FPS Marine Limited

LED LIGHTING

One vessel replace period 8~14days

1.HIGHLIGHT OF THE PROJECT

In present world LED (light emitting diode) is considered as one of the low power consumption light with greater illumination capacity. Implementing new LED lights in existing Ship power system will reduce overall power consumption which eventually reduces Fuel consumption and running cost. As reduction in fuel consumption which directly effects reduction in Air Pollution.

2. Location to be covered with New LED Lights installation.

In this Project it's considered to replace the existing Internal fluorescent tubes with new LED lights without changing existing light enclosure (Fitting).

3.LED tube types are in scope

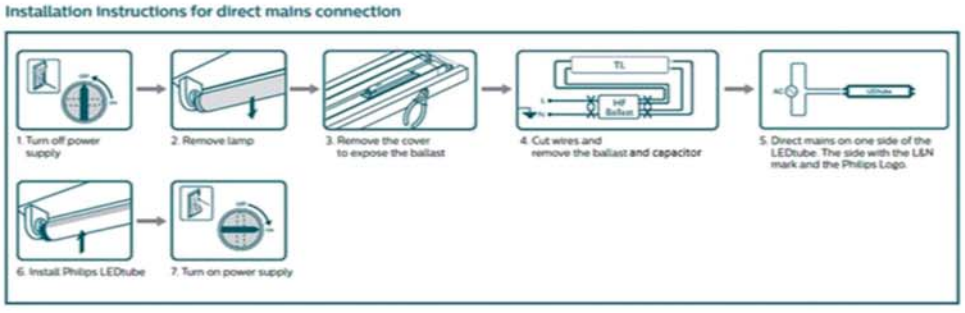
•600mm 18W replacement type, to be replaced with 8W LED tube, colour temperature 3000 Kelvin warm white, marking 830, Cap-Base, G13 ROT, T8 type

•600mm 18W replacement type, to be replaced with 8W LED tube, colour temperature 4000 Kelvin cool white, marking 840, Cap-Base, G13 ROT, T8 type

•1200mm 36W replacement type, to be replaced with 12.5W LED tube, colour temperature 3000 Kelvin warm white, marking 830, Cap-Base, G13 ROT, T8 type

•1200mm 36W replacement type, to be replaced with 12.5W LED tube, colour temperature 4000 Kelvin cool white, marking 840, Cap-Base, G13 ROT, T8 type

4.Job scope



•Identify the Lights location with respect to Lighting layout drawing.

•Select New LED lights according to required Length of the existing tube.

•Replace only Normal 230v AC Fluorescent tubes with New LED tubes as demonstrated in the above picture (Replace ONLY standard 18W & 36W light tubes with LED type).

Replace 18W tube with 8W LED tube.

Replace 36W tube with 12.5W LED tube.

•Rewiring of fixture to remove ballast load.

•Usage of heat shrink tube and insulate properly if any internal damage of wiring found in lighting fixtures.

•Repair any internal wiring damages found in lighting fixtures, some example of damage is as shown below

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Lamps Power details..

		Qty of Lights	Qty of Lamps	Power (W)
Fluorecent Light	40W	108	216	
		1	2	
		2	2	
		10	20	
		217	434	
		2	4	
sub total			676	27040
	20W	99	198	
		84	168	
		3	6	
		10	10	
		9	9	
sub total			391	7820
	18W	31	31	558
	15W	34	34	1156

Other lights:

Incandescent light	60W	84	84	5040
	100W	2	2	200
Flood light	400W	4	4	1600
Totol Power			**43414**	

Total Lamps required Power:43.414KW

Total Lamps rquired Engergy per day (assume 80% usage): 43KW x 80% x 24H=825KWH

Generator Engine rating: 1470 KW.

Fuel Consumption (ISO) at 50% Load: 206.6 g/Kw.h

Equivalent Fuel Consumption for Lamps per day: 206.6 g/Kw.h x 825 KWH=170,445g= 0.17T

Yearly Fuel Consumption (assume 200day usage): 200Day x 0.17T = 34T

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