

Project number: MCP2160079
Project name: OR Tambo International Airport (ORTIA) - 20" Jet Fuel Feeder Line
Client: Airports Company South Africa SOC Limited

Item No	Equipment /Line	Description	Unit	Qty	Supply Rate	Install Rate	Amount R c
		<u>SCHEDULE E: CONTROL & INSTRUMENTATION</u> <u>General notes:</u> a) Control valves are calibrated with clean air and not local air compressors b) Quantities of the rates are estimated c) The contractors rate must include 2x AFC files on site. One is the working file and other is the mater file d) All redlines must be transferred from the working file to the master file e) All cable lengths are approximate and must be verified before procurement f) All wiring is marked with single side grafo-plast type barrel and tagging. Tagging mist be black text and yellow tag. g) Boot lace lugs is used with an approved crimper h) installation must be according to ACSA Standard Specifications.					
		<u>PRELIMINARIES AND GENERAL</u> Contractor to provide a detailed breakdown of Preliminaries					
1		Fixed-charge And Value-related Items	Sum	1			-
2		Time-related Items	Sum	1			-
		<u>CABLE INSTALLATION</u> <u>Note: All cables lengths must be verified on site to confirm quantity and measured before procurement</u>					
3	2,3,6 &7	Supply, install, gland and terminate 1 pair 1.5mm ² armoured cable. Type IAL XLPE-I.S., (Black and Blue)instrument cable. Analog AI/DI,(IS), (5), Signals from the instruments to RIO WEST TF1-JC01-C (Ex ia)	m	310			-
4	2,3,6 &7	Gland & Terminate cable on Item 6.01 (4 lengths)	ends	8			-
5	1	Supply, install, gland and terminate 1 pair 1 mm ² core cable, (Black)instrument cable. Digital /DI,(NIS), Signals from the motorised Valve to RIO WEST TF1-JC01-C (Ex ia)	m	80			-
6	1	Gland & Terminate cable on Item 6.03 (1 lengths)	ends	2			-
7	5	Supply, install, gland and terminate 2 pair 1 mm ² core cable, (Black)instrument cable. Digital /DI,(NIS), Signals from the motorised Valve to RIO WEST TF1-JC01-C (Ex ia)	m	80			-
8	5	Gland & Terminate cable on Item 6.03 (1 lengths)	ends	2			-
9		Supply, install and terminate 16 mm ² Green and Yellow earth cable	m	20			-
		<u>INSTRUMENTS INSTALLATION</u> <u>Rates to include the following:</u> a) Instruments to be installed in accordance with the instrument installation detail (STDD) b) Stainless steel identification tags with stainless steel straps c) Mounting of all support and aligning brackets					
10	VCM-1	Supply and install the Hand switch (HS-XX1)	each	1			-
11	VCM-1	Supply and install Pressure transmitter (PIT-XX1) - c/w Sustech Manifold	each	1			-

12	VCM-1	Supply and install Pressure Gauge (PI-XX1) - c/w Sustech Manifold	each	1			-
13	VCM-0	Supply and install Pressure Gauge (PI-XX2) - c/w Sustech Manifold	each	1			-
14	VCM-0/1	Supply and install In-Line Pig Indicator	each	2			-
		<u>INLINE INSTRUMENTS & VALVES INSTALLATION</u>					
		<u>Rates to include the following:</u>					
		<u>a) Installation in accordance with the instrument installation detail (STDD)</u>					
		<u>b) glanding and terminating of all cables</u>					
		<u>c) stainless steel identification tags with stainless steel straps</u>					
		<u>d) mounting of all support and aligning brackets</u>					
		<u>e) Mechanical to assist with installation</u>					
15	DBB-XX1	Supply and installation of DBB XX1 MOT valve (20")	each	1			-
16	DBB-XX2	Supply and installation of M DBB XX2 valve (18")	each	1			-
		<u>INSTRUMENT TUBING</u>					
		<u>Rates to include the following:</u>					
		<u>a) Securing with clamps and supports</u>					
		<u>b) All fittings & valves required for installation</u>					
		<u>c) Leak test on installed tubing as per Sappi Standard Specification</u>					
		<u>d) DP level transmitters to be installed with filling tee's (where applicable)</u>					
17	VCM-1	Supply and install ½ "stainless steel tubing fitted with fittings, fixtures etc. (PIT-XX1)	m	6			-
		<u>INSTRUMENT STANDS</u>					
		<u>Rates to include the following:</u>					
		<u>a) Manufacture and installation of stands according to ACSA Standard Specifications.</u>					
		<u>b) instrument identification nameplate on the stand must be installed where each instrument is installed</u>					
		<u>c) the grouting of instrument stand</u>					
18	VCM-1	Supply and Install Single Pedestal (PIT-XX1 & HS-XX1)	each	2			-
19	VCM-1	safety earth the instrument stand	m	20			-
		<u>EXISTING CONTROL PANEL REQUIREMENTS - PANEL WIRE</u>					
		<u>Installation of panel wiring in cabinets including all necessary fastening and tagging</u>					
20		Supply and install white 1mm ² panel wiring	m	50			-
21		Supply and install black 1mm ² panel wiring	m	50			-
		<u>LOOP CHECKS & CALIBRATION</u>					
		<u>Rates to include the following:</u>					
		<u>a) necessary adjustments of the instruments with necessary test equipment and tools</u>					
		<u>b) compiling check sheets, certificates and reports.</u>					
		<u>c) issuing of certificate confirming loop wiring was done and correspond to the wiring diagram of the loop</u>					
		<u>d) calibration of all field instruments and issue certificates.</u>					

TOTAL CARRIED FORWARD TO SUMMARY