APM TERMINALS
APM TERMINALS TANGIER

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Innovation

White light
Crane operator chair
Truck positioning system
Remote control device
Automotive Terminal Tractor - ATT

Predictive maintenance

Infrared thermography
Ultrasound
Wire rope inspection device

Total Productive Maintenance - TPM

Process Excellence - PEX
- The annual cost savings per crane are 71% (€16,236);
- The investment is paid back in 1 ½ years;
- The energy savings per crane are 32,685 kWh per year;
- The total reduction in CO₂ output per crane is 107 tons per year.
- This design reduces overall stress, including, as a consequence, reduction of the lower back lumbar load.

- The highly ergonomic position of all the controls enables the crane operator to monitor the work in the best possible way, considerably contributing to the overall performance and productivity.
Traffic light

Beacon

20°

Sensor

Innovation

White light

Crane operator chair

Truck positioning system

Remote control device
To operate the crane without operator, with different speeds (low, medium, high)

Advantages:
- Safe workplace: direct contact with the working place
- Reduce labor cost for maintenance
Innovation

- White light
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Automotive Terminal Tractor
Infrared Thermography is the technique of using an infrared camera to test the thermal patterns which can then show the current condition of a device or composition of a material.

**Advantages:**
- Offers cost savings over routine
- To allow convenient scheduling of corrective maintenance
- To prevent unexpected equipment failures or unplanned stop
Ultrasound is the technique of using an Airborne ultra sound device to detect friction and turbulent flow on electrical, Mechanical and Hydraulic system.

**Advantages:**
- Decrease the maintenance cost
- Increase equipments reliability
- Improve customer satisfaction
TCK non destructive and qualitative portable wire rope tester is a wire rope quantitative, positioning and intelligent inspection with various advanced technologies which help to detect and identify defect type, location and quantity.
Wire rope inspection device

Total Productive Maintenance - TPM

Background

- Total
- Productive
- Maintenance

Goals

1. Zero BAD
   - 0 Breakdowns
   - 0 Accidents
   - 0 Damages

2. High equipment OEE

3. Engaged workforce
Within Process Excellence we make use of the Lean Six Sigma (LSS) toolkit

**Strengths of Lean:**
- Focus on eliminate waste
- Gemba Kaizen approach
- TPM principles
- Strong basic tools

**Strengths of Six Sigma:**
- Zero defects
- Focus on reduce variation
- D-M-A-I-C approach
- Data analysis
- Strong statistics tools

PEX makes use of all LSS tools when useful