

Krishnapatnam Lighthouse

Estd.1940

MASTER LEDGER

1. **Name** : KRISHNAPATNAM LIGHTHOUSE cum
D.G.P.S. STATION
2. **Sr.No.**
(In A.L.O.L) : 0952
3. **Position** : Lat: 14° 17'8.44" N
Long: 80° 08'16.44' E
4. **Elevation** : 35 m. above MSL
Flash (3) White every 15 Sec.
5. **Characteristic** : **(F10.48Sec. +ec2.02+F10.48**
ec2.02 sec+ F10.48 +9.52sec)
6. **Range in nautical miles**
 - i) Luminous : 18 NM
 - ii) Geographical : 16 NM
7. **Lighthouse Tower**
 - i) Type : Hexagonal RCC Tower
 - ii) Height : 30 Mtr
 - iii) Colour : Black & White bands
Scheme
8. **Optical Equipment**
 - a) **Optic**
 - i) Make : Stone Chance, India
 - ii) Size : 300 mm (4th order large) Revolving
 - iii) No. of Panels : 6 Nos.
 - iv) Area of
dipodic : 137 sq cm
portion
 - v) Divergence
Main/Service : Horizontal 5° 44', Vertical 2° 52'
 - vi) Duration of flash
Main : 0.48 seconds



- Emergency : ---
- b) **Pedestal** : Ball bearing type
Twin stepper motor Direct drive system.
- c) **Rotation Device** : i) Stepper motor : 2 no 20KG-cm (Unique make)
ii) Controller: 2 no 20Kg-cm (Unique make)
- d) **Rotation Speed** : 2 RPM
- e) **Illuminant**
i) Main/Service : 150W MH Lamp - 3 nos. (cluster)
- f) **Effective Beam Intensity**
i) Main/Service : 9, 39,500 cds.

9. **Lantern**

- i) Diameter : 2.4Mtr
ii) Height of glazing : 1.38Mtr
iii) No. of panes : 12 Nos.
iv) Ventilators : 8 Nos.

10. **Energy Source**

- A) APSPDCL Mains** : 440 V, 3 phase, 50 Hz
- B) Green Energy** : 3KW off grid solar power plant for main light in Lighthouse premises.
- i) Solar panels : 12 No 36V/250W(Renewsys make)
ii) Battery Bank : 12 No 12V /150Ah (Exide SMF)
iii) Inverter : HBL Make 3KVA /48Vdc
- C) Green Energy** : 15KW on grid solar power plant in DGPS premises
i) Solar panels : 60 Nos. 36V/250W(Empire make)

ii) PCU Inverter : Delta Make 15KVA /32.5V DC
Model: RPI-15A

11. Diesel Engine Generators

S. No.	Engine No	Make /Type	HP	No. Of Cylinder	RPM	Cooling	Place of installation
1.	03.8906/1820483	Kirloskar HA394	32 BHP	3 Nos.	1500	Air Cooled	DGPS
2.	03.8901/1620326	Kirloskar HA394	32 BHP	3 Nos.	1500	Air Cooled	DGPS
3.	02.2129/ 1320075	Kirloskar HA294	19 BHP	2 Nos.	1500	Air Cooled	LH

12. Details of Alternator

S. No	Frame	Make	KVA	voltage	Freq.	Phase	RPM	Place of installation
1	CS3B017H13163-H	Kirloskar	25.0	230 V	50 Hz	3Phase	1500	DGPS
2	CS3B016H19220-H	Kirloskar	25.0	230 V	50 Hz	3Phase	1500	DGPS
4	CBIB01D1413-4	Kirloskar	15.0	230 V	50 Hz	Single	1500	LH

13. Automatic Voltage Stabilizers : 3 Nos. connected in DGPS

i) Make : SURVOMAX
Type : SERVO
Capacity : 15 KVA, single phase
Input : 170 V – 270 V
Output : 220 V to 230 V

date of installation : 31/3/2018

ii) Make : Supra hitech – 1 No connected in Lighthouse
Model : SH-3150
Capacity : 15 KVA 3phase
Frequency : 50 Hz
Input : 360-470 V
Output : 415 V ± 1%

date of installation : 14/7/2022

14. AMF Panel

Make : Elect India- 2 Nos.(1 in DGPS,1 in LH)
Model : REV EMF 50 A – SPC -2 nos.
Capacity : 20 KVA, 3 phase

15. Automation of Lighthouse Equipments with RCS

- i) RDS Control Panel in power House : 1No.(s.no.102941162)
- ii) RDS Control Panel in Service room : 1No.(s.no.102944743)
- iii) V-Sat Dish size : 1.2 mtr. dia
- iv) HP Desktop Computers with RDS Software : 2 Nos.
- v) Date of Installation 2013

16. Differential Global Positioning System (DGPS)

A. Reference Station : (RS-1) S. No.17023 P/N: EDRS-MK I

Comprising of

- a) GR 30 professional GNSS reference receiver. (Made in [Switzerland](#))
Sl. No-1705505
- b) MSK modulator SL. NO: 17C003023 with rack mountable Chassis
Sl. NO: 17023.
- c) AR 20 GNSS Choke ring antenna SR. No. 19336009 (MADE IN USA)

B. Reference Station : (RS-2) Sr.No17024 P/N: EDRS-MK I

Comprising of

- a) GR 30 professional GNSS reference receiver. (Made in [Switzerland](#))
Sl. No- 1705506
- b) MSK modulator SL. NO: 17C003024 with rack mountable Chassis
Sl. NO: 17024
- c) AR 20 GNSS Choke ring antenna SR. No. 19336010 (MADE IN USA)

C. Integrity Monitor : Sr.No17023., P/N: EDIM-MK I

Comprising of

- a) GR 30 professional GNSS reference receiver. (Made in [Switzerland](#))
Sl. No- 1705516
- b) Demodulator SL.NO. 17C001023
- c) GEODETIC Antenna AS 10 S/NO: 16471073 (MADE IN CANADA)
- d) Beacon Antenna : A031
Hemisphere MD : B1644-01871-01-067

D. Integrity Monitor : Sr.No.17024, P/N: EDIM-MK I

Comprising of

- a) GR 30 professional GNSS reference receiver. (Made in [Switzerland](#))
Sl. No- 1705401
- b) Demodulator SL.NO. 17C001024
- c) GEODETIC Antenna AS 10 S/NO: 16471074 (MADE IN CANADA)
- d) Beacon Antenna : A031
Hemisphere MD : Sl. No: B1644-01871-01-075

E. RS Changeover : P/N: EMS50-RB, SL.NO: 174098B7012
unit

F. MOXA N PORT
Serial Device : SL.No: 5650-16
Server

G. CISCO switch : SL. NO: DNI2138071C

H. Transmitter: (VRD750 Dual)

Make : M/s Nautel INC, USA
Serial No. : B395
Operating frequency : 297 KHz
Power output : 500 W
Input power : 230 V, 50 Hz, Single phase

I. Un interrupted Power supply:

- i) **M/s APC make 10 KVA ON line UPS (MODEL NO. : SRC 10 KUXI ; S/NO: B21622000217 for transmitter with 12V/42AH Amaron make Lead Acid maintenance free battery 16nos.**

- ii) **M/s APC make 3 KVA ON line UPS (MODEL NO. : SRC 3 KUXI) S/NO: B21645009329 for DGPS with 12V/42AH EXIDE make Lead Acid maintenance free battery 6 Nos.**

J. AUTOMATIC TUNING UNIT

Make : M/s Nautel INC, USA
Serial No. : B309
Model : ATU –HP
Operating frequency : 297 KHz
Input power : 230 V, 50 Hz, Single phase
30 Mtr GI trestle tower : 2 Nos for wire antenna.

K. ISOLATION TRANSFORMER : 1 No
: (15 KVA, 1 PHASE , S/NO: 17.03.150080)

L. AC timer : 1 no (with LED Display for 3 AC)
: (Sr. No: 17F242)

M. Electric Winch : 2 Ton (Double Barrel)
Model : 1B42X
Make : Powertek Equipment Co., Mumbai.
HP : 2.0
Serial No. : 179117, 180117
Rope Speed : 5 mtr / min
Wire rope dia : 8 mm dia
Drum Capacity : 100 Mtr

17. NAIS Equipment

Make : M/s SAAB
AIS R40 Base Station : Sl.No.5258
AIS R40 Base Station : Sl.No 5284
(Connected with Cisco switch and HUGHES HT2300 Satilite modem.)

V- SAT Dish Size : 2.4 Mtr. dia
VHF Antenna : 2 Nos.
GPS Antenna : 2 Nos.
Date of
Commissioning : 29/10/2013

18. **RACON** (under replacement)

i) Make : PHARAS MARINE AUTOMATIC POWER, X-BAND
ii) Input Voltage : 9 to 36 Volts D.C.
iii) RACON S.No. : 20180762SJP
iv) Morse Code : C
v) Date of commissioning : 30-10-2018
vi) Solar panel : ACCESS SOLAR LTD, ASL- S7012
Capacity 12V/70W
vii) Battery : 12 V 100 AH Exide, date of installation:01/11/18

19. **Battery Charger** : 1 No.(not working)

Make : AE
Capacity : 15 AMP
Input : 230 V
Output : 30

20. **Street Lights** : i) 11Nos. G.I poles with 25W LED light
A) DGPS compound : ii) 2 Nos. gate doom lights.

B) LH compound : i) 7 No's G.I poles with 25W LED light
ii) 2nos. gate lights

21. **No. of Batteries** : 2 Nos 12 V 150 AH long tubular for UPS
(AMARON.Make, DoI – 5/6/22)
1 Nos.12 V 75 AH Lead Acid for Genset-1
(KOEL green Make, DoI – 31/10/2018)

1 No.12 V 75AH Lead Acid for Genset-2
(KOEL green Make, DoI - 31/10/2018)

1 No. 12 V 100 AH Lead Acid for Genset -3
(KOEL Make, DoI – 15/720/13)

22. **Air-Conditioner** : 3 Nos.
(Split type)
Make : 2No's Samsung, 1No. Panasonic
Capacity : 1.5 Ton
23. **Firefighting equipment**
Fire Extinguishers
- i) D.C.P. type : 3 no.s new Nos. (DOI-15/12/18)
(3.2kg,9,6,4 Capacity)
3 no.s old (DOI-NA)kept in DGPS
1 nos. (DoI - 15/12/18),
- ii) Foam type : (1 no. in DGPS room, 01 no. PH)
(9 litres capacity) : 2 no.s old (DOI-NA) 1 no. Kept in LH
CO2 type (DOI-15/12/18)
- ii) Fire Buckets : 6 Nos.
24. **Communication Facility** : Telephone No: 0861-2377049 with broadband internet
e-mail : krishnapatnam-vizag@nic.in
25. **Water Supply** : i) Potable water supplied by KPCL in underground tank at DGPS compound. Pumped to Over Head tank by 1HP motor.
ii) In LH compound one bore well provided, water pumped to overhead tank by 1HP motor.
26. **Land**
A) DGPS Premises

- i) Area : Ac.3.60 Cts.
 - ii) Demarcation : Masonry Compound wall
 - iii) No. of fruit trees : Nil
 - iv) No. of non fruit bearing Trees : 20 Nos.
- B) Lighthouse Premises**
- i) Area : Ac.1.0 Cts.
 - ii) Demarcation : Masonry Compound wall
 - iii) No. of fruit trees : Nil
 - iv) No. of non fruit bearing Trees : 10 Nos.
- 27. Buildings** : Power House, Stores, Office & DGPS room – 1 Unit, IQ – 1 Unit, A.E (E) Qtr.-1 Unit, S.R.T – 1 Unit, N.A Quarter – Twin unit & LHA Qtr. - Twin unit, Over Head Tank with Pump House, Coil hut, Underground water tank, Security cabin.
- A) DGPS premises**
- B) Lighthouse premises** : Lighthouse Tower, Power house, IQ, Over Head Tank with Pump house, Security cabin & Static Sensor Radar Tower.
- 28. Staff** : i) Asst. Engineer (E)-vacant; SRT-Vacant, NA-II-1nos ,NA III-3nos, LHA, Field Assistant – 3 nos. (outsourced) ,03nos security(outsourced).
- 29. Mode of approach** : By train up to Nellore and then by Road 30 km up to Lighthouse and DGPS.
- 30. Facilities available** : a) Post Office within 7 km (Muthukur)
b) Govt. Hospital within 7 km (Muthukur)
c) Govt. School within 7 km (Muthukur)
d) Nationalized Bank with 10 km (Muthukur)
e) Police Station within 9 km (Muthukur)
- 31. Postal Address** : Assistant Engineer (Electronics),
Krishnapatnam Lighthouse, Muthukuru

Via. Gopalapuram Post, Nellore Dist.
Andhra Pradesh, Pin Code: 524 344.

32. Cost Details

- i) Construction : Not available
- ii) Cost of equipment : Not available

33. Year of first Light Commissioned : 1940

34. Subsequent Innovation : 1978, 1991, 2003, 2012

35. Date of Commissioning of present LH : 19-11-2012