A fatal accident on board the Hong Kong registered container ship "SEASPAN EXPEDITOR" at Western Anchorage No.3, Hong Kong on 17 August 2016

1. The incident

1.1 At about 1529 hours on 17 August 2016, a fatal accident happened to a crew member on board a Hong Kong registered container ship "SEASPAN EXPEDITOR" (the *vessel*) at Western Anchorage No. 3, Hong Kong.

1.2 The *vessel* was lying at anchor at West Anchorage No.3 after her arrival at Hong Kong on 11 August 2017. The machinery parts were receiving from a dumb steel lighter in the afternoon on 17 August 2016. Firstly all the machinery parts were received and placed on aft main deck of the vessel. Among the machinery parts, one main engine cylinder head and two main engine exhaust valves were being transferred to engine room by ship's mono rail hoist, and then transferred by engine room overhead crane and secured to their designated stands. The first lift exhaust valve was successfully transferred to the designated stand. While the second engineer was securing the first lift exhaust valve on the stand, the fitter was handling alone the second lift exhaust valve which was lowering through the skylight hatch by the mono rail hoist by the deck hands. The fitter temporarily placed the second lift exhaust valve (3 tonnes) on a small size removable floor plate (i.e. assess cover plate) under the skylight, and released the hook of mono rail hoist.

1.3 Soon after releasing the hook of mono rail hoist, the exhaust valve toppled and crushed the fitter at his left side abdomen to serious injury. The fitter was immediately sent to hospital by emergency paramedic helicopter, but he was declared dead on arrival at the local Tuen Mun hospital.

1.4 At the material time, the tropical cyclone warning signal No. 1 was effective, and the weather gradually changed and deteriorated. The tropical cyclone warning signal No.3 was issued shortly after the incident happened.

1.5 The investigation identified the following contributory factors to this incident are as follows:

i The heavy exhaust valve was placed improperly on the removable floor plate which was not reinforced by fitting structure underneath, and was not secured on the frame properly by screws. As a result, the exhaust valve toppled and crushed on the casualty due to the failure of the removable floor plate;

ii Failure in cooperation and close supervision to ensure the safe handling heavy machinery parts operation where experience and team work dominant. Potential hazard created while the operation of lift heavy parts was done by one rating (the casualty) who performed multiple tasks (i.e. a signalman, a guider and a slinger) simultaneously, and the casualty placed himself in a danger zone.; and

iii Failure in risk assessment dealt with heavy machinery parts handling operation to discuss in depth or underestimate the scope of assignment in toolbox talk, i.e. the role of team leaders, the signalman and supervisor were not declared to the members, as well as the handling procedure of the lifting should have not been taken by a single person on the engine room side.

2. Lessons learnt

2.1 The heavy machinery parts should be placed on the floor plate which is firmly supported by beam underneath or reinforced structure. All engine room floor plate should be secured in place to prevent free movement.

2.2 In order to ensure the safe handling heavy machinery parts in engine room where experience and team work dominant, after an appropriate risk assessment, the role of team leader, the signalman and supervisor should be clearly declared and designated, and the handling procedure of the lifting should have not been taken by one person on the engine room side.