



KHULNA SHIPYARD LIMITED

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BABE (F) - 337/LAAI/2024-2025

30 DECEMBER 2024

Dear Sir

INVITATION FOR QUOTATION LIGHTING ARRANGEMENT AND FIRE ALARM ITEMS

1. Khulna Shipyard Limited (KSY) will procure “Lighting Arrangement and Fire Alarm” as per attach specification (10 Pages), following terms & condition:
2. Please send your offer CFR Chattogram Sea Port basis within **19/01/2025 (1130 Hours)** by e-mail or closed envelop.
 - a) Payment: Payment will be made through Letter of Credit. 80% of the total contract value will be paid against shipping documents and rest 20% will be paid after receiving the material at KSY and satisfactory acceptance.
 - b) Shipment: 60 days from the opening date of LC.
 - c) FOB value & Ocean freight should be shown separately.
3. 01% (One) Bid Bond/Earnest Money of the total quoted value must be submit with offer. Bid Bond may be Pay Order/Bank Guarantee in favour of KSY.
4. 05% Performance Guarantee (PG) is to be submitted before Purchase Order.
5. Certificate: Imported items & others accessories will be brand new and supplier must provide manufacturer certificate as regard to the genuinity of the source and items.
6. Offer Validity: 30 Days from Tender Opening Date.

Thanking You

Sk. Shah Moshir Rahman
OIC, Commercial Foreign
For Managing Director

**REQUIRED LIGHTING ARRANGEMENT AND FIRE ALARM ITEMS
FOR 2X70 TON BP TUGBOAT**

Ser	Description	Qty. (2x vessel)	Remarks
1	<p>Machinery Space Light AC (LED)</p> <p>Rated voltage: AC 220, 50 Hz</p> <p>Power: 2x20 W</p> <p>Illuminant: LED Tube Light</p> <p>Light length: 2 feet</p> <p>Lamp Holder: G13</p> <p>Illuminous Flux: 1500 lm (minimum)</p> <p>Color Temperature: 6500 k (natural day light)</p> <p>Protection Glass: IP56</p> <p>Cable Outside Diameter: \varnothing10 - \varnothing14</p> <p>Installation Method: Ceiling Mounted Type</p> <p>Ambient Temperature: - 30°C to 50°C</p> <p>Material: Lamp Body is steel or Stainless Steel Lampshade is engineering plastic</p>	22 pcs	
2	<p>Machinery space light AC+DC (LED)</p> <p>Rated AC voltage: 100-220, AC, 50 Hz</p> <p>Rated DC voltage: 24 VDC</p> <p>Power: 2x20 W (AC) & 1x15W (DC)</p> <p>Illuminant: LED Tube</p> <p>Light length: 2 feet</p> <p>Lamp Holder: G13</p> <p>Illuminous Flux: 1500 lm (minimum)</p> <p>Color Temperature: 6500 k (natural day light)</p> <p>Protection Glass: IP56</p> <p>Cable Outside Diameter: \varnothing10 - \varnothing14</p> <p>Installation Method: Ceiling Mounted Type</p> <p>Ambient Temperature: - 30°C to 50°C</p> <p>Material: Lamp Body is steel or Stainless Steel Lampshade is engineering plastic</p>	28 pcs	
3	<p>Cabin light AC (LED)</p> <p>Rated voltage: 100-240, AC, 50 Hz</p>	32 pcs	

	Power: 2x20 W		
	Illuminant: LED Tube		
	Illuminous Flux: 1300 lm (minimum)		
	Color Temperature: 6500 k		
	Protection Glass: IP44		
	Cable Outside Diameter: Ø10 - Ø14		
	Installation Method: Recessed Type		
	Ambient Temperature: - 25°C to 45°C		
	Material: Lamp Body is steel Lampshade is engineering plastic		
4	Cabin light AC+DC (LED)	48 pcs	
	Rated AC voltage: 100-240, AC, 50 Hz		
	Rated DC voltage: 24 VDC		
	Power: 2x10 W (AC) & 1x3W (DC)		
	Illuminant: LED Tube		
	Illuminous Flux: 1300 lm		
	Color Temperature: 6500 k		
	Protection Glass: IP44		
	Cable Outside Diameter: Ø10 - Ø14		
	Installation Method: Recessed Type		
	Ambient Temperature: - 25°C to 45°C		
	Material: Lamp Body is steel Lampshade is engineering plastic		
	Weight: 6.8 kg		
5	Dimmer for cabin lights	80 pcs	
	Rated Voltage: 250 V		
	Current: 10A		
6	Outside light pendant, 220VAC (LED)	60 pcs	
	Rated voltage: AC 220, 50 Hz		
	Power: 8-12 W minimum		
	Illuminant: LED Lamp		
	Lamp Holder: E27		
	Illuminous Flux: 420 lm		
	Protection Class: IP56		
	Cable Outside Diameter: Ø10 - Ø14		
	Installation Method: Fixed Type		

	Ambient Temperature: - 30°C to 55°C		
	Material: Lamp Body is engineering plastic lampshade glass		
7	Bed light (LED) with 2 pin socket	30 pcs	
	Rated voltage: AC 220, 50 Hz		
	Power: 8 W		
	Illuminant: Fluorescent Lamp		
	Lamp Holder: G5		
	Illuminous Flux: 130 lm		
	Protection Class: IP20		
	Cable Outside Diameter: Ø10 - Ø12		
	Installation Method: Wall Type		
	Ambient Temperature: - 25°C to 45°C		
	Material: Lamp Body is steel lampshade is engineering plastic		
8	Bull eye lamp 220VAC (LED)		18 pcs
	Rated voltage: AC 220, 50 Hz		
	Power: 8-12 W minimum		
	Illuminant: LED Lamp		
	Lamp Holder: E27		
	Illuminous Flux: 300 lm		
	Protection Class: IP56		
	Cable Outside Diameter: Ø12 - Ø14		
	Installation Method: Fixed Type		
	Ambient Temperature: - 30°C to 55°C		
	Material: Lamp Body is high quality marine aluminum alloy lampshade is glass		
9	Flood light 200W, 220VAC (LED)	12 pcs	
	Rated voltage: AC 220, 50 Hz		
	High performance and efficiency		
	Die-Cast aluminum body		
	IP66 Rated		
	IK08 Rated		
	Meanwell Driver		
	Versatile design for both wall and post-top mounting		
	Supplied with 3m wiring cable		

10	Portable light 100W (WT) with 15m cord & plug	04 pcs	
	Light weight portable lamp with globe and guard for illumination purpose		
	Material: Plastic		
	Voltage Ratings: AC 230, 50 Hz		
	Power Ratings: 100W		
	Lamp: E27		
11	Portable light 100W (non-WT) with 15m cord & plug	04 pcs	
	Light weight portable lamp with globe and guard for illumination purpose		
	Material: Plastic		
	Voltage Ratings: AC 230, 50 Hz		
	Power Ratings: 100W		
	Lamp: E27		
12	Portable light 60W with 15m cord & plug, with one side cover	10 pcs	
	Light weight portable lamp with globe and guard for illumination purpose		
	Material: Plastic		
	Voltage Ratings: AC 230, 50 Hz		
	Power Ratings: 60W		
	Lamp: E27		
13	Portable incandescent flood light 300W	08 pcs	
	Rated voltage: AC 220, 50 Hz		
	Power: 300 W		
	Illuminant: Halogen Lamp		
	Lamp Holder: R7S		
	Illuminous Flux: 4800 lm		
	Protection Class: IP56		
	Cable Outside Diameter: Ø12 - Ø14		
	Installation Method: Hanging Type		
	Ambient Temperature: - 30°C to 55°C		
	Material: Lamp Body is stainless steel lampshade is engineering plastic		
14	Ex-proof light 220VAC (LED)	04 pcs	
	Explosion Proof Mark: Exd II CT4		

	Rated voltage: AC 220, 50 Hz		
	Rated Power: 2x20 W		
	Light Source: Fluorescent		
	Lamp Holder: FA6		
	Material: Steel and PC		
	Protection Class: IP56		
	Weight: 5.8 kg		
	Cable outside diameter: $\varnothing 11 - \varnothing 13$		
15	Chart table light with dimmer, 220VAC (LED)	02 pcs	
	Rated voltage: AC 220, 50 Hz		
	Rated Power: 8.5 W LED or 60-100W incandescent lamp		
	Illuminant: LED dimming bulb or incandescent lamp		
	Lamp Holder: E27		
	Protection Class: IP22		
	Cable outside diameter: $\varnothing 8$		
	Installation Method: Wall mounted Type		
	Ambient Temperature: - 25°C to 45°C		
	Material: steel		
	Remark: with dimming		
16	Morse signal light 220VAC+ Morse key	02 pcs	
	Rated voltage: AC 220, 50 Hz		
	Rated Power: 2x25 W		
	Illuminant: Incandescent lamp		
	Color: White		
	Lamp Holder: B22d		
	Horizontal Arc: 360°		
	Visible Distance: 5 n.m		
	Protection Class: IP56		
	Cable Outside Diameter: $\varnothing 12 - \varnothing 14$		
	Installation Method: Seat mounted Type		
	Ambient Temperature: - 30°C to 55°C		
	Material: Lamp body material is brass and lampshade material is engineering plastic		

17	Signal search light 1000W (remote controlled)	4 pcs	
	Rated voltage: AC 220, 50 Hz		
	Rated Power:1000 W		
	Lamp Holder: E40		
	Illuminant: Incandescent Bulb		
	Material: Stainless Steel		
	Illuminous Flux: 17000 lm		
	Protection Class: IP56 (Full Water Proof)		
	Cable Outside Diameter: Ø10 - Ø12		
	Control panel with joystick and on-off switch for each unit		
18	Fire alarm main control panel	2 nos.	
	8 zones		
	Network up to 8 control panels		
	Activate controls via key switch or code entry		
	Compatible with Apollo Orbits Marine detectors		
	Integral detector removal monitoring		
	Earth fault monitoring		
	3 Amp switch mode power supply Nom 27V DC		
	4 monitored sounder outputs		
	2 Aux C/O relays (1 x Fire) (1 x Fault). voltage free		
	Class change I/P		
	Alert I/P		
	Fire & fault switched -ve outputs		
	Program delays to outputs		
	False alarm modes A, B & C		
	Muster alarm		
	Test mode, with or without sounders		
	Disable zones, sounder O/Ps, aux O/Ps & delays		
	Alarm load, 2.4A shared between all sounder outputs		
	All sounder circuits are fused @ 500mA with resettable fuses		
19	Fire alarm repeater panel	2 nos.	
	Same easy-to-use controls and indications as panel		

	Can be fully functional or passive		
	12 zonal fire & fault indications		
	Integral 1.25 Amp PSU		
	Class change & alert inputs		
	Test mode and disablement functions		
	6 programmable switch -ve outputs		
	Fault tolerant loop or legacy radial wiring options		
20	Battery for Fire alarm main control panel (as per manufacturer standard)	04 pcs	
21	Battery for Fire alarm repeater panel (as per manufacturer standard)	04 pcs	
22	Smoke detector	60 pcs	
	All data is supplied subject to change without notice. Specifications are typical at 24V, 23°C and 50% RH unless otherwise stated.		
	Photo-electric detection of light scattered by smoke particles over a wide range of angles. The optical arrangement is made up of an infrared emitter with a prism and photo-diode at 90° to the light beam with a wide field of view		
	Sampling Frequency: Once every four second		
	Operating Voltage: 8.5 VDC to 33 VDC		
	Supply wiring: Two wire supply, polarity sensitive		
	Maximum Polarity Reversal: 200 ms		
	Power up time: < 20 seconds		
	Minimum Detector active voltage: 6 V		
	Power up surge current at 24 volts: 95µA		
	Average quiescent current at 24 volts: 95µA		
	Alarm Current: 12V(20mA), 24V (40mA)		
	Alarm Load: 600 ohm		
	Holding Voltage: 5V-33V		
	Minimum Holding Current: 8mA		
	Minimum Voltage to light alarm LED: 5V		
	Alarm reset voltage: < 1V		
	Alarm reset time: one second		
	Alarm indicator: Integral indicator with 360° visibility		
	Remote output LED (-) characteristics: 1.2 Kohm connected to negative supply		

	Operating and Storage Temperature: - 40°C to 70°C		
	Humidity: 0 – 98% RH		
	Protection Class: IP23D		
	Standard and Approval: BV		
23	Smoke detector (Ex. proof)	4 pcs	
	Operating Voltage: 14 VDC to 28 VDC		
	Quiescent current: 85µA at 24 volts		
	Dimensions: 100mm Dia x 50mm H inc base		
	Operating Temperature: - 40°C to 70°C		
	Relative Humidity: 0 – 98% RH		
	Protection Class: IP23D		
	Weight: 75 grams		
	Approvals: EN54-7		
24	Heat detector	4 pcs	
	All data is supplied subject to change without notice. Specifications are typical at 24V, 23°C and 50% RH unless otherwise stated.		
	Measurement of heat by means of a thermistor		
	Sampling Frequency: Once every four second		
	Operating Voltage: 8.5 VDC to 33 VDC		
	Supply wiring: Two wire supply, polarity sensitive		
	Maximum Polarity Reversal: 200 ms		
	Power up time: < 20 seconds		
	Minimum Detector active voltage: 6 V		
	Power up surge current at 24 volts: 95µA		
	Average quiescent current at 24 volts: 95µA		
	Alarm Current: 12V(20mA), 24V (40mA)		
	Alarm Load: 600 ohm		
	Holding Voltage: 5V-33V		
	Minimum Holding Current: 8mA		
	Minimum Voltage to light alarm LED: 5V		
	Alarm reset voltage: < 1V		
	Alarm reset time: one second		
	Alarm indicator: Integral indicator with 360° visibility		

	Remote output LED (-) characteristics: 1.2 Kohm connected to negative supply		
	Operating and Storage Temperature: - 40°C to 70°C		
	Humidity: 0 – 98% RH		
	Protection Class: IP23D		
	Standard and Approval: BV		
25	Manual call point	32 pcs	<p>Figure .1</p>
	Cable Termination: 0.5 – 2.5 mm ²		
	Maximum Voltage: 30 VDC		
	Current Ratings (Switch only): 2 Amps		
	Material: PC/ABS		
	Weight: 130g Flush & 180g Surface		
	Humidity: 93±3% non condensing		
	Operating Temperature: - 10°C to 55°C		
	Protection Class: IP24D		
26	Manual call point (Ex. proof)	4 pcs	
	Ambient: - 40°C to 70°C		
	Relative Humidity: R.H 95% @20°		
	Switch: Sealed-IP67		
	Ingress Protection: IP 66/67		
	Enclosure material: Marine grade copper free LM6 aluminum		
	Enclosure finish: Chromated & powder coated finish (anti corrosive)		
	Color: RAL 3000 Red or others		
27	Alarm bell with flash, 24VDC shallow	10 pcs	
	Voltage Range: 21.6 to 28 VDC		
	Number of tones: 32		
	Operating Frequency: 440 to 2900 Hz		
	Operating Temperature: - 20°C to 70°C		
	Monitoring: Reverse Polarity		
	Protection Rating: IP21C (Shallow), IP33C (Deep)		
	Boxed weight: 0.22 to 0.25 kg		
	Body color: Red or white		
28	Alarm bell with flash, 24VDC deep	4 pcs	

	Voltage Range: 21.6 to 28 VDC		
	Number of tones: 32		
	Operating Frequency: 440 to 2900 Hz		
	Operating Temperature: - 20°C to 70°C		
	Monitoring: Reverse Polarity		
	Protection Rating: IP21C (Shallow), IP33C (Deep)		
	Boxed weight: 0.22 to 0.25 kg		
	Body color: Red or white		
29	Detector base (as per manufacturer standard)	62 pcs	
30	Detector base (Ex proof) (as per manufacturer standard)	4 pcs	
31	Zener barrier 2 channel	2 pcs	
	Number of channels: 02		
	Module Type: Fire and Smoke Detector Interface		
	Barrier Type: Galvanic Barrier		
	Maximum Voltage: 28V		
	Hazardous Area Certification: ATEX		
	Maximum Current: 42 mA		
	Supply Voltage: 6 – 30 VDC		
	Operating Temperature: - 20°C to 60°C		
	Safety Current Maximum: 28V		
	Series: MTLx561		