EMPLOYERS REQUIREMENTS - PHASE 1

CONTRACTOR DESIGNED NEW HYDROTHERAPY POOL INSTALLATION

ELECTRICAL CHARACTERISTICS

	Model	Qty					Sub-total	Starter		
Item		Duty	S/by	Supply Voltage	Power (kW)	FLC (Amps)	FLC	Туре	Comments	
Circulating Pumps	NB50-200/213	1	1	415	3.00	5.00	5.00		See note 2)	
Heat Exchanger Booster Pump	NB 32-160.1/137	1		415	0.25	1.00	1.00	DOL	See note4 and 6)	
Feature Pump	32-125/106	1		415	1.10	2.00	2.00			
Ultra Violet Unit	WF-115-3	1		230	1.50	4.00	4.00	-	See notes 8) & 11)	
PAC Dosing Pump	DDE-61-5	1		230	0.02	1.00	1.00	-	See note 7	
Raw Water Make-up Valve	Burkett 0290	1		230	0.10	1.00	1.00	-	See note 9)	
Sample Board	Bayrol Analyt	1		230	0.00	1.00	1.00	-	See note 5)	
Hypo Dosing	Pellet Pro	1		230	0.10	1.00	1.00			
CO2 Dosing	DDE-61-5	1		230	0.00	1.00	1.00			
Underwater Lights	Par 56	8		24	0.02	1.00	8.00			
Level Control	Proximity Sensors	1		24	0.00	0.00	0.00			
Pool Cover		1		230	0.37	1.00	1.00			
		26.00								

Notes:

- 1) Control panel to be manufactured in accordance with EN 60439-1/1999 Low Voltage Switchgear and Controlgear Assemblies.
- 2) Duty, Standby circ pumps to be interlocked to prevent standby pump operating while duty pump is in operation.
- 3) Common Fault Volt Free relay to BMS.
- 4) Shrouded relay controlled by heat exchanger booster pump for primary heating engineer.
- 5) Chemical dosing controller to be interlocked with circulating pumps via a volt free contact fed from chemical dosing controller.
- 6) Heat exchanger booster pump to be interlocked with circulating pumps.
- 7) PAC Dosing to be interlocked with circulating pumps.
- 8) Ultra Violet Unit to be interlocked with circulating pumps.
- 9) Fire Alarm Emergency Stop relay to drop out all controls with the exception of raw water make-up, raw water make-up valve and chemical dosing control panel.
- 11) Ultra Violet Unit 3 Phase
- 13) Testing

ELECTRICAL CHARACTERISTICS - POOL INSTALLATION (Cont'd)

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In addition, functional checks shall be carried out in the works to ensure that all interlocking and sequencing is in accordance with the performance requirements of the specification.

The Engineer shall be given notice of such tests so that he may attend if they so desire.

With all control circuits disconnected but with all isolators closed and power fuses fitted the panels shall be subjected to a pressure test of 2.5kV for one minute across the following points:

- a) Phase to phase
- b) Phase to neutral
- c) Phase to earth
- d) Neutral to earth

This test shall be followed by an insulation resistance test with an approved type of 500V testing instrument.

With all electronic components and timeswitches removed and with all isolators closed and protective circuit devices fitted an insulation resistance of not less than 20 Megohms shall be obtained between each of the following points:

- a) Phase to phase
- b) Phase to neutral
- c) Phase to earth
- d) Neutral to earth