

# TRANSNET ENGINEERING

## PRODUCT SYSTEMS DEVELOPMENT

### PORT EQUIPMENT

## SPECIFICATION FOR AMS OVERHAUL PARTS LIST


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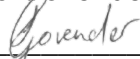
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## 1. INTRODUCTION

The following specification details the parts required for the overhaul of the Automated Mooring System (AMS) located at Transnet National Port Authority- Ngqura.

## 2. ELECTRICAL ITEMS

Table 1 details the list of electrical components which are required for the overhaul of the AMS.

Table 1: Electrical Items

No.	OEM Name	OEM part no	TE Item No	Item	Description	Comments	QTY
1	Parker	C3F001D2F12 I22 T40 M00	055856955	Motion Controller	Parker Servo Fluid motion Controller Compax 3F-T40 DeviceNet	or equivalent	4
2	Baluff	BTL5-S172-M0600-K-K10	085855671	Position Sensor	Transducer Balluff BTL5 Compact, SSD, 600mm Proximity Sensors, Micropulse BTL0AZE	or equivalent	8
3	Allen Bradley	AB 871F-N65BP80-D4	055856266	Proximity Sensor	Proximity sensor 4 wire AB 871F-N65BP80-D4 FLAT PACK STYLE	or equivalent	5
4	Siemens	6EP1935-6MF01	085856951	Battery Bank (24VDC, 30A, 12Ah)	UPS Battery Unit - Siemens SITOP Battery Module	or equivalent	2
5	Xylem	5828803	055855791	Float Switch	Float switch assembly	or equivalent	2
6	Wago	757-145	055856256	Sensor actuator box 4port	Sensor actuator box 4port 5 pole M23 Wago	or equivalent	2
7	Wago	757-165	055856257	Sensor actuator box 6port	Sensor actuator box 6port 5 pole M23 Wago	or equivalent	2
8	IFM	TR-...KDBR12-MFRKG/US/...../V	055856038	Oil tank temperature sensor	Amplificator TR2432 -40° + 300° Oil tank	or equivalent	2

					temperature sensor with display		
9	Buschjost	8574401.841	062858380	Pressure Solenoid	Pneumatic pressure solenoid 24V, 0Hz, 40W, PA 0-25 bar, G 1", NO, top mount, 2/2 way piston valve	or equivalent	6
10	Busch	MM1142BV Aqua inox 415V	055856273	Vacuum Pump	Vacuum pump with SS cover MM1142BV Aqua inox 415V 3.5KW 140m3/h	or equivalent	2
11	Allen Bradley	194E-A100-1753-6N	055858381	Isolator	Isolator, 3P Pole DIN Rail Isolator Switch - 100A , 45kW , IP66	or equivalent	2
12	Allen Bradley	100-K12DJ10	055858382	Contactactor	Contactactor, 24 V dc Coil, 3 Pole, 12 A, 5.5 kW, 3NO	or equivalent	4
13	Allen Bradley	1606-XLS480E	085858383	Performance Power Supply	Performance Power Supply, 24-48V DC, 480 W, 120/240V AC / 110-300V DC Input Voltage, 20A	or equivalent	2
14	Allen Bradley	1606-XLS960EE	085858384	Performance Power Supply	Performance Power Supply, 24-28V DC, 960 W, 1-Phase 240V AC Input Voltage, 40A	or equivalent	2
15	Siemens	6EP1931-2EC31	085858385	Uninterruptible Power Supply	24VDC-24VDC UPS 960W 40A	or equivalent	2
16	Roline	11.01.9018-50	085858386	DB9 Cable	DB9 female-female 1.8 m	or equivalent	2
17	Allen Bradley	AB 700-TBR24	085858387	TERMINAL BLOCK RELAY	TERMINAL BLOCK RELAY, 6A, 1CO SPDT, 24VAC/DC COIL, FOR USE	or equivalent	30

					WITH 700-HLT1Z SOCKET		
18	Rittal	1521010	085858388	Junction Box	Stainless Steel Junction Box, IP66, 150 x 150 x 85mm	or equivalent	2
19	Phoenix Contact	3003017	085868389	Termination block connector	JB3 14 way termination block connector 32A 24-12AWG 800V	or equivalent	2
20	Pilz	751104 PILZ - PNOZ S4 C 24VDC 3 N/O 1 N/C	085858390	Safety relay	Safety relay - PNOZsigma Safety relay (standalone) 24VDC 3 N/O 1 N/C	or equivalent	2
21	Allen Bradley	871F-N65BP80-D4	085858391	Proximity sensor	Proximity sensor 4 wire AB 871F-N65BP80-D4 FLAT PACK STYLE	or equivalent	4
24	Microsonic	MIC+ 600/IU/TC	055856254	Ultrasonic sensors	Microsonic Ultrasound Sensor 6m (MIC 600IUTC)	or equivalent	2
25	Microsonic	MIC+340/IU/TC	084855928	Ultrasonic sensor	Ultrasonic transducer 3403400mm, Microsonic (water clearance)	or equivalent	2
26	IFM	PN-400-SBN14-MFRKG/US/ /V	085858392	Pressure sensor	Pressure sensor PN2220 with display	or equivalent	6
27	IFM	TN-013KCBD10-MFRKG/US/ /V	055856094	Temperature Sensor	Temperature sensor with display TN2531 - 40°+150°C	or equivalent	4
28	Bosch Rexroth	VEI-8A-2A-12A-NC-S-NSS 350 bar	013856105	Solenoid valve	Solenoid valve VEI-8A-2A-12A-NC-S-NSS 350 bar	or equivalent	4
29	Bosch Rexroth	VEI-8A-2T-12A-NC-S-NSS 350 bar	013856104	Solenoid valve	Solenoid valve VEI-8A-2T-12A-	or equivalent	4

					NC-S-NSS 350 bar		
30	IFM	PT3551	055856120	Pressure transmitter	Pressure transmitter PT3551 0-250 bar 1/4"Gas 4-20 mA	or equivalent	5
31	Hella	Duraled 20 2JA980608-00x	080858402	HPU Internal Light	HPU Internal Light - Hella Marine DuraLED 36 700 lumen, 6500k, 9-33V	or equivalent	3
32	IFM	PE3029	055856277	Vacuum sensor -1 to 0 bar 4-20mA output IP67	Vacuum sensor -1 to 0 bar 4-20mA output IP67 Pressure Sensor with display	or equivalent	4
33	Allen Bradley	800F	084856207	E- Stop Push Button Vacuum side	Emergency stop operator Ø40 red IP66, twist release, with yellow guard and weatherproof surface mount enclosure	or equivalent	1
34	-	-	085858393	HPU Ambient Air Temperature Transducer	HPU Ambient Air Temperature Transducer 4-20ma	or equivalent	1

### 3. MECHANICAL ITEMS

Table 2 details the list of mechanical components which are required for the overhaul of the AMS.

Table 2: Mechanical Items

No.	OEM Name	OEM part no	TE Item No	Description	Comments	QTY
1	-	1149654/11	088859477	VACUUM PAD SEAL (sample available at Ngqura Terminal)	Or equivalent	3
2	Sesino	AP 2/680 EB N 1406876	084856030	Hydraulic Oil cooler unit - Double (Sesino AP 2-680 EB) 100-300l min flow rate, 28l capacity, 230/400 V 50Hz, 2x 690W, 120kg	Or equivalent	1
3	Effebe	F03A3PEIMAA	013856279	Valve 1" manual Effebe Titan AISI 316	Or equivalent	2
4	Busch	PPB 0532 121 863	084855168	Exhaust Filter cartridge for Mink MM1142BV vacuum pump Busch 127x64x125 polyester	Or equivalent	2
6	Norgren	T40C8800	084856276	Silencer sinterised bronze G1" Norgren	Or equivalent	2
7	Buschjost	0000000.9400	013858405	Pad-To-Atmosphere Valve, 24V, 0Hz, 38 W	Or equivalent	2
8	Norgren	5311-03	084856275	Filter 1" insert 40um Vacuum manual drain Norgren	Or equivalent	2
10	Filtro	401/4-B-AF1- A006N/S	013856042	Inline filter LMP 401/4-B- AF1-A006N/S	Or equivalent	3
11	Stucchi	801300025	084856121	QRC m 1.5"G Series A ISO16028 FF Stucchi-A30	Or equivalent	4
12	Stucchi	801300026	084856122	QRC f 1.5"G Series A ISO16028 FF Stucchi-A30	Or equivalent	4
13	Stucchi	801300053	084856123	QRC Male 1.25in BSP Series A25 ISO 160028 FF	Or equivalent	2
14	Stucchi	801300052	084856124	QRC Female 1.25in BSP Ser series A25 ISO 160025 FF	Or equivalent	2
15	MPFiltiri	FHB320-2-B-AF1- A03-NP01	084856091	Pressure filter FHB320-2- B-AF1-A03-NP01	Or equivalent	2
16	MPFiltiri	3564500000000.00	084856092	Indicator, Pressure Switch 7bar , SOLENOID	Or equivalent	2
17	Rubinetto	3393453006000.00	088859540	CARTRIDGE CONTROL VALVE RUBINETTO FT 267/5 100 (accumulator)	Or equivalent	1

18	Piastra	2125150463000.00	085858403	PIASTRA DISTR.1ACCUMUL.1.1/4"G + valve manifold block	Or equivalent	1
19	Stucchi	801300031	084856129	QRC f 1/4"G Series A male ISO16028 FF Stucchi A21	Or equivalent	4
20	Stucchi	801300004	084856130	QRC f 1/4"G Series A fem ISO16028 FF Stucchi A21	Or equivalent	4
21	Stucchi	801300051	084856125	QRC Male A21 1" BSP ser.A16028 Flat Face Stucchi	Or equivalent	1
22	Stucchi	801300050	084856126	QRC Female A21 1" BSP ser.A16028 Flat Face Stucchi	Or equivalent	1
23	Stucchi	801300021	084856127	QRC f 3/4"G Series A male ISO16028 FF Stucchi A21	Or equivalent	2
24	Stucchi	801300022	084856128	Coupling female 0.75" BSP Series A stucchi A13	Or equivalent	2
25	Rexroth	3DR10 P4 6X/200 Y 00M	013856110	Valve reducing 3DR10 P4 6X/200 Y 00M	Or equivalent	1
26	Norgren	F17-800-M3DG	088859478	Filter Housing, 1" G, Manual Drain, Metal bowl, 250psi, 40um, Vacuum Drain Filter Unit	Or equivalent	2

## 4. HOSES AND PIPES

Table 3 shows the hoses and pipe which are required for the overhaul of the AMS.

Table 3:Pipes and Hoses

No.	TE Drawing No.	TE Item No	Description	Quantity
1	PEP1016C0121	013858408	Top Motor Hose - L600	1
2	PEP1016C0122	013858409	Top Motor Hose - L650	1
3	PEP1016C0123	013858410	Top Motor Hose - L850	1
4	PEP1016C0124	013858411	BTM Motor Hose - L500	1
5	PEP1016C0125	013858407	BTM Motor Hose - L600	1
6	PEP1016C0126	013858531	BTM Motor Hose - L650	1
7	PEP1016C0127	013858532	BTM Motor Hose - L800	1
8	PEP1016C0128	013858533	Top Tank FRNT Piping	1
9	PEP1016C0129	013858534	Top Tank FRNT Piping	1
10	PEP1016C0130	013858535	Accumulator A pipe	1
11	PEP1016C0131	013858536	Accumulator B pipe	1
12	PEP1016C0132	013858483	Valve to Tank pipe A	1
13	PEP1016C0133	013858484	Valve to Tank pipe B	1



14	PEP1016C0134	013858485	Butterfly Valve Flange	1
15	PEP1016C0135	013858486	Vaccum Tank Hose - L1350	1
16	PEP1016C0136	013858487	Vaccum Tank Hose - L1200	1
17	PEP1016C0137	013858488	Vaccum Tank Hose - L1100	1
18	PEP1016C0138	088858552	Tank to Motor Hose	1