



SECTION 6.0 SCHEDULE OF TECHNICAL REQUIREMENT OF EQUIPMENT

6.1 SCOPE OF WORKS

The works to be performed under this contract are listed hereunder:

- 6.1.1. To supply, delivery, installation, testing and commissioning of the following equipment at Pembinaan Kolam Menyelam Tempur Kem 21 GGK Mersing, Johor that include :

Complete Pool Filtration System c/w circulation pump, sand filter, circulation piping and fittings, pool water treatment system, under water lighting, pool cleaning accessories, switch board, controls, wiring, trunking, conduit etc.

- 6.1.2. Servicing and maintaining the above-mentioned system for a period of one year from the date of its handing over to the Jabatan Kerja Raya in good operating condition.

- 6.1.4 Deviation

Any deviation from the specifications shall not be made without prior consent of the Superintending Officer.

6.2 SYSTEM DESIGN REQUIREMENTS

The works to be carried out under this contract shall comprise but not limited to the supply, delivery to site, installation, testing and commissioning and maintenance of the following equipment and principal services, including all associated minor works and items:

6.3 SCHEDULE OF TECHNICAL REQUIREMENT

6.3.1 Quality of Treated Pool Water

Tenderers shall achieve the following conditions in each pool as a minimum.

Turbidity	: Below 5 turbidity units
Free chlorine	: 0.5 ppm – 4 ppm
PH Value	: Between 7.2 and 7.8
TDS	: < 1500 ppm
Colour	: Hazen unit less than 5

6.3.2 Piping Work

- (a) UPVC Class E suction pipework c/w fittings valves, and etc.
- (b) UPVC Class E delivery pipework c/w fittings valves, and etc.
- (c) UPVC Class E backwash pipework c/w fittings valves, and etc.



6.3.3 General Pool Data & Design Requirement

NO.	ITEMS	DESCRIPTION
1	Pool Dimension	25m (L) x 15m (W)
2	Pool Shape	Rectangular
3	Pool Depth	10.0m (Deep Section) 6.9m (Intermediate Section) 1.9m (Shallow Section)
4	Pool Type	Overflow
5	Pool Capacity	2,730 cu.meter
6	Turn Over Period	8 Hours
6	Water Circulation Rate	1,251 igpm
7	Filtration rate	12 igpm/ft2
8	Unit of Filter Required	3 nos,
9	Disinfection system	Conventional (Sodium hypochlorite & Hydrochloric acid)



6.3.4 Schedule Of Pool Circulation Pump

NO.	FUNCTION	HEAD (ft)	FLOW (igpm)	V/Ph/Hz	PUMP SPEED (RPM)	PUMP TYPE	REMARK
1	Duty	90	620	415/3/50	1450	Centrifugal End-Suction	Equipped with stainless steel strainer basket on suction side
2	Duty	90	620	415/3/50	1450	Centrifugal End-Suction	Equipped with stainless steel strainer basket on suction side
3	Standby	90	620	415/3/50	1450	Centrifugal End-Suction	Equipped with stainless steel strainer basket on suction side

6.3.5 Schedule Of Sand Filter

NO.	TYPE	FILTER AREA (m ²)	FLOW RATE (igpm)	MAX. WORKING PRESSURE (bar)	REMARKS
1	Sand	3.3	417	2.5	Equipped with side mounted multiport valve and oil pressure gauge
2	Sand	3.3	417	2.5	Equipped with side mounted multiport valve and oil pressure gauge
3	Sand	3.3	417	2.5	Equipped with side mounted multiport valve and oil pressure gauge

6.3.6 Schedule of Chemical Dosing Pump

NO.	FUNCTION	FLOW (liter/hr)	HEAD (bar)	REMARK
1	Sodium Hypochlorite	14	5	Equipped with chemical tank (1,000 liter), bracket for mounting above tank and other necessary accessories. Pump shall be compatible to work with automatic pool chemical regulator system.
2	Sodium Hypochlorite	14	5	
3	Hydrochloric Acid (pH reducer)	14	5	
4	Hydrochloric Acid (pH reducer)	14	5	