



SMIDS - DON'T ARRIVE IN PORT WITHOUT IT!

Lloyds and MED Ship's Wheel Approved

The Ship's Movement Information Display System, known as **SMIDS**, is a highly effective monitoring system for ships and large vessels. The system provides the bridge with clear information on the exact positioning and slightest movement, by calculating the longitudinal and lateral speeds of the vessel, using speed over the ground from the GPS and heading from the ship's gyrocompass. The system replaces the more restrictive SONAR Doppler-docking systems with immediate satellite technology and clearly highlights the slightest movement from the bow or stern, which is off course **as it happens**.

This constantly updating data, recorded by the system, is received using GPS/Glonass satellite information and is accurate to an astounding +/- 0.01 knots, which is **equivalent to approximately 0.5cm per second**. A receiver is fitted to either end of the vessel and the simultaneous fixes are processed with the information to the instant read out on the bridge. For extremely large vessels further receivers can be fitted along the side deck at maximum beam, which may be required for docking.



One of the major advantages is that SMIDS is unaffected by water temperature differences, salinity, cavitation or silty or sandy water. It can be fitted while the vessel is underway, eliminating the need for expensive dry-docking and interruptions to the schedule and it can even be installed using the ship's existing wiring from an original Doppler system.

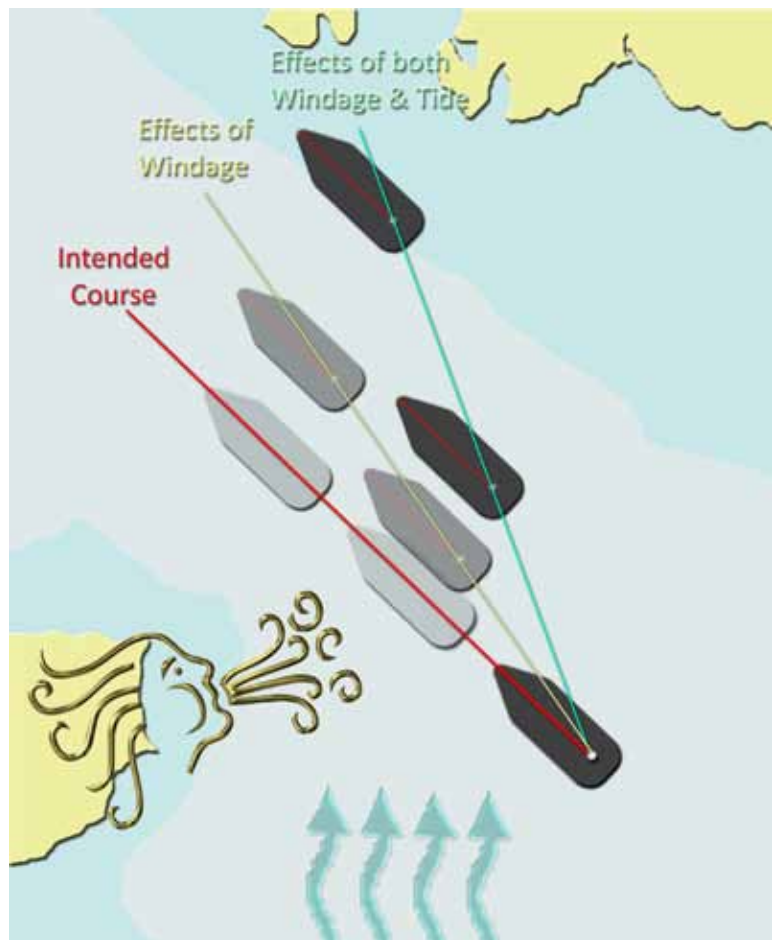
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Docking

When performing complex docking procedures, SMIDS is an essential aid to bridge navigation, picking up the slightest unpredictable alteration of speed and course over the ground, simultaneously at the bow and the stern of the vessel. When docking in high winds or strong tides, this can provide vital information ahead of time to ensure the safety of the crew, the shore crew and the vessel. (See graphic)

An indispensable addition to SMIDS is the SMIDS PDA, which can be used on the bridge or from the ship's office, at the same time on a pier, as well as on board any tugs that may be required for docking manoeuvres, providing the same instantaneous readout of the slightest deviation, to every member of the team involved in the procedure. When docking in a foreign country, there are no language barriers as the readout from SMIDS is numeric.



Bunkering at anchor or ship to ship refuelling at sea

Exact positioning and knowledge of the two vessels proximity from each other, is a key element for safe refuelling, whether at anchor or underway. SMIDS installed on both vessels can provide accurate data on the distance apart, heading and course over the ground in real time on both vessels, ensuring that a safe and efficient working distance is maintained throughout the refuelling. SMIDS gives a readout to the bridge of the slightest change in direction and speed, allowing critical time to correct any erratic alteration of course, possibly due to wind and sea conditions. By using the SMIDS PDA readout on the second vessel, up to the minute information can also be provided to both Ships' Masters on both their own SMIDS as well as that of the other vessel in close proximity.

Manoeuvring in confined or tidal waters

When underway and manoeuvring in confined, restricted or tidal waters, SMIDS provides constant updates as they happen, allowing sufficient time to correct any errant course likely to put the ship and its crew into potential danger. The system reading from the bow and stern of the vessel gives real time data to such an accurate degree that even the smallest correction on heading or speed is immediately updated within the system; meandering tidal rivers or narrow channels will require this degree of accuracy for

the safe passage of very large vessels and SMIDS is the key to simply relaying the exact minute movements of both the bow and the stern simultaneously. This information means that the Master is able to correct the heading immediately the readout has highlighted even a half centimetre in the wrong direction!



Note to Editors – older/other docking systems:

Laser docking is normally only accurate to +/- 1.9 knots, which is equivalent to 99cm per second and only within a tolerance of 15 degrees, which is not as safe as SMIDS. Another disadvantage is that when a carrier arrives fully loaded, at certain states of the tide, the laser system can miss the vessel altogether! The laser system can also bounce off hull angles giving little or no accuracy.

Doppler docking requires dry-docking to fit and has proven inaccurate in silty water, brackish water or even with hot and cold flow, as the signals are susceptible to interference.

AMI Marine will be exhibiting at Europort in Rotterdam from 3rd – 6th November on stand number 8.216. Appointments can be booked with

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