

PART C2.2
BILLS OF QUANTITIES

CSIR KLOPPERSBOS GAS			191013		
BILL OF QUANTITIES: LABORATORY GAS INSTALLATION					
BILL No. 2		Instrument Tubing – Stainless Steel		Refer to drawing no 191013-M-G-4GF-GS_rev0	
Item	Description	Unit	Quantity	Tariff	Amount
	Extra over for S/S, 316 Grade, instrument tube fittings, welded				
	S/S instrument tube, bends				
2.1	Ø6mm S/S tube 90° Bend	No	9	R	-
2.2	Ø10mm S/S tube 90° Bend	No	28	R	-
2.3	Ø6mm S/S tube formed bend	No	48	R	-
	S/S instrument tube, Tee's				
2.4	Ø10mm - Ø10mm - Ø10mm S/S tube Tee	No	4	R	-
	S/S instrument tube, reducers (largest size)				
2.5	Ø10mm - Ø6mm S/S tube reducer	No	8	R	-
	Stainless steel, 316 Grade, instrument tubing and ancillaries, unpolished, welded, including supports and fixings			R	-
	S/S instrument tubing, supported in single volume space				
2.6	Ø6mm S/S pipe	m	117	R	-
2.7	Ø10mm S/S pipe	m	65	R	-
TOTAL BILL - INSTRUMENT TUBING - STAINLESS STEEL				R	-

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BILL OF QUANTITIES: LABORATORY GAS INSTALLATION					
BILL No. 3		<u>Reticulation and Support Systems</u>		Refer to drawing no 191013-M-G-4GF-GS_rev0	
Item	Description	Unit	Quantity	Tariff	Amount
	Perforated metal cable trays including supports and fixings				
	Pre-galvanised (GMS) cable trays, supported in single volume space c/w brackets and support fittings				
3.1	300mm Medium duty cable tray with return flange	m	30	R	-
3.2	300mm GSM Tray cover	m	15	R	-
	<u>Pre-galvanised (GMS) cable trays, supported in vertical space c/w brackets and support fittings</u>				
3.3	300mm Medium duty cable tray with return flange	m	16	R	-
3.4	300mm GSM Tray cover	m	2	R	-
	Perforated metal cable tray fittings				
	<u>Pre-galvanised (GMS) cable tray bends</u>				
3.5	300mm Medium duty square bend	No	12	R	-
3.6	300mm Square bend cover	No	8	R	-
TOTAL BILL - RETICULATION AND SUPPORT SYSTEMS				R	-

CSIR KLOPPERSBOS GAS			191013		
BILL OF QUANTITIES: LABORATORY GAS INSTALLATION					
BILL No. 4		Pipe and Tube Accessories	Refer to drawing no 191013-M-G-4GF-GS_rev0		
Item	Description	Unit	Quantity	Tariff	Amount
	Stainless steel instrument tube accessories c/w pipe connections, supports and identification				
4.1	316S/S Instrument tube ball valves Ø6mm S/S instrument tube ball valve, nylon directional handle	No	16	R	-
4.2	Ø10mm S/S instrument tube ball valve, nylon directional handle	No	8	R	-
	316S/S Instrument tube emergency solenoid type, shut off valves, electrically operated (Refer to schedules on drawings)				
4.3	Ø10mm S/S instrument tube 2-way solenoid valve, direct acting, 1600kPa SVA01	No	4	R	-
TOTAL BILL - PIPE AND TUBE ACCESSORIES				R	-

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BILL No. 5 <u>Equipment</u>			Refer to drawing no 191013-M-G-4GF-GS_rev0		
Item	Description	Unit	Quantity	Tariff	Amount
5.1	General				
	<u>Emergency shut-off system, electrical connections and galvanise steel conduit</u> Emergency shut off push button lockout stop c/w cabling to emergency solenoid shut off valve arrangement	No	2		R -
5.2	Gas manifolds				
	<u>Flammable, high purity 316S/S tube gas manifolds, oxygen compatible c/w manual change over panel, 600kPa distribution</u> 2 x 1 Manual change-over c/w gauges, valves, pressure regulator panel, braided steel hoses, connector fittings and cylinder holding brackets	No	1		R -
5.30	<u>High purity, oxygen compatible, 316 S/S tube gas manifolds c/w manual change over panel, 600kPa distribution</u> 2 x 1 Manual change-over c/w gauges, valves, pressure regulator panel, braided steel hoses, connector fittings and cylinder holding brackets	No	3		R -
TOTAL BILL - EQUIPMENT					R -

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BILL OF QUANTITIES: LABORATORY GAS INSTALLATION					
BILL No. 6 <u>Budgetary Allowance</u>			Refer to drawing no 191013-M-G-4GF-GS_rev0		
Item	Description	Unit	Quantity	Tariff	Amount
6.1		No			R -
TOTAL BILL - BUDGETARY ALLOWANCE - CARRIED FORWARD TO FORM OF TENDER					R -