

Marine Industry

INDUSTRY: **Marine**

APPLICATION: **Ship Board Crane**

PRODUCT: **9 Ton Underhung Double Girder Crane**

SERVICES: **Design, Installation, Quality and Load Testing**

THE CHALLENGE

To design a ship board crane that will withstand and safely operate in a saltwater environment. The design requires critical fleet angles, minimal hook-to-hook spacing, and accommodation for 2 degrees of ship list, along with other considerations.

THE SOLUTION

American Crane manufactured a crane featuring components such as: corrosion resistant fasteners, corrosion resistant coatings and stainless steel electrical enclosures (NEMA 4X). All gearing, including the drive motions and the gear rack, was designed with a minimum service factor of 2.0 for heavy duty service. In addition to the primary hoist holding brake, secondary hoist holding brakes were employed to operate directly on the drum. Rope reeving was designed with a minimum 6:1 safety factor in lieu of the standard 5:1 found on industrial applications.

THE RESULT

This special design met all customer specified requirements including anti-corrosive crane components and full bridge and trolley motion capability, vital during rolling and/or listing of the ship. Rack and pinion systems provide the stability for travel motions under all conditions, thereby preventing wheel slippage associated with conventional crane wheel drive configurations. All features of the crane provide the highest degree of safety for operator and equipment.