

PRODUCT SPECIFICATION

lift-on/lift-off hatch cover

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Since the development of the first containership, TTS Ships Equipment has been involved in the creation of lift-on/lift-off hatch cover systems.

Use of advanced stress-calculation systems and computer-aided design technology for the steel structure enables the hatch cover panels to accommodate higher container loadings, while keeping panel weights within the permitted maximum for handling by shore cranes.



TTS DRY CARGO HANDLING DIVISION



Operational flexibility through sealing system choices

Another design feature of the panels allows them to be lifted in non-sequential order, giving full flexibility of container handling operations. This facility has been made possible by using different sealing arrangements in the cross joints as shown below.

Fig.1: for hatches requiring only two panels, the sliding seal is the optimum choice

Fig.2: where a hatch is closed by three or more panels, the most suitable system is the advanced TTS Ships Equipment watertight vacu-seal which is retracted by an electrically-driven vacuum pump

Fig.3: the cross joints of the covers on larger containerships may be fitted with a system that uses only two sealing flaps to provide the necessary weathertightness

Fig.4: securing by semi-automatic twist lock

Fig.5: bearing pad arrangement (pad on coaming)

Fig.6: bearing pad arrangement (pad on hatch cover)

New securing alternatives and bearing system

The traditional cleating systems such as quick-acting cleats and sliding cleats, have been replaced by an advanced twistlock system. Semi-automatic twistlocks, as used in container lashing systems, automatically secure the panels as they are lowered to their closed position. Sliding foundations permit the necessary movement between the panel and coaming.

For bearings transferring the weight of the hatch cover and its container load to the coamings, TTS Ships Equipment offers a solution using several different systems and materials of the TTS EverEst™ bearing pad family.

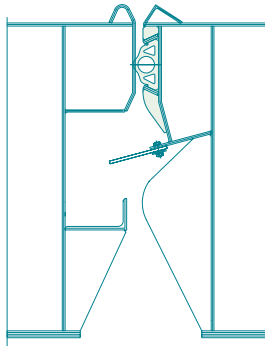


Fig. 1

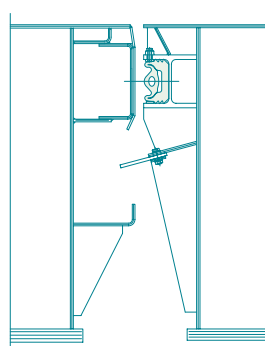


Fig. 2

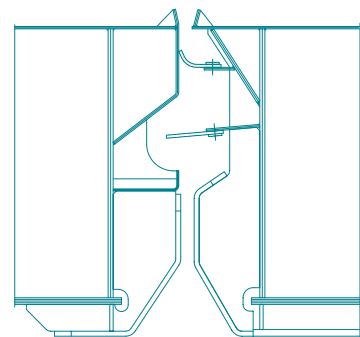


Fig. 3

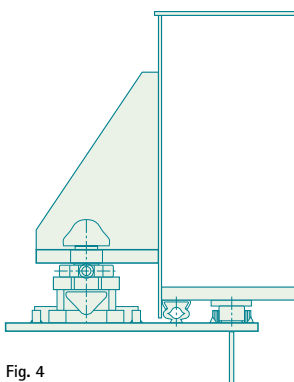


Fig. 4

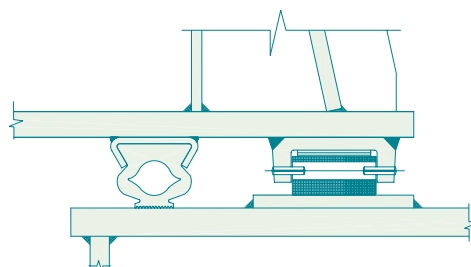


Fig. 5

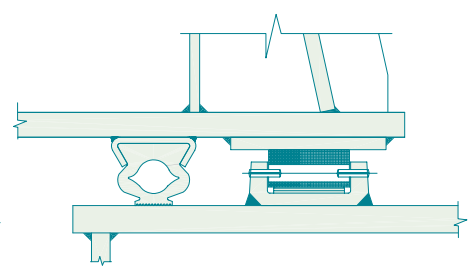


Fig. 6

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