

## M&EE DEPARTMENT SECTION WORKS

### ➤ VPT Mobile X-ray Container Scanner :

- Mobile X-Ray Container Scanning System (MXCS) has been installed by Visakhapatnam Port Trust at GCB berth for the purpose of reducing physical examination and dwell time of containers at VCTPL . After successful Trial Run of the MXCS, the Atomic Energy Regulatory Board (AERB) has issued license on 27th July, 2021 to VPT for its regular operation. The Scanner can scan up to 20 containers per hour, enabling the Trade to directly move out their containers with upgrade security and zero hassle.
- The newly inaugurated mobile x-ray scanner facility will help scan the containers inside the terminal premises; thus, security agencies will have the advantage of taking appropriate action before the container is allowed to exit. The scanners will help enhance VPTs efficiency and considerably reduce import dwell time
- Work Awarded to M/s.Smiths Detection (Aria Pacific) Pte. Ltd., Singapore.
- Date of Commencement of work 05.02.2018.
- Estimate Bid Value Rs.29,68,74,836/-



➤ **VPT 10 MWp Solar Project:**

- Design, Engineering, Manufacture, procurement & supply, Erection, Testing, Commissioning and Comprehensive Operation & Maintenance for 7 Years of 10 MW Solar PV Plant on turn-Key basis at Visakhapatnam Port Trust.
- Work Awarded to M/s. Jakson Engineers Limited, A-43, Phased –II (Extension) Hosiery complex, NOIDA – 201305. U.P.
- Work Order Value Rs 57.5 Cr + Rs 2.45 Cr (O&M for 7 years)
- Date of Commencement of work 31.10.2015.
- Date of Commencement of O&M 23.01.2019.



➤ **Solar energy streams Developed by VPT**

- 10 MW Ground mounted solar system - Completed (under O&M since 23.01.2019)
- 100 KW Roof top solar system at Golden Jubilee Hospital - Completed (on 15.12.2015)
- 90 KW Roof top solar system at MF & DC office - Completed (on 31.01.2016)
- 580 KW KW Roof top solar system at Sports complex & Admin building on RESCO model (@Rs3.934) - Completed (on 25.01.2019)

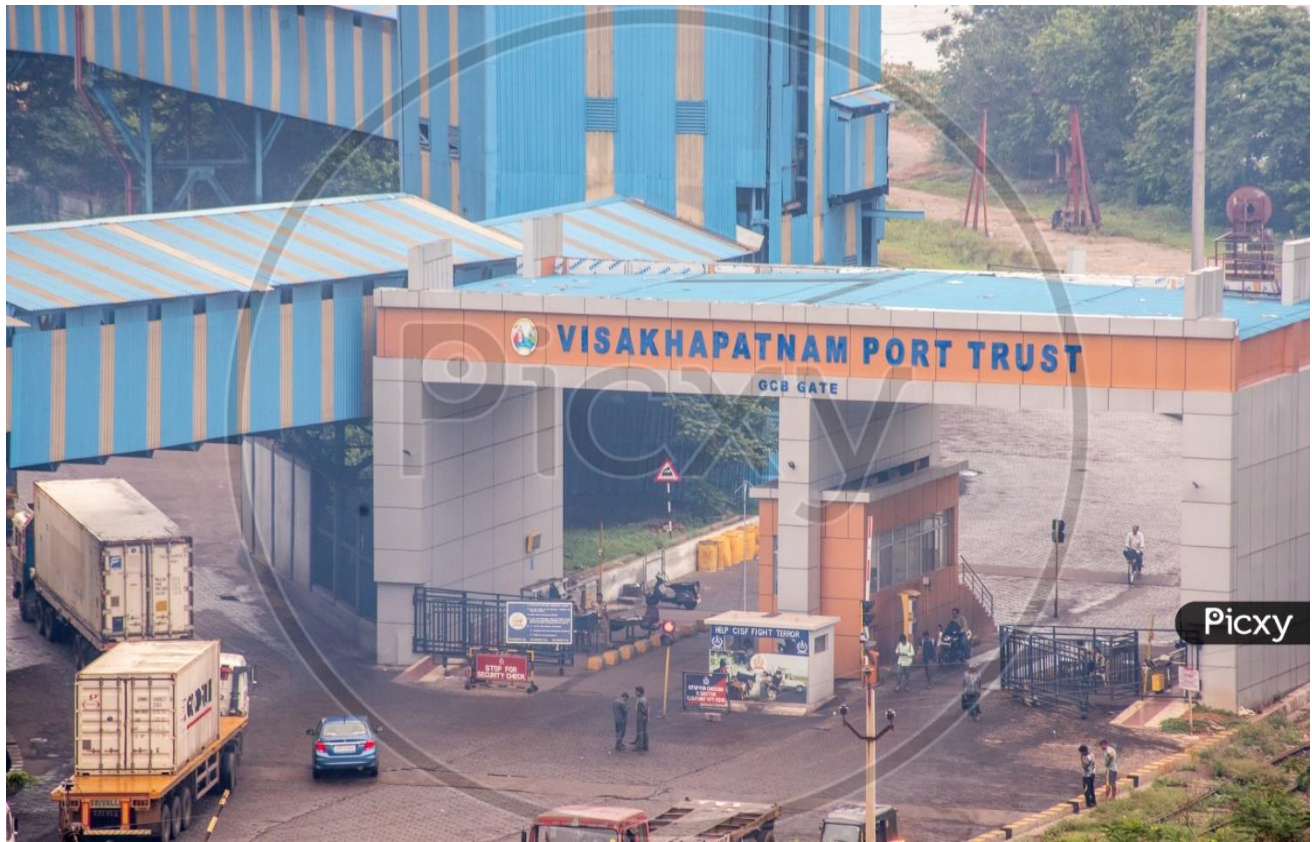
➤ **INDUSTRIAL LIGHTING:**

- As per the existing Lighting inventory of VPT there are almost 4016 nos of light fittings exists of various wattages of street lights, flood lights in all over the port operational areas, High mast / mini mast tower lights, road lighting, shed lighting, harbour park and maharani peta housing colonies areas etc. In compliance to the Direction of Ministry of New and Renewable Energy (MNRE), about 2000 Nos. ( on street light poles & High mast / Mini mast towers) of the LED light fittings were replaced in phase I & II by M/s EESL which are under the scope of maintenance by EESL, is limited only to - repair / replacement of above 2000 Nos LED streetlight fittings, and the power supply to these street light fitting is not in the scope of M/s EESL.

➤ **RFID (Radio Frequency Identification System) based Gate pass entry system:**

- As a part of Modernization of Indian sea Ports in order to enhance security, remove bottle necks of seamless movements of traffic across port gates, ensure tracking, tracing of man, material, vehicle, equipment and other assets, Visakhapatnam Port Trust has initiated implementing Radio Frequency Identification (RFID) based access control systems.
- Consequent to the above M/S KELTRON (Kerala State Electronics Development Corporation, a Govt. of Kerala undertaking) was awarded the project of implementing RFID in Visakhapatnam Port Trust to an amount of Rs.6.95 Crores including O&M for a period of 07 years. To improve further gate infrastructure, VPT has spent Rs.3.20 crores for smooth and effective gate operations.
- As a part of implementation, Visakhapatnam Port has planned to implement initially at main harbor gates covering east, west and outer harbour cargo handling areas,
  1. GCB Gate
  2. East Quay-7 -Gate
  3. Dock main Gate
  4. West Ore Berth-Gate
  5. West Quay 7&8-Gate
  6. North West Gate

- Visakhapatnam Port Trust has enabled RFID based gate pass entry system to its users at all 06 gates. Port users can apply online permits for entry into the dock area.



#### ➤ **RADIO NAVIGATION EQUIPMENT (MBES):**

- In the year 2004, VPT has installed Automatic identification system ( AIS) at control station -1 to monitor vessel which are entering and exiting the port area. Subsequently VPT has commissioned 25KW , X - band salesmar Radar duly installing in the year 2008 in order to comply ISPS requirements and to meet core objective of port navigation that is safe navigation of vessels calling at VPT. The above Radar caters to surveillance of the port limits upto a range of 25Nm.
- Nirmal launch is equipped with single beam echo sounder which uses SONAR (Sound navigation and Ranging) technology to measure the depth of sea bed duly ensuring 16m channel draft to safely manoeuvre the vessels In/out of the harbour. Further, VPT is envisaging to replace the existing single beam echo sounder with latest Multi beam echo sounder which will be commissioned by Sept 2020 duly complying ministry guidelines to improve the operational efficiency.

➤ **WIRELESS COMMUNICATION:**

- In this highly competitive shipping sector it is vital to ensure the faster turnaround of vessels and key to accomplish this seamlessly is an effective communication between all departments which is accomplished using this wireless VHF communication.
- VPT has deployed 160 nos. of wireless sets for uninterrupted wireless communication among staff for shipping/handling/railway operations. Further 02no of Repeater stations are installed at Duffer in signal station – II (Rose Hill) and DLD building.
- In addition to this, 80 No of digital VHF sets were provided to Marine wing for effective communication to safely manoeuvring the vessels during anchorage pilotage, berthing.
- Further 55 Nos of digital VHF sets are deployed for port security (CISF Patrolling and crime) for effective monitoring the port security and surveillance.

➤ **CARGO HANDLING EQUIPMENT:**

- VPT has installed 02No of 100 Ton Electronic in-Motion Railway Weigh Bridges (01 No. at AKP & 01 No. at WOB) for weighment of all cargo through Railway rake movements. The weigh bridges were procured and installed in the year 2009 as per the Railway Design and standards organization (RDSO) specifications.
- Further, the present weighbridges are being replaced with latest technology high capacity 140 Ton Electronic In-Motion Railway Weigh Bridges for faster evacuation of cargo duly reducing the TRT of rakes.

➤ **ISPS EQUIPMENT:**

- VPT has installed 95 nos of high resolution cameras throughout port area for effective surveillance of shipping operations duly complying ISPS requirement. Also a command control centre has been established for effectively monitoring cargo handling operations, environmental parameters and security aspects.
- VPT has also commissioned Radiation detection equipment (RDE) to detect nuclear materials and radioisotopes for the purpose of stopping illicit shipment of special nuclear material.

➤ **Harbour Pilot System (HPS):**

- Recently Harbour Pilot System introduced in VPT to meet challenges of bringing CAPE and Baby CAPE (Bigger size) vessels in the narrow congested waters of Inner Harbour.
- It aids pilots in safe navigating, docking the vessels by taking precise position of vessels using PPU (Portable Pilot Unit) for measurement of speed, Heading and accurate Rate of Turn of vessel while manoeuvring.
- Presently HPS system is being used by pilots by carrying PPU's which is portable type having lighter weight and smaller size.

➤ **B.G.LOCOS:**

- The B.G.Loco Section is one of the Division in the M&EE Department. This division is provided with Diesel Electric Locomotives to Operate & Maintain, the Locos are provided to Traffic Railway Operations in all the 3 shifts to handle rail born cargo of port i.e. around 30% of Port throughput.
- B.G. Locos section is having a sub stores to maintain the required spares for repairs and HSD oil bunks (22KL & 15KL Capacity) for fuelling of locomotives.

SI. No.	DESCRIPTION	MODEL	Qty.
1	WDS-6 Model Diesel electric Locomotives.	1350 HP	07
2	WDG-3A Model Diesel electric Locomotives.	3100 HP	03

**VI. 10 MLD SEWAGE TREATMENT PLANT (STP)**

- Sewage Treatment is the process of removing contaminants from Municipal waste water, containing mainly household sewage and some Industrial waste water. Physical, Chemical and Biological process are used to remove contaminants and produce Treated waste water (or Treated Effluent) that is safe enough for release into the environment. A by-product of Sewage treatment is a semi-solid waste or slurry called Sewage Sludge. The sludge has to undergo further treatment before being suitable for disposal or application to land.



➤ **OSTT, LPG & OR-I, II & III SECTION**

1. VPT provided with Oil / LPG berths namely O.S.T.T, LPG and OR-I, II & III.
2. This section maintains the fire fighting facilities at O.S.T.T./LPG/OR-I, II & III berths for ensuring safety at berths as per PESO requirements.
3. Maintenance of various capacities of Generator sets for lighting and power supply for handling of cargos at OSTT berth. Generator sets at LPG/OR-I&II maintained for catering power supply in case failure of AP Transco power supply to cater emergency needs viz., lighting and foam pumps.
4. Existing fire fighting facilities at OSTT, LPG, OR-I, II & III are
  - The Fire Fighting Facilities at OSTT are provided in the year 1986. These facilities are suitable to handle upto 50,000 DWT Vessels as per latest OSD guide lines (2017).
  - The Fire Fighting Facilities provided at LPG in the year 2000. These facilities are suitable to handle upto 20,000 DWT Vessels as per latest OSD guide lines (2017).
  - The Fire Fighting Facilities provided at OR-I & II in the year 1992. These facilities are suitable to handle 20,000 to 50,000 DWT Vessels.



➤ **Sweeping Machine:**



➤ **Fog Cannons:**



➤ **FLOATING CRAFTS SECTION:**

- One of the core operations of Visakhapatnam Port Trust is Pilotage of merchant vessels into and out of the port and one of the important resources needed in this operation is Tug. A tug is a floating craft that manoeuvres vessels by pushing or towing them. Tugs move vessels that either should not move by themselves, such as ships in narrow channels of harbour or congested areas or those that could not move by themselves, such as barges, disabled ships. Tugs are powerful for their size and strongly built, and can operate in close quarters.

**(TUGS, LAUNCHES & CRANES):**

1. 65 Tons Bollard Pull ASD Tug	-	01 No.
2. 60 Tons Bollard Pull ASD Tug	-	01 No.
3. 50 Tons Bollard Pull Tractor Tug	-	04 Nos.
4. 100 Tons Floating Crane	-	01 No.
5. 50 Tons Floating Crane	-	01 No.
6. Pilot Launches	-	04 Nos.
7. Mooring Launches	-	03 Nos.
8. Survey Launch (Nirmal)	-	01 No.
9. Agni Class Fire Float	-	01 No.
10. 500 M <sup>3</sup> Grab Hopper Dredger	-	01 No.
11. 350 Tons Oil Barge	-	01 No.

**DRY-DOCK Details:**

a) Length	-	140.24 mtrs.
b) Breadth	-	18.28 mtrs.
c) Draft	-	5.6 mtrs.

**Fishing Harbour Details:**

- The fishing harbour dry dock was built in the year of 1986. Size of the dry dock is 65M X 20M X6M, having dewatering pumps 3nos. 200Hp -2nos, 20Hp -1no. The existing dry dock was facilitating docking & undocking operations of private vessels, Coast guard and fishing trawlers.

## **SAFETY INTERFACE - V.P.T FOR WEB PORTAL**

**MISSION :** Being mega port in the eastern region, V.P.T is with un-compromised core value to provide safe and secure shipping services. While handling International Ships in the port, we comply with International safety standards at port operations while handling hazardous, dangerous and sensitive cargoes at our berths.

We demonstrate leadership in ensuring best safety practices in the port and our mission is set up for achieving “Zero accident” at port operations. Every employee of the port is responsible for accident prevention.

**SAFE OPERATIONS:** Safe cargo handling is being ensured by implementing OHSAS 45001 systems. Control measures are in place by work place Hazard Identification and Risk Analysis processes. Operations are regularly reviewed and evaluated by the safety programs, procedures and control systems. Joint inspections are taking place and corrective actions are being taken promptly to reduce potential hazards at operations.

### **INTERNAL CONTROL AND SAFETY REPORTING SYSTEM:**

Port operations are being monitored by the operational control rooms, Command control room, Long range CCTV network etc. Emergency reporting is done by the intricate communication systems. Personnel movement is monitored by RFID system round the clock by the Central Industrial Security Force (CISF).

### **SAFETY TRAINING:**

Safety trainings are mandatory to employees before, entering the operational work spots. On the job safety trainings at work spots are the most successful programme in preventing incidents in the organization. An exclusive training centre HRDC is functioning with expert faculties.

### **SAFETY AUDITS.**

Safety audits are being conducted by Both internal and External safety auditors for all the work locations of the port. Audit findings and its compliance are reviewed the top management through OHSAS management system.

### **STATUTORY ENFORCEMENT:**

Mandatory safety inspections by enforcing authorities Inspectorate Dock Safety and Factories Inspector is scheduled from time to time to ensure compliance of the relevant Acts. Inspectorate Dock Safety office is situated in the port premises.

### **APPLICABLE REGULATIONS / ACT'S:**

1. Dock workers (SHW) Act 1986
2. Factories Act 1948.
3. W.C (Workmen Compensation) Act.