

# JTSCB Digests

JTSCB(Japan Transport Safety Board)

(Issued in December, 2013)

## Digest of Marine Accident Analyses

### For prevention of “Fatal and Injury Accidents Caused by Oxygen Deficiency or Gas Poisoning”

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#### 1. Preface

We have seen many fatal and injury accidents occurring to seafarers and shore workers while working on board, and when we analyze those accidents which were investigated by the Japan Transport Safety Board by the type of work when they occurred, it is found that most of the accidents occurred while such types of work as working inside tanks and holds, or mooring, anchoring and stevedoring were carried out. These types of accident may not happen frequently compared to collision and capsizing of vessels, but they suggest that factors easily overlooked in normal situations can lead to serious accidents. Almost all of the accidents occurring inside tanks and holds lead to fatality in particular, indicating that they contain a very high fatality risk once they have occurred.

In April this year, the Board made an investigation report public about an accident which occurred in Sakai-Senboku Quarter Section 7 of Hanshin Port in which a crew member who inhaled a toxic gas in a cargo tank of a chemical tanker became unable to breathe and died of hypoxia. In order to prevent occurrence of a similar accident, the Board made recommendations to the Minister of Land, Infrastructure, Transport and Tourism and the operator of the chemical tanker. With respect to the accident which occurred in June 2011 in which four crew members on board a chemical tanker sailing along Nagoya Port North Passage in Aichi Prefecture inhaled hydrogen sulfide gas, causing two of them to die and the other two to be injured, the Board pointed out the need for taking safety actions so that crew members should assess the risk associated with tank washing water, become fully familiar with the handling method of such water and observe evacuation procedures when exposed to a dangerous situation.

Furthermore, a similar accident occurred in July 2012, in which two crew members on board a chemical tanker of foreign nationality sailing off the north coast of Heigunto, Yanai City, Yamaguchi Prefecture inhaled a toxic gas and died.

In view of these ongoing situations and with a view to preventing occurrence of similar accidents, we present some case studies of serious accidents investigated by the Board, various statistical data digesting the features of similar accidents, and preventive actions taken based on the recommendations and opinions of the Board.

We hope that this digest will be used as teaching materials on various occasions such as safety seminars held by parties concerned, and will be able to contribute to the prevention of similar accidents.

