOLTAGE 2PH,AC 380V-460V, OUTPUT VOLTAGE 420V DC. PROFIBUS CONNECTIVITY IN BASE BOARD, AUTO MOTOR IDENTIFICTION, AUTO RESTART, WOBBLE GENERATOR, BRAKE OPERATION, FREE FUNCTION BLOCKS AVAILABLE AS LIBRARY etc.	2	Number
674424433	LAPTOP WITH LATEST AND COMPATIBLE SIMATIC MANAGER AND SCOUT MANAGER LICENSED SOFTWARE WITH SIMOCRANE LIBRARIES INSTALLED.	1	Number
674424434	POWER INTERFACE INCLUDING TERMINALS C98043-A7105- L4,PART NO.6RY18031DA02 FOR SIEMENS SIMOCRANE	1	Number
674424435	SUPPLY/UNLOADING AND HANDING OVER OF SIMOCRANE SIMOCRANE SYSTEM EQUIVALENT TO T300 CARD OF SINAMICS DC DRIVE SYSTEM SIMOCRANE SYSTEM CONSISTS OF 1 SIMOTION CONTROLLER, CF CARD CONTAINING LICENSE FOR SIMOCRANE FUNCTION (BASIC TECHNOLOGY WITHOUT SWAY CONTROL). ONE SIMOCRANE SYSTEM CAN BE CONNECTED TO ONE HOLD, ONE CLOSE, TROLLEY/BOOM CHANGE OVER, GANTRY 1 AND GANTRY 2 DRIVES. ALL DRIVES HAVE TO BE SIEMENS SINAMICS AC OR DC DRIVES	1	Number
674424436	THYRISTOR LINE D420/1600,4 QUADRANT,PART NO.6RY18020CA26 FOR SIEMENS MAKE SIMOCRANE	2	Number
674424437	THYRISTOR MODULE 312A,1600V PART NO.6SY70100AA05	1	Number
674424438	PROFIBUS MASTER - CP 342-5; PART NO. 6GK7342-5DA03- 0XE0	1	Number
	674424433 674424435 674424436 674424437	MICROPROCESSOR- THYRISTOR BASED DRIVE UNIT WITHOUT ENCLOSURE FOR HOLD AND CLOSE MOTOR (SHIPUNLOADER) MODEL: SIMOREG 6RA80, WITH ADVANCED CU AND BOP ARMATURE RATING: 1600A, INPUT VOLTAGE 3PH, 400V,50HZ , OUTPUT VOLTAGE 0 to -/+420V DC. FIELD RATING: 40A, INPUT VOLTAGE 2PH,AC 380V-460V, OUTPUT VOLTAGE 420V DC. PROFIBUS CONNECTIVITY IN BASE BOARD, AUTO MOTOR IDENTIFICTION, AUTO RESTART, WOBBLE GENERATOR, BRAKE OPERATION, FREE FUNCTION BLOCKS AVAILABLE AS LIBRARY etc.  LAPTOP WITH LATEST AND COMPATIBLE SIMATIC MANAGER AND SCOUT MANAGER LICENSED SOFTWARE WITH SIMOCRANE LIBRARIES INSTALLED. POWER INTERFACE INCLUDING TERMINALS C98043-A7105- L4,PART NO.6RY18031DA02 FOR SIEMENS SIMOCRANE SUPPLY/UNLOADING AND HANDING OVER OF SIMOCRANE SIMOCRANE SYSTEM EQUIVALENT TO T300 CARD OF SINAMICS DC DRIVE SYSTEM SIMOCRANE SYSTEM CONSISTS OF 1 SIMOTION CONTROLLER, CF CARD CONTAINING LICENSE FOR SIMOCRANE FUNCTION (BASIC TECHNOLOGY WITHOUT SWAY CONTROL). ONE SIMOCRANE SYSTEM CAN BE CONNECTED TO ONE HOLD, ONE CLOSE, TROLLEY/BOOM CHANGE OVER, GANTRY 1 AND GANTRY 2 DRIVES. ALL DRIVES HAVE TO BE SIEMENS SINAMICS AC OR DC DRIVES  THYRISTOR LINE D420/1600,4 QUADRANT,PART NO.6RY18020CA26 FOR SIEMENS MAKE SIMOCRANE 674424437 THYRISTOR LINE D420/1600,4 QUADRANT,PART NO.6RY18020CA26 FOR SIEMENS MAKE SIMOCRANE 674424437 THYRISTOR MODULE 312A,1600V PART NO.6GK7342-5DA03-	MICROPROCESSOR- THYRISTOR BASED DRIVE UNIT WITHOUT ENCLOSURE FOR HOLD AND CLOSE MOTOR (SHIPUNLOADER) MODEL: SIMOREG 6RA80, WITH ADVANCED CU AND BOP ARMATURE RATING: 1600A, INPUT VOLTAGE 3PH, 400V,50HZ ,OUTPUT VOLTAGE 0 10-/4420V DC. FIELD RATING: 40A, INPUT VOLTAGE 2PH,AC 380V-460V, OUTPUT VOLTAGE 420V DC. PROFIBUS CONNECTIVITY IN BASE BOARD, AUTO MOTOR IDENTIFICTION, AUTO RESTART, WOBBLE GENERATOR, BRAKE OPERATION, FREE FUNCTION BLOCKS AVAILABLE AS LIBRARY etc.  LAPTOP WITH LATEST AND COMPATIBLE SIMATIC MANAGER AND SCOUT MANAGER LICENSED SOFTWARE WITH SIMOCRANE LIBRARIES INSTALLED. 674424434 14,PART 10.6RY18031DA02 FOR SIEMENS SIMOCRANE SIMOCRANE SYSTEM EQUIVALENT TO T300 CARD OF SINAMICS DC DRIVE SYSTEM SIMOCRANE SYSTEM CONSISTS OF 1 SIMOTION CONTROLLER, CF CARD CONTAINING LICENSE FOR SIMOCRANE FUNCTION (BASIC TECHNOLOGY WITHOUT SWAY CONTROL). ONE SIMOCRANE SYSTEM CAN BE CONNECTED TO ONE HOLD, ONE CLOSE, TROLLEY/BOOM CHANGE OVER, GANTRY 1 AND GANTRY 2 DRIVES. ALL DRIVES HAVE TO BE SIEMENS SINAMICS AC OR DC DRIVES  THYRISTOR LINE D420/1600,4 QUADRANT,PART NO.6RY18020CA26 FOR SIEMENS MAKE SIMOCRANE 674424437 THYRISTOR MODULE 312A,1600V PART NO.6SY70100AA05 1 674424433 PROFIBUS MASTER - CP 342-5; PART NO.6GK7342-5DA03-

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PROJECT			SHIP UNLOADER DRI WILLINGDON ISLANI		ACEMENT AT FACT	
ITEM			6RA80 SERIES DC DR	IVES		
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# 1.0 INTRODUCTION

1.1. This specification covers the requirements of DC drive replacement for Grab Type Ship Unloader for FACT Willington Island.

# 2.0 SCOPE OF WORK

SI. No.	Description	Qty
1	Supply of 1600 Amps 6RA80 series Hold and Close Drives with following specification: FOUR QUADRANT Microprocessor Based THYRISTOR BASED DC DRIVE (Without Panel).  Model: Sinamics 6RA80 with advanced CU and BOP Rating: 1600A (Armature) & 40A (Field) Input Voltage: 3 phase 400V, 50 Hz Output Voltage: 0 to ± 420VDC, Supply Voltage for field: 2ph AC 380 to 460V, Rated Armature voltage: 420 V DC, Profibus connectivity in base board, auto motor identification, auto restart, wobble generator, brake operation, free function blocks	2
2	available as library etc.  Supply/of Trolley Drive FOUR QUADRANT Microprocessor Based THYRISTOR BASED DC DRIVE (Without Panel).  Model: Sinamics 6RA80 with advanced CU and BOP Rating: 600A (Armature) & 25A (Field) Input Voltage: 3 phase 400V, 50 Hz Output Voltage: 0 to ± 420VDC, Supply Voltage for field: 2ph AC 380 to 460V, Rated Armature voltage: 420 V DC, Profibus connectivity in base board, auto motor identification, auto restart, wobble generator, brake operation, free function blocks available as library etc.	1
3	Supply of Simocrane system equivalent to T300 Card of Sinamics DC Drive system consists of 1 simotion controller, CF Card containing license for Simocrane function (Basic Technology without sway control). One Simocrane system can be connected to one Hold, one Close, Trolley/Boom Change over, Gantry 1 and Gantry 2 Drives. All Drives have to be Siemens Sinamics DC Drives	1
4	Addition of Profibus or Profinet Card in PLC Rack. One CP card as Profibus Master is to be inserted in CPU rack as the Simocrane system requires Profibus with 6 MBPS rate. Or Profinet CP can be inserted in the PLC rack for communication. PLC communicate with Simocrane only and all present PLC signals for controlling Drive (Basic control word, T300 Technology word) can be mapped one to one with Simocrane system	1

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Sl. No.		Description		Qty
5	Laptop with latest a	ith Simatic Manager and Scout Soft and compatible Simatic Manager an ocrane Libraries installed	ware Id Scout Manager Licensed	1
6	Removal of Existing modifications, Simon which are supplied. Simocrane system, S	nmissioning of DC drives (Hold, Close DC Drive, Mounting of Sinamics DC crane, CP Card in PLC rack, Power ar Scope of work also includes Progran Sinamics DC Master and no load tria hile the berthing of solid cargo ship	Drives with suitable nd Control Wiring for 3 driv mming in PLC for new drive al. Load test and commissio	es,

# 3.0 GENERAL REQUIREMENTS

- 3.1. The existing 6RA70 series DC Drives shall be replaced with 6RA80 series DC Drives. New drives shall be retrofitted into the existing panel with modification to mounting arrangement and bus bar alignment if necessitated by the minor change in dimensions of drive units.
- 3.2. Power and control wiring of the supplied drive using cables and accessories confirming to IS 1554 or latest requirements. Power and control cables shall be of 1.1 kV grade with copper conductor and appropriate sizing. All flexible cables shall be multi-stranded Copper. Cable entry points shall be completely sealed using appropriate barriers/ compounds.
- 3.3. All accessories required for successful commissioning of the system like communication cables, terminals, lugs, DIN rails etc shall be supplied by the vendor.
- 3.4. All control cables shall be terminated inside control panel using proper connectors. Labels of permanent nature should be provided to facilitate identification of circuits and replacement. All power, control and other cables are to be provided with proper ferrule number as approved by the Purchaser.
- 3.5. Installation of Simocrane system equivalent to existing T300 Card of Sinamics DC Drive system consists of 1 Simotion controller, CF Card containing license for Simocrane function (Basic Technology without sway control). The Simocrane system should be connected to one Hold, one Close and Trolley Drives. The existing PLC program will be shared with the vendor after confirmation of order. The existing PLC program in S7-300 should be modified and mapped to Simocrane system with all existing functionality. Necessary modifications including establishing communication for conversion from T-300 based system to Simocrane system

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- The existing HMI shall be retained with all functionality.
- 3.7. All accessories which may be required at the time of commissioning of the PLC like communication cables, power supply etc are in vendor's scope.
- 3.8. Communication between PLC and Simocrane system and between Simotion controller and DC Drives should be established with addition of Profinet/Profibus cards with suitable bandwidth to allow error- free communication.
- 3.9. All existing input and output signals for the DC drives are to be connected to the newly installed drive like Encoder inputs, joystick inputs.
- 3.10. There shall be provision to save open and close position of grab by selecting setting mode in operator console. When setting mode is activated, hold and close motor should be operated very slowly.
- 3.11. Folding and stretching of the boom is required for the crane. This already existing functionality shall be retained as such.
- 3.12. Parameter setting and tuning of drives and Simocrane system for optimal performance shall be done.
- 3.13. Folding and luffing of the boom is required for the crane. This already existing functionality shall be retained as such.
- 3.14. Operating steps/instructions for all operations shall remain the same as existing system. There shall be no performance penalty in any operation due to this migration.

# 4.0 STANDARDS AND REGULATIONS

a. Electrics of the crane shall comply with the Indian Electricity Rules, Regulations, Acts, statutory regulations applicable for the place of installation and shall conform to the latest edition of relevant Indian Standards particularly the following:

i. IS:3177

Code of practice for electrics of overhead traveling crane

ii. IS:8544

Motor starters for voltages not exceeding 1000 V

iii. IS/IEC 61800-5-1 Adjustable speed electrical power drive systems

iv: IS 5831

PVC insulation and sheath of Electric Cables

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# 5.0 DRAWING AND DOCUMENTS

- 5.1. Vendor shall prepare and submit all as-built documents, drawings as per appropriate standards.
- 5.2. PLC program, Simocrane configurations and program and individual drive configurations shall be shared as hard copies and soft copies in the appropriate format.

# 6.0 DETAILS OF EXISTING SYSTEM

# b. Existing Motors to be controlled

#### With DC Drive

i. Hold Motor: 200 kW, 1100 rpm , 400 V DCii. Close Motor: 200 kW, 1100 rpm , 400 V DC

iii. Trolley Travel motor:  $84.5 \, kW$ ,  $1100 \, rpm$ ,  $400 \, V$  DC

#### AC 415V

i. Holding brake

ii. Closing brake

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# 7.0 List of Functions/ Grab Technology as Existing and shall be retained in the new System

## A. Holding Gear

## O Non-linear Master Controller Set Point

The sensor fitted to the Master Controller supplies a set point which is directly proportional to its angle of excursion. To allow the Crane Operator to make more accurate positioning at slow speeds, the set point follows a nonlinear function, and the output characteristic is thus converted into a progressively bent characteristic. This permits fine adjustment even at small speeds.

## Heavy-duty Operation

In heavy-duty operation, loads greater than the rated load can occasionally be lifted. However, this is only permissible at reduced speed. In this mode, therefore, the master controller set point is multiplied by a selectable factor of less than 1 (< 1). This results in full utilization of the excursion area with reduced presetting of the set point.

# Position/ Displacement Control

Using Position Control, the drive can approach a preset point with Displacement Control and time optimization. From a specified point onwards, the speed set point is limited according to the displacement. The displacement actual value is available via a Pulse Generator.

#### Pre-limit Switching

The function "Pre-limit switching" permits limitation of the speed set point to an adjustable speed when the pre-limit switch is run-over. This prevents the drive from moving at full speed into the limit switch.

#### Inching Operation

For inching, an adjustable jogging set point is applied as the speed set point in order to define small speeds e.g. for cable changing

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# Starting Pulse

To prevent sagging of the load, a constant or load dependent set point is applied to the Pre-control input of the Speed Controller in the hoisting winch.

Changeover of Ramp Function Generator with Field Weakening and heavy-duty service

At the transition into the field weakening region, the ramp-up time can be extended to prevent moderately rated drives from reaching the current limits. In heavy-duty service, however, the ramp-up time is extended from the beginning, compared to the rated ramp- up time, and not only when a particular speed is reached.

# Speed Zero Signal

Speed zero detection for brake control at speeds between 5 and 10 % of rated speed.

Control Monitoring

This

function carries out a comparison between speed set point and actual value.

Monitoring of Speed Actual Value

In actual value monitoring, a prerequisite is the presence of two speed actual value generators, for example, a normal speed actual value generator and a displacement actual value generator (which also supplies a speed). With hoisting winches, a generator can be fitted at the motor and a generator at the drum. This allows monitoring of the mechanical elements between them (gear breakage monitoring).

#### Constant Field Weakening

With hoisting winches without load measurement, the speed during lowering can be increased by the square of the efficiency.

## Slack Cable Control

The Slack Cable Controller can be used to prevent the cable from becoming slack when the grab is closed in the load material. It also ensures that the grab can dig into filling material, thus achieving the maximum degree of filling.

## **B.** Closing Gear

#### Inching Operation

For inching, an adjustable jogging set point is applied as the speed set point in order to define small speeds, e.g. for cable changing.

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#### Starting Pulse

To prevent sagging of the load, a constant or load dependent set point is applied to the pre-control input of the speed controller in the hoisting winch.

#### Speed Zero Signal

Speed zero detection for brake control at speeds between 5 and 10 % of rated speed.

#### Control Monitoring

This function carries out a comparison between speed set point and actual value.

# Monitoring of Speed Actual Value

In actual value monitoring, a prerequisite is the presence of two speed actual value generators, for example, a normal speed actual value generator and a displacement actual value generator (which also supplies a speed). With hoisting winches, a generator can be fitted at the motor and a generator at the drum. This allows monitoring of the mechanical elements between them (gear breakage monitoring).

## Grab Displacement Control

With grab displacement control, the set point formed by the Position Controller is limited via the Master Controller of the closing winch. To adjust the grab during grab change, a small set point is applied via the Master Controller.

## o Grab Adjustment

To adjust the grab, the displacement actual values are stored as set points for the "Opened" and "Closed" end points.

# Synchro Control for Lifting Beam Operation

During lifting beam operation of the holding and closing winch, the closing winch follows the holding winch with displacement control.

#### Current Compensation Control

During hoisting and lowering of the closed grab, the tensions of the holding and closing cables should be approximately the same. The required hoisting power is optimally distributed over both motors. The current actual values are compared in the current compensation control, and the difference applied to the speed controller of the closing winch.

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#### 8 OTHER REQUIRMENTS

# 8.1 Input Power Supply for New Drive

8.1.0 The input power supply arrangement for the existing drive shall be retained and used for the new drive. Any re-termination and glanding if required shall be in the scope of the vendor

## 8.2 Software and License

8.2.0 Vendor shall provide suitable Software with lifetime license for configuration and monitoring of PLC Drive and HMI device. Scope of supply of suitable connecting cables are also in Vendor's scope.

## 8.3 Emergency Stop Push Buttons

8.3.0 Existing Safety switches of sustained contact type provided shall be incorporated in the new System so that under any emergency conditions, operating any one of the switches shall make the main incoming Contactor (already existing) tripped and thus cutting off power to all the motors and devices.

#### 8.4 Earthing

8.4.0 All electrical accessories shall be effectively earthed in duplicate by the Vendor, to the nearest existing earthing junction plate provided by the Purchaser. Minimum size of earthing cable shall be 10 sqmm Copper or 16 sqmm Aluminium.

# 8.5 Controls and Protection

8.5.1 The crane hoisting, lowering, grab close, grab open and neutral position commands are generated by an 'H'-type analog Joystick. Crane long travel and cross travel motions are controlled by an analog '+'-type Joystick. Vendor shall incorporate both these controls in the new System. Supply of joystick is not in Vendor's scope.

#### 9.0 TESTING AND COMMISSIONING

Testing of the System, after installation shall be carried out by authorized and trained personnel of the Vendor. Necessary support and assistance, especially for integration of the new System with the existing unloading equipment, will be extended by FACT's Engineer in-charge.

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Testing shall include carrying out pre-commissioning checks on Power/ Control wiring, checking of Protection, Alarm and Annunciation, Earthing etc

The following tests shall be conducted and records submitted to FACT.

- i. Insulation resistance of electrics supplied
- ii. Tests for Controls and Interlocks
- iii. Physical verification of items for compliance with PO Specifications
- iv. Performance test at site by actual unloading of material. A minimum unloading speed of 600 MT/ hour shall be possible, without any limitation from the new Control System.

All safety interlocks shall be tested.

System shall be deemed to have been commissioned only after successful testing of various controls as specified in the TPS, checking of unloading operation for proper operation and handing over of the System to FACT.

## 10.0 TRAINING

10.1. After successful commissioning of the System, the Vendor shall provide sufficient training to Technicians and Engineers of FACT. The level of the training shall be such that they shall be able to troubleshoot hardware/ software problems/ replace faulty devices/ cards and configure/ re-program after replacement of items.

# 11.0 SPARES LIST

SI. No.	Description	Qty
1	Thyristor line D420/1600 4Q ; Part Number: 6RY18020CA26	2
2	Thyristor module 312 A 1600 V ; Part Number: 6SY70100AA05	1
3	Control electronics Standard incl. terminals 32 MB C98043-A7100-L3; Part Number: 6RY18030AA000AA1	1
4	Power Interface incl. terminals C98043-A7105-L4; Part Number: 6RY18031DA02	1

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#### 12.0 OTHERS

- 12.1 Vendor shall provide minimum 1-year performance warranty from the date of commissioning for the New System (including all devices/ components) supplied by him.
- 12.2 Payment of 90 % value of supply items shall be released against material supply and remaining will be released with final bill after the submission of all documents and successful commissioning of drive system in all aspects.
- 12.3 Vendor shall complete the delivery of all items within 8 months from the date of issue of purchase order. After delivery, Vendor shall complete the commissioning work within a period of 30 days from the date of clearance issued by FACT. The time taken by FACT, for approval of drawings and documents submitted by the Vendor and erection of various items supplied by the Vendor as per the approved documents shall be deducted for the purpose of finding the actual time taken by the Vendor for commissioning.
- 12.4 FACT's general terms & conditions are applicable to this work.
- 12.5 After completion of work at site, bidder shall prepare "AS BUILT DRAWINGS" and "O&M Manual" and submit to FACT.

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# **PRE-QUALIFICATION CRITERIA**

#### TENDER No. MM/172/G30862

SI No	Pre-Qualification Criteria (PQC) Conditions	Documents to be submitted along with bid	Bidders compliance
1	Bidder shall be either Siemens or Siemens Authorized to use the name Siemens Solution Partner.	Self Declaration by OEM/valid authorisation certificate from Siemens. The authorization certification has been proved in drive and motion control crane Portfolio Modules.	
2	Bidder shall have good experience in supply & erection or replacement and commissioning of Siemens drives in grab type unloader cranes.	Copy of work orders related to supply & erection of Siemens drives having a capacity of 1000 Amps(min), Its erection in grab type unloader cranes and its successful work completion with in last 7 years.	
3	The Bidder shall have executed Purchase / Work Orders as per any one of the 3 conditions:  A. 1 order of value not less than Rs. 60,00,000 OR  B. 2 orders of value not less than Rs. 37,50,000 each, OR  C. 3 Orders of value not less than Rs. 30,00,000 each.	Copies of executed Purchase Orders / Work Orders	
4	<ul> <li>a) Average annual turnover of the bidder for the last three financial years ending on 31-03-2024 shall be at least Rs. 140/- Lakhs or above and</li> <li>b) Annual turnover for each year shall be at least Rs. 21 /- lakhs or above during the last three financial years ending on 31-03-2024</li> </ul>	Self-attested copies of audited financial statements (Profit & Loss Account and Balance Sheet) for the last three financial years ending on 31-03-2024	

#### NOTE: -

- 1) All the documents submitted in proof of the PQ criteria shall be attested by the authorized signatory of the bidder. FACT shall be at liberty to verify the data / documents s submitted by the Bidders with clients / users.
- 2) Pre-Qualified bids will only be considered for Technical Evaluation. Technically and commercially acceptable Bids will only be considered for Price Bid opening.
- 3) Submission of authentic documents for meeting the above technical and financial criteria is the prime responsibility of the Bidder. Wherever FACT has concern or apprehension regarding the authenticity/ correctness of any document, FACT reserves the right of getting the documents cross verified from the document issuing authority.
- 4) IMPORTANT: In case of ambiguity or incomplete or non submission of required relevant documents along with bid, FACT reserves the right, at its option, to reject the Bidders Bid without assigning any reason and without notice.



# **COMPLIANCE STATEMENT**

SI. No.	Terms	Bidder confirmation
1	Offer shall be strictly as per provided TPS – <b>CD-ELE-WI-SUD RO</b>	
2	Vendor shall provide minimum 1 year performance warranty from the date of commissioning for the New System (including all devices/components) supplied by them	
3	Please confirm:  Completion Period: Vendor shall complete the delivery of all items within 8 months from the date of issue of purchase order. After delivery, Vendor shall complete the commissioning work within a period of 30 days from the date of clearance issued by FACT.	
4	Please confirm : Price Basis – FOR FACT Stores (as per Gem T & C)	
5	Please confirm : Taxes and Duties - The Price offered in GEM is all inclusive of TAX. (as per Gem T & C)	
6	Please confirm: Payment Terms: Payment of 90 % value of supply items shall be released against material supply and remaining will be released with final bill after the submission of all documents and successful commissioning of drive system in all aspects.	
7	Please confirm: Liquidated Damages: As per GeM — "@ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever"(as per GeM T & C)	