Labadee Mooring Buoy, Haiti

waterfront & marinas

Coastal Systems International, Inc., with the cooperation of Danport and the Danish Hydraulic Institute (DHI), developed static and dynamic analytical models to design a mooring buoy system for Royal Caribbean's Voyager-class cruise ships, the largest passenger ships in the world at the time of construction. The design presented numerous challenges due to the high incidence of gusty winds, tight maneuvering spaces, and the size of the vessel. All these constraints were analyzed and resolved in order to proceed with the buoy's design. A geotechnical investigation was also conducted to confirm sea-bottom characteristics.

Based on the model results, Coastal Systems developed design plans and specifications for the dual mooring buoy system and coordinated the procurement of materials. Each custom-designed mooring bouy required a catenary system of six 15-ton L.W.T. anchors. Construction management services were provided on behalf of the owner.

Construction of the dual-point mooring system was completed with a 240' anchor handling ship mobilized from Louisiana. Construction was completed in five days, between cruise ship calls to the private island destination.

Client:	Royal Caribbean Cruises, Ltd.
Location:	Labadee, Haiti
Date of Completion:	2001
Construction Cost:	$2,000,000

Mooring System in Use

Mooring System Deployment & Use