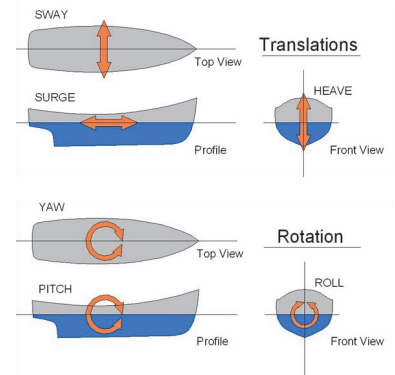


Ride Control Systems

Advanced Ship Motion Reduction in Five Degrees of Freedom

Naiad Dynamics began pioneering the science of Ride Control over 40 years ago with our revolutionary work with the US Navy and the fast ferry industry. Since then, we have introduced numerous groundbreaking advances in Ride Control System (RCS) devices and controls to keep pace with the expanding diversity of hull forms emerging from the world's commercial and military shipbuilders. Today, ND Ride Control Systems are operating on most of the commercial fast ferries in the world, over 50 of the world's Navies and Coast Guards, and ND is leading the way for high-speed and advanced hull form luxury yacht RCS solutions.



Overview

Active Ride Control is the continuous and simultaneous dampening of multiple ship motions in real time.

- ✓ Reduced roll, pitch, yaw, heave and sway motions.
- ✓ Reduced motion sickness, crew fatigue, falls/accidents, rough weather interruptions, and cargo/equipment damage.
- ✓ Automatic motion control and optimized running attitude reduces vessel drag and maintains a straighter course heading, improving speed and fuel efficiency.
- ✓ Active T-Foils, Trim Tabs, Interceptors, Lifting Foils, Fins, Rudders and Air Cushions are used alone or fully integrated in combinations to suit ride quality objectives.
- ✓ Proprietary modeling software developed over decades of experience accurately analyzes a vessel's motion characteristics, and its effect on seasickness incidence averages.
- ✓ Advanced digital control system modulates all control devices simultaneously for maximum efficiency.



High Speed Ferry with ND Active T-Foil, Fins and Trim Tabs Integrated RCS



Trimaran with ND Active Lifting Foils



Catamaran with ND Active T-Foil and Trim Tabs



Monohull with ND Active Interceptors and Fins

Active Trim Tabs

Active Trim Tabs are transom mounted flaps that create lift to continuously and automatically control roll and pitch motions while simultaneously optimizing running attitude. Suitable for a wide variety of applications and hull forms.

Active Fins

ND has supplied more Active Fins than any other brand. Commonly used for roll control underway (AtSpeed®) as well as at anchor (AtRest®), ND has integrated fins into many RCS applications for roll, pitch and yaw damping.

Active Interceptors

Like Active Trim Tabs, Active Interceptors are transom mounted and create lift to control roll and pitch motions while simultaneously optimizing running attitude. Instead of a flap, the interceptor deploys a curved blade that is uniquely strike tolerant, requires less power and space, and simplifies installation.

Active Rudder Roll Stabilization

Using the ship's rudders as active motion control devices, the Naiad RCS integrates with the autopilot control to reduce roll while maintaining course.

Active Lifting Foils

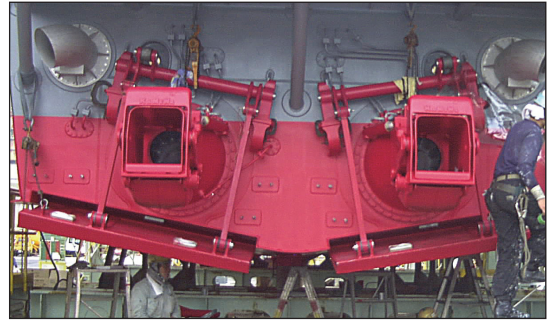
Active Lifting Foils (see photo on reverse side) provide motion control as well as hydrodynamic lift for multi-hull vessels. The added lift reduces wake and wetted surface for higher speed, and the foils are continuously modulated for motion damping and optimal running attitude.

Active T-Foils

An original Naiad Dynamics innovation, Active T-Foils are a reliable and effective ride control device, proven in hundreds of successful installations. Available with active flap, pivoting (with or without active flap) and fully retractable (with or without active flap) in a range of sizes to suit any application. Suitable for monohulls, catamarans and trimarans.

Active Air Cushion Control

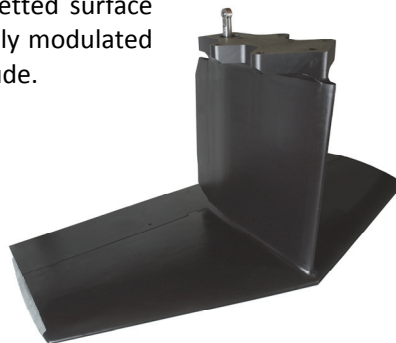
Our development of Ride Control Systems for Surface Effect Ships (SES) began over 40 years ago with the USN. With precise control of SES air cushion vents and stern seal pressure, the Naiad RCS reduces motions and enhances performance.



ND Active Trim Tabs



ND Active Interceptors



ND Active T-Foil



Norwegian Skjold Class FPB Surface Effect Ship
World's fastest armed vessel

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NAIAD DYNAMICS: The Science of Ship Motion Control®