

# JTSTB Digests

JTSTB (Japan Transport Safety Board)

(Issued in November, 2014)

## Digest of Marine Accident Analyses

### For prevention of “Collision Accidents in Congested Areas”

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### 1. Preface

Since Japan is surrounded by water all sides, marine transport rivals land transport as one of its primary transportation methods. There is a large industrial zone known as the “Pacific belt zone” extending from the Kanto region to northern Kyushu, with distribution of goods highly active in its surrounding areas. On the other hand, as there are also a number of excellent fishing grounds there, it is an area congested with many different vessels using the same waters.

It has been one year since operation of the “Japan-Marine Accident Risk and Safety Information System” (hereinafter referred to as “J-MARISIS”) was started at JTSTB in May 2013. Users of this system can use the Internet from a PC to create map displays for themselves, showing information about what types of accidents have occurred in the past in marine areas of interest, what kinds of risks exist in those areas, and what level of traffic density those areas have (refer to page 3 for an explanation of “traffic density”).

Looking at the Pacific belt zone using J-MARISIS shows that areas such as Tokyo Bay, Ise Bay, Osaka Bay, Bisan Seto, Kurushima Strait, and Kanmon Strait are displayed in blue to signify that they have high traffic density, and also that there are many marks indicating accidents in these locations, which suggests that these are areas with active marine traffic and a high frequency of accidents occurring in them.

Recent serious marine accidents have resulted in the loss of precious human lives as well as vessels and cargo. These include an accident that occurred in September 2013 in waters to the west of Izu Oo Shima, involving a collision between cargo ships leading to 6 fatalities with 1 vessel capsizing; and an accident in March 2014 at the mouth of Tokyo Bay, also involving a collision between cargo ships leading to 1 fatality, 8 people missing, and 3 people injured with 1 vessel sinking (both of these accidents are currently under investigation at JTSTB).

In this context, we will provide accident case studies, with statistical data, by using J-MARISIS while focusing on a frequently occurring type of accident that involves a collision between vessels in areas with high traffic density, especially areas where serious marine accidents occurred or areas where characteristic accidents occurred near the entrances or exits of traffic routes, etc. prescribed in the Maritime Traffic Safety Act (not including traffic routes themselves) (\*1).

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.



(\*1 Target marine areas)



Figure 1: Traffic density conditions according to J-MARISIS ([http://jtsb.mlit.go.jp/hazardmap/index\\_en.html](http://jtsb.mlit.go.jp/hazardmap/index_en.html))