

How sea state is linked to davit performance

Navies, coastguards, pilot authorities, offshore operators and research organisations need to launch and recover boats safely, often in heavy seas. SOLAS makes no distinctions on sea states. However, **755 ship accidents** 2001-2010 occurred during bad weather/**heavy seas** (IMO). Meanwhile, **67%** of **marine casualties/incidents** 2011-2014 involved **human error** (EMSA).

Davit features:

Vestdavit optimum:



Speed

SOLAS requires boats to be lifted at 18m/min; in higher sea states; boats lifted in a down swell are raised by the following wave crest, then **dropped** as the wave subsides



To ensure safety and comfort, Vestdavit single point davits have variable speeds from **18-50m/sec**



Dynamic brakes

If a braking system fails, the results can be **disastrous** for the boat and crew



Vestdavit's **Dual Brake System** offers the redundancy of a centrifugal brake for lowering and a static brake for holding



Self-tension

Before they are lifted or released, boats on the water can rise or fall by several metres: slack hoisting wires can tangle or cause **shock** loads



Vestdavit's **Constant Tensioning System** links to the winch motor, continuously compensating for heave motion



Shock Absorber

The dynamic forces active during boat lowering place **stress** on the deck, the davit structure and components including hinges and bolts



Vestdavit's **Shock Absorber System** absorbs sudden accelerations during hoisting/lowering, reducing G-Forces by up to 80%



Boat Guiding

In heavy seas, sway loads created as the davit moves from the stowed position to the ship's side create a **risk** for the boat and its crew



Vestdavit's **Boat Guiding System** ensures safety as the davit moves between the stowed and ship's side positions, also holding the boat in place before lowering/lifting



»»»» **67%** of marine casualties and incidents are due to human error and equipment failure

Workboats and tender boats are not considered LSA within **SOLAS** but are used more often in high sea states

755 cases of ship accidents caused by bad weather or heavy seas were reported between 2001 and 2010

1,900+

Vestdavit davits, side and stern launch systems have been supplied since **1975**

SOLAS includes design criteria and safety factors useful for davit design, but these must be combined with motion compensation systems. The result will be a proper working tool for ships and its crew.

SOLAS approved davits are made for man riding

SOLAS only regulates speeds at which davits can hoist (18m/min) and lower (36 m/min) boats, but has **no regulations related to different sea states**

Vestdavit single point davits lift and lower boats at different speeds:

Sea state **1**: 18m/min
Sea state **2-3**: 36m/min
Sea state **4**: 40m/min
Sea state **5-6**: 50m/min

Davits should be placed on the mother vessel, mid-ship and not too high above sea level, to ensure safety of the crew and the boat

Vestdavit supplies davits to navies and coast guards worldwide



In the North Atlantic, the swell's wavelength can be **500m+**

The most common way of measuring sea state and wave height is the World Meteorological Organization (WMO) scale ranging from



1 - 9

With a **Vestdavit** single point davit, crew boats can be launched and retrieved in sea states of

≤6