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# **SPECIFICATIONS FOR THE SUPPLY, AND INSTALLATION OF COMPONENTS FOR BOOSTER PUMP STATION AND CLEAR WATER-INTAKE OF SAND-BYPASS AT PORT OF NGQURA FOR A ONCE-OFF PERIOD**

## **1. Introduction**

Invitation to service providers to tender for the supply and installation of components of Sand bypass Booster Station 02 at Port of Ngqura in accordance with the Original Equipment Manufacturers (OEM's) manual.

## **2. Scope Of Work and Specification**

2.1.(a) Supply and installation of components for Booster 02. As per the table below.

(b) Integrate Booster 02 into the Scada system of Sand bypass, test and commission.

2.2 (a) Reconfigure safety devices and features on the clear water station.

(b) Integrate pump monitoring safety device into the Scada for faults and failure of submersible pump(180kw), test and commission as per clause 2.3

DOCUMENT NAME.	PAGE
SPECIFICATIONS FOR THE SUPPLY, DELIVERY AND INSTALLATION OF COMPONENTS FOR BOOSTER PUMP STATION AT SAND-BYPASS AT PORT OF NGQURA.	1 OF 5

ITEM	DESCRIPTION	OEM MANUFACTURE PART NUMBER / SUPPLIER ORDER NUMBER	SAMPLE ALLOCATIO N
Inverter power layer interface PCB	Allen-Bradley Inverter power interface Series B	SK-R1-PINT2-F8	On site if required
Invert power PCB	Allen-Bradly Invert power PCB Series A	SK-R1-PC1-F8	On site if required
Inverter Power Control PCB	Allen-Bradley Powerflex 750 main power supply board kit Series A	SK-R1-PWRS1-CD-F8	On site if required
Inverter gate PCB	Powerflex 750 inverter gate board Series A	SK-R1-IG1-C770D740	On site if required
Pressure limit Switch	Johnson controls pressure limit switch	P77AAA-9300	On site if required
IGBTs Transistor	Infineon FF1800R12IE5PBPSA 1 Dual IGBT Module, 1.8 kA 1200 V, 10-Pin PRIME3+	FF1800R12IE5PBPSA 1	On site if required
Bussmann Fuse	Fuse-link, high speed, 1100 A, AC 690 V, size 3, 76 x 92 x 135 mm, aR, IEC, UL, single indicator	170M6665	On site if required
Bussmann Fuse	Fuse-link, high speed, 800 A, AC 690 V, DIN 3, 76 x 92 x 109 mm, aR, DIN, IEC, single indicator	170M6112	On site if required
Bussmann Fuse	Fuse-link, high speed, 1400 A, AC 690 V, size 3, aR, IEC, UL, type K indicator	170M6467	On site if required
Micro Switch	Eaton Bussmann series high speed microswitch, 2A 250V AC, With Indicator	170H0069	On site if required

DOCUMENT NAME:	PAGE
SPECIFICATIONS FOR THE SUPPLY, DELIVERY AND INSTALLATION OF COMPONENTS FOR BOOSTER PUMP STATION AT SAND-BYPASS AT PORT OF NGQURA.	2 OF 5

Single Incremental Encoder	Single Incremental Encoder Input, 5V DC, use with Powerflex 750 Series	20-750-ENC-1	On site if required
Encoder	X-heavy duty Hollow shaft encoder, Incremental	750729-03	On site if required
Pressure Transducer	VEGA VEGABAR 82 Pressure Transmitter 0-100Kpa	54344418	On site if required
Pressure Transducer	VEGA VEGABAR 82 Pressure Transmitter 0- 400Kpa	54344418	On site if required
Pressure Transducer	VEGA VEGABAR 82 Pressure Transmitter 0-4000Kpa	54344418	On site if required
TEMPERATURE PROBE	ENDRESS-HAUSER EASYTEMP PT100 TEMPERATURE PROBE SENSOR 0-100	TMR31-A1AAAAAC1AAA	On site if required

- For Pressure Transducer the supplier is required to take flange measurements as they have different sizes

### 2.3 Clear water Station Specification

- (a) PLC installed: Allen Bradley Logix 5573
- (b) Pump control: Soft stater-Allen-Bradley SMC flex MFG LOC 1150
- (c) Pump installed: Flygt 400V, 3phase, 180kW, 360A

## 3. Guarantee/ Warranty

- The service provider shall provide a 6-month warranty for the components and the works.
- The service provider must ensure the supplied components aligned with the specification provided and in accordance with the OEM's manual.
- The sole responsibility for ensuring that the components supplied conform to the specification shall rest with the awarded service provider.

## 4. Bill of Quantities

Item No	Description	Unity	Qty	Total Price

DOCUMENT NAME:

SPECIFICATIONS FOR THE SUPPLY, DELIVERY AND INSTALLATION OF COMPONENTS FOR BOOSTER PUMP STATION AT SAND-BYPASS AT PORT OF NGQURA.

PAGE

3 OF 5

1	Safety File	EA	1	
2	Inverter power layer interface PCB	EA	4	
3	Invert power PCB	EA	4	
4	Inverter Power Control PCB	EA	4	
5	Inverter gate PCB	EA	9	
6	Pressure limit Switch	EA	6	
7	IGBTs Transistor	EA	9	
8	Bussmann Fuse	EA	12	
9	Bussmann Fuse	EA	12	
10	Bussmann Fuse	EA	15	
11	Micro Switch	EA	39	
12	Single Incremental Encoder	EA	6	
13	Encoder	EA	6	
14	Pressure Transducer	EA	4	
15	Pressure Transducer	EA	8	
16	Pressure Transducer	EA	8	
17	TEMPERATURE PROBE	EA	20	
18	Allen Braddley Logix 5573	EA	2	
19	Soft starter Allen Bradley SMC flex MFG LOC 1150	EA	1	
20	Flygt MiniCAS pump sensor monitor	EA	2	
21	Contingencies			
<b>Sub Total (Excl VAT)</b>				
<b>VAT (15%)</b>				
<b>GRAND TOTAL</b>				

## 5. Signatures

Compiled: Xola Mdinci

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

DOCUMENT NAME:	PAGE
SPECIFICATIONS FOR THE SUPPLY, DELIVERY AND INSTALLATION OF COMPONENTS FOR BOOSTER PUMP STATION AT SAND-BYPASS AT PORT OF NGQURA.	4 OF 5

Technical Manager: Ayanda Dlula

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Senior Engineer: Masande Betela

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

DOCUMENT NAME:

SPECIFICATIONS FOR THE SUPPLY, DELIVERY AND INSTALLATION OF COMPONENTS FOR BOOSTER PUMP STATION AT SAND-BYPASS AT PORT OF NGQURA.

PAGE

5 OF 5