



CASE STUDY

Port Entry Light Helps Ensure Vessel, Cargo and Crew Safety at Large South American Port

Puerto Mamonal, Cartagena, Colombia



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Project Overview



Application

Port Entry Light Helps Ensure Vessel, Cargo and Crew Safety at Large South American Port



Product

Sealite LED Sectored Port Entry Light



Location

Puerto Mamonal, Cartagena Bay, Colombia



Date

September 2018



Background

Colombia's Puerto Mamonal is a public use/private owned multipurpose port, committed to a safe, competitive and environmentally sustainable operation. It is located within the large, South American port of Cartagena in the Caribbean Sea. Cartagena Port is one of the world's top 100 busiest ports due to the high volume of marine traffic calling on its 53 inland ports, including Puerto Mamonal.

Puerto Mamonal experienced significant growth in recent years in its bulk and containerized cargo activities. Further development of Puerto Mamonal was required to help ease the strains of increased imports, exports and in the Cartagena port area.



The Challenge

The Bay of Cartagena has three entrance channels yet only two could accommodate marine traffic.

The primary channel is very congested. The second channel is too shallow to accommodate marine traffic.

The third channel, Varadero, is deep enough to accommodate large vessels but has several navigation challenges for the 80,000 ton displacement/500' LOA vessels expected to call at Port Mamonal. Shifting sandbars made grounding a constant threat, and protected, pristine coral reefs surround Varadero Channel. Precise navigation aid was required to help ensure safe and timely delivery of vessels, cargo and crew.

Delays in the delivery of goods and services and the risk of vessel grounding is a real threat to the local economy that can result in environmental impact, subsequent loss of marine life and potential downturn in tourism visitors to the region. Puerto Mamonal wished to avert these maritime concerns by adding a much need Port Entry Lighting system to enhance the safety of vessel traffic



A requirement for the Port Entry Light was that it had to be solar powered to minimize utility expenses and remain operable in case of power shortages or outages.

The Solution

The port owners selected Sealite's solar powered Port Entry Light (PEL) to aid mariners on approach into Puerto Mamonal.

The compact and lightweight design of Sealite's high intensity Port Entry Light provides over 120,000cd to offer a brilliant 3NM daytime range into Puerto Mamonal. The PELs brilliance easily stands out against confusing background lighting in the large port. Power consumption is a mere 30 watts, offering an economical navigation solution and ideal solar powered aid to navigation.

Beyond minimal utility costs, Sealite's Port Entry Light offers a measured, one minute of arc changeover between green/white/red color sectors; this provides unparalleled accuracy on vessel approach into port, where highly precise navigation assistance was critical to maneuver through the tight channel.

Sealite's Port Entry Lights are easily programmed via USB on a personal computer. They are available in both 5 and 10 degree sectored beam width models, and can be tailored to a specific installation site; 32 light intensity steps and 256 flash characters provide easy identification for ship captains and harbor pilots.

The Port Entry Lights from Sealite are Type 1 or Type 3 AIS ready for remote monitoring of operating status by port maintenance personnel. GPS interface enables synchronization with multiple PEL units and other AtoNs for optimal port entrance safety. GSM monitoring provides remote control of the light through a compatible cell phone or Sealite's web portal.

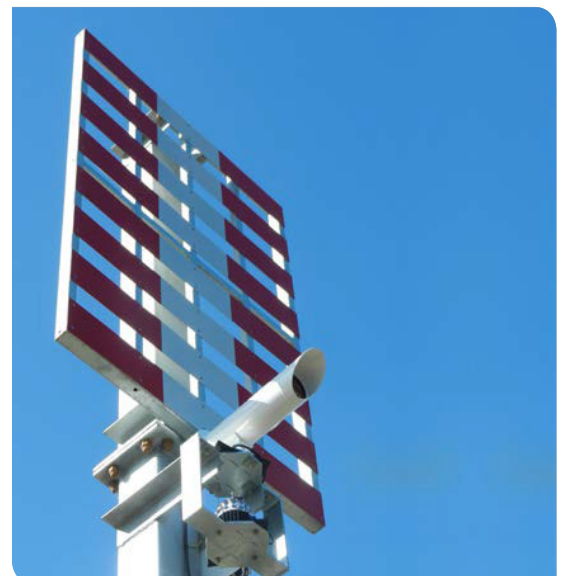
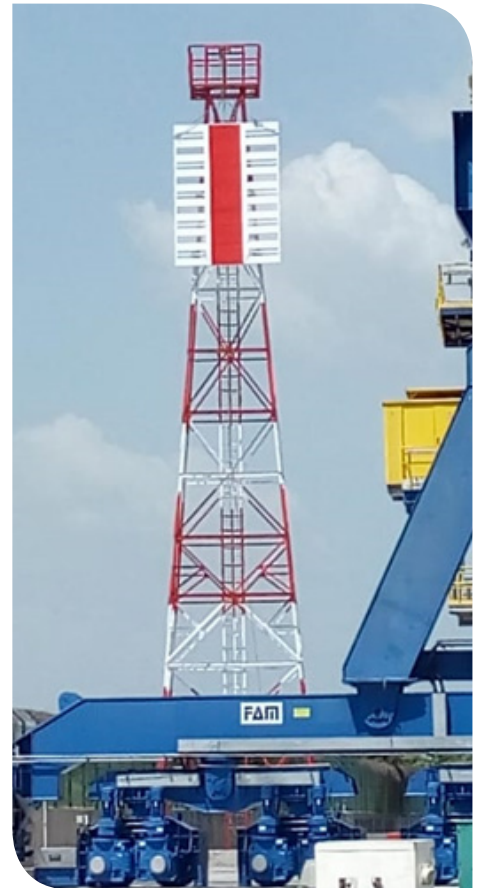
The Result:

The Sealite PEL 10 has helped the owners of Puerto Mamonal increase the number of large visiting vessels, expand trade into the area and provide safer operations for vessel operators, owners, pilots and crew pilots within the larger port of Cartagena.

"The Sealite Solar Port Entry Light, solar panels and batteries were easily assembled and configured on site. Pilots in the area state the PEL is of great help to navigation because it allows the vessels to transit the narrow channel in a safe manner."

Zully Margarita Arroyo Castro

Asistente de Gerencia
Ingenieria Naval & Senalizacion Maritima S.A.S.
Barranquilla - Colombia





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