

Chapter 5: Efforts toward accident prevention

1 Publications

The JTSB prepares and issues various publications, as well as investigation reports, regarding specific cases.

We place these publications on our website and, in order to make them more accessible to the public, we also introduce them through our monthly JTSB E-Mail Magazine service (only available in Japanese).

Our e-mail magazine service is widely used by people in the aviation, railway, and shipping industries, as well as administrative agencies and educational/research organizations.

The screenshot shows the JTSB website interface. At the top, there is a header with the JTSB logo and the text '運輸安全委員会 Japan Transport Safety Board'. To the right, there are icons for an airplane, a train, and a ship, along with the text '国土交通省' and 'ENGLISH'. Below the header, there is a sidebar on the left with various navigation options like '文字サイズの変更', '船舶事故ハザードマップ', '報告書検索/調査中/統計', '安全情報', and '広報・刊行物'. The main content area is titled '各種刊行物' and lists several publications, including the '運輸安全委員会ダイジェスト' (Transportation Safety Board Digest) and '運輸安全委員会年報' (Transportation Safety Board Annual Report). A green box highlights the 'メルマガ配信サービス' (E-Mail Magazine Service) section, which includes a link to subscribe to the JTSB E-Mail Magazine.

You can read our publications and subscribe to our E-Mail Magazine service via the JTSB website.

URL: <http://www.mlit.go.jp/jtsb/>

2 Issuance of the JTSB Digest

With the aim of fostering awareness of accidents, and preventing similar ones from occurring, we issue a bimonthly “JTSB Digests.” This publication introduces you to statistics-based analyses and must-know cases of accidents.

We also issue “JTSC Digests” (English version) as part of our efforts to encourage overseas communications.

In 2013, we released six issues of “JTSC Digests” (February, April, June, August, October, and December: Issues No. 6-11) as well as two issues of “JTSC Digests” (English version, April and December).

The summary of each issue is as follows:

JTSC Digests Issue No. 6 [Case Studies] (Issued on February 12, 2013)

- Case study of an accident investigation (marine): “Seawater poured through an air tube and into a ballast tank. This increased the list of the ship and resulted in it capsizing and sinking.”
- Case study of a serious incident investigation (aircraft): “An outbound airplane that had been directed to wait in front of a runway entered without acknowledging the directions it had been given. This resulted in an arriving airplane, which had obtained clearance for landing, having to go around.”
- Case study of a serious incident investigation (railway): “The starting signal did not switch to ‘stop’ but stayed on ‘proceed’ multiple times, even after the departure of trains.”



JTSC Digests Issue No. 7 [Marine Accident Analyses] “Toward the prevention of passenger ship accidents” (Issued on April 26, 2013)

- Circumstances of each accident
- Case study of an accident investigation: “A passenger, who was seated at the front part of the cabin without buckling up, fell on his seat and landed on his buttocks when the vessel’s body was shaken up and down. The passenger sustained a compression fracture in the lumber vertebra upon impact.” (Similar examples appeared.)
- Case study of an accident investigation: “A passenger, who was seated in the fifth row from the front of the cabin, was lifted up when the vessel’s body was shaken up and down. He then hit their head on the ceiling, and then dropped into the seat, resulting in a fracture in his lumber vertebra.”
- Case study of an accident investigation: “A sightseeing boat going down the river ran into a rock and then capsized.”
- Case study of an accident investigation: “A vessel listed during the sailing due to a wave from behind, causing its load to collapse.”



JTSC Digests Issue No. 8 [Case Studies] (Issued on June 21, 2013)

- Case study of an accident investigation (aircraft): “A freight plane bounced multiple times when landing, resulting in the rupture of its left main wing and an outbreak of fire that burnt the plane.”
- Case study of an accident investigation (marine): “Steered by its captain, who was drunk at the time, a ship ran into a canal and crashed into the shore protection.”
- Case study of an accident investigation (railway): “A bullet train was derailed by the seismic shaking from the main shock of the Great East Japan Earthquake”



JTSB Digests Issue No. 9 [Marine Accident Analyses] “Toward the prevention of fatal and injury-causing accidents relating to oxygen deprivation or gas poisoning” (Issued on August 13, 2013)

- Circumstances of each accident
- Case study of an accident investigation: “A crew member inhaled chloroform gas when checking inside of a cargo tank, leading to an inability to breathe that caused him to die from oxygen deprivation.”
- Case study of an accident investigation: “A crew member who was engaging in unloading operations entered a cargo tank. The crew member died from asphyxiation due to oxygen deprivation.”
- Case study of an accident investigation: “After unloading chloroform, a crew member became unconscious in the ballast pump room due to inhalation of the chloroform gas.”
- Case study of an accident investigation: “Two crew members died from the hydrogen sulfide gas generated in the slop tank”



JTSB Digests Issue No. 10 [Railway Accident Analyses] “Toward the prevention of accidents involving cars that occur at level crossings and other places” (Issued on October 11, 2013)

- Circumstances of each accident
- Case study of an accident investigation: “A train collided with a large dump truck that was stopped at a level crossing, causing it to derail. The passengers aboard the train were injured.”
- Case study of an accident investigation: “A bus entered a level crossing without stopping and collided with a train. Six of the passengers on the bus were injured”
- Case study of an accident investigation: “A dump truck entered a level crossing while a train was approaching. It collided with the train and burst into flames.”
- Case study of an accident investigation: “A limited express train collided with a car at a level crossing. The driver of the car had not noticed the sign stating that the road was blocked off.”
- Case study of an accident investigation: “A trailer truck ignored a traffic light to enter an intersection, resulting in a collision with a tram. As a result, the tram was derailed.”



JTSB Digests Issue No. 11 [Aircraft Accident Analyses] “Toward the prevention of helicopter accidents” (Issued on December 18, 2013)

- Circumstances of each accident
- Case study of an accident investigation: “When a helicopter hanged the cargo during a flight, the cargo got caught in a ground object, such as perhaps trees or rocks. This resulted in the helicopter crashing in the mountains.”
- Case study of an accident investigation: “While it was lowering a rescue worker with a hoist for rescue work, a helicopter crashed in a rivulet. The rivulet was downstream of a waterfall basin.”
- Case study of an accident investigation: “During a flight for the delivery of materials, a sling



damaged helicopter's tail rotor, causing it become out-of-control and crash.”

- Case study of an accident investigation: “An aircraft with a high rate of descending suffered a hard-landing, causing some of its passengers to get injured.”
- Case study of an accident investigation: “A helicopter was stuck in an obstacle on the ground; it rolled over when its driver attempted to take off.”
- Case study of an accident investigation: “During a flight to observe power lines, a fire broke out in the rear cargo room; the aircraft was burnt and wrecked after a forced landing.”

For Prevention of Small Aeroplane Accidents (Issued on April 15, 2013)

For prevention of Fatal and Injury Accidents Caused by Anoxia or Gas Poisoning (Issued on December 18, 2013)

3 Issuance of the Analysis Digest Local Office Edition

The JTSB has issued the analysis digest local office edition (only available in Japanese). It has issued this publication in order to provide various kinds of information to help prevent marine accidents. The information is based on the analyses made by our regional offices and relates to specific accidents that occurred in their respective jurisdictions. This information focuses on cases with characteristic features such as the sea area, the type of vessel, and the type of accident.

Analysis Digest Local Office Edition in 2013

Hakodate	Circumstances of vessel collisions in the Hokkaido coastal area
Sendai	Situation of accidents where fishing vessel member(s) died or were injured
Yokohama	Circumstances of pleasure boat accidents in Hamana Lake, as well as Imagireguchi in Hamana Lake
	Situation of pleasure boat accidents in Ise Bay and Mikawa Bay
Kobe	Personal Watercraft: Driving precautions
Hiroshima	Situation of grounding accidents in the Seto Naikai Sea
Moji	Situation of grounding accidents in Kanmon Port
	Situation of marine accidents that occurred when a crew member was operating their cell phone
Nagasaki	Situation of grounding accidents in Hiradoseto
Naha	Toward the prevention of accidents in leisure ships





As you read these local office digests, you can not only find out the circumstances of local accidents, but can also gain some tips for accident prevention.

The local offices will make further efforts to regularly issue the analysis digest local office editions. By doing so, they will ensure that you will be provided with more satisfactory content.

4 Issuance of the JTSB Annual Report

In July 2013, we issued the JTSB Annual Report 2013. We did so in order to share the lessons learned from accidents and incidents with interested parties, by introducing our general activities in 2012.

As part of our efforts to provide information overseas, we issued the “Japan Transport Safety Board Annual Report 2013” on November 2013. We did so to let people overseas know about the topics in this Annual Report.



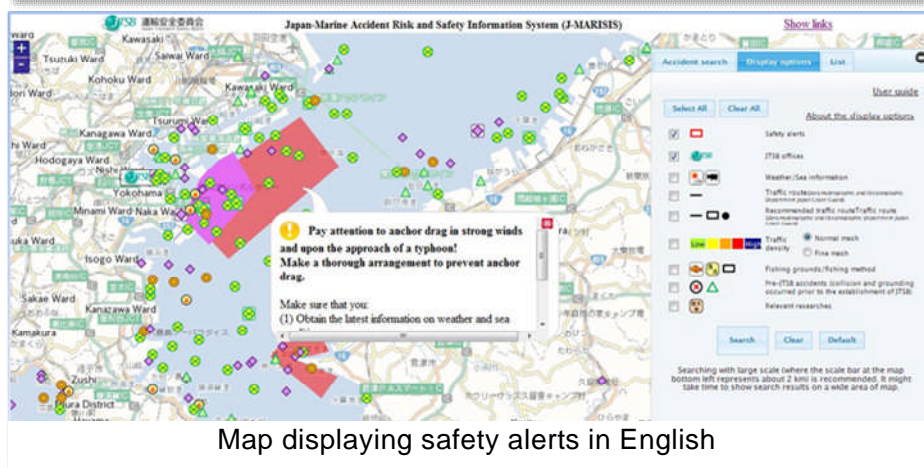
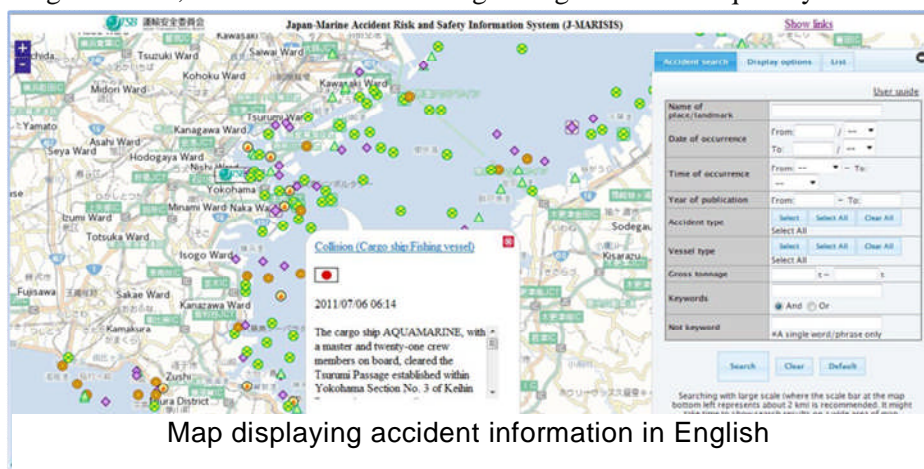
5 Japan-Marine Accident Risk and Safety Information System: Using the map to find information on accidents, risks, and safety

JTBSB launched a web-based marine accident map that provides the information about where the marine accidents have occurred. This map, the Japan-Marine Accident Risk and Safety Information System, was launched in Japanese at the end of May 2013.

This system enables you to view accident summaries and investigation reports for accidents and serious incidents, as well as vessel traffic, water routes, and fishing spots, on the same map. By disclosing the risks of accidents in each sea area, this system is designed to alert those who are on board ships that are sailing through the area to potential risks. By doing so, the system aims to prevent similar accidents and further improve the safety of sea traffic.

Maritime organizations have told us about how they use system, and how they would like to use it further. We have received feedback such as: “Since we can use the system to search by vessel types and accident types, we would like to utilize it as material in the training for our seamen, as well as the safety training programs,” and “By using the system to search by seasons and time, we want to use it to create documents for the safe operation of ships.”

In addition, in response to numerous requests for an English version of this system, for the education of foreign seamen and information provision to foreign vessels, we launched the English version (J-MARISIS) on September 2013. This is because today, most of the merchant fleets in Japan are run by foreign seamen, and accidents involving foreign vessels frequently occur in Japanese coastal waters.



Column

Japan-Marine Accident Risk and Safety Information System: Global Version

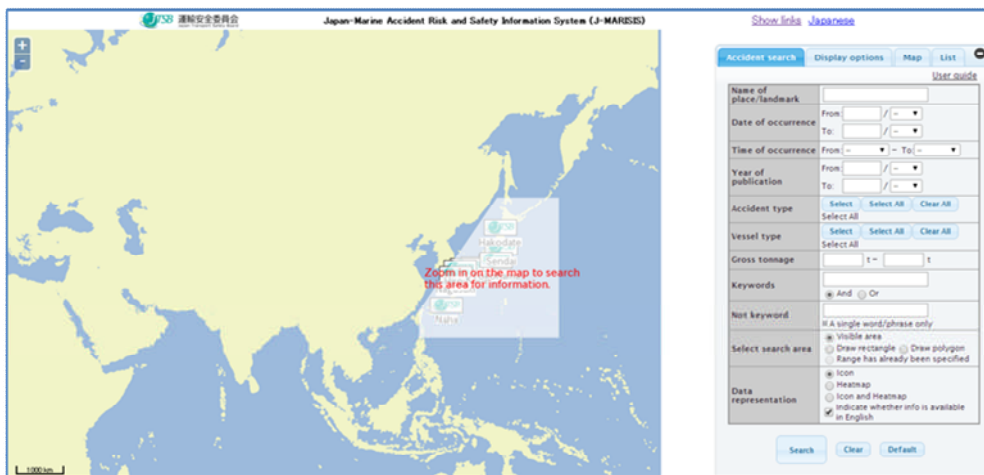
Internationalization and functionality enhancement

<http://jtsb.mlit.go.jp/hazardmap/>

Director for Analysis, Recommendation, and Opinion

In April 2014, JTSB launched the “Japan-Marine Accident Risk and Safety Information System (J-MARISIS) Global Version.” The system expanded the search range to enable users to search for investigation reports of marine accidents and incidents all over the world.

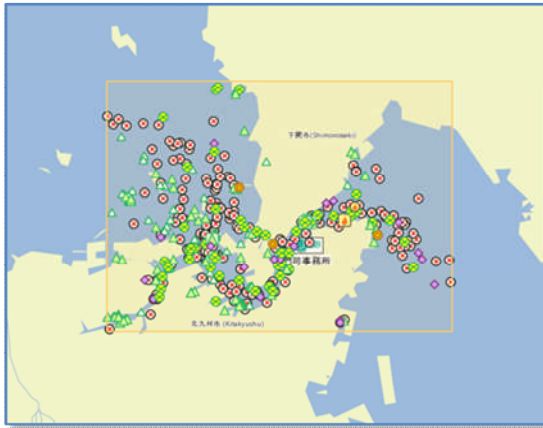
In accordance with requests from users to be able to search for marine accidents in any sea area around the world, JTSB enhanced the system to allow users to search not only our investigation reports, but also those published by foreign accident investigation authorities. (We presented J-MARISIS at the 9th European Marine Accident Investigators’ International Forum, which was held in Switzerland in September 2013. We also presented it at the 22nd Marine Accident Investigators’ International Forum, which was held in South Korea in October. Furthermore, we have added links to investigation reports published by the accident investigation authorities of the seven countries that agreed on the idea of this system at these forums.)



Front Page in the Global Version

On top of this, we’ve enhanced the system to provide new functions, including the display of marine accident information that are under investigation, search functions in any range, and distance estimations and drawing. These are functions that have requested by many of our customers.

We’d like to hear your ideas and opinions to further enhance the system in the future. We hope that you can make use of the system to prevent marine accidents.



Search function is available in any



You can draw planned routes

6 Dispatch of lecturers to seminars

The JTSB uses accident case studies and analysis results in its accident prevention activities to impart knowledge and accident prevention measures to concerned parties.

JTSB lecturers have been dispatched to conduct seminars and training, which are organized by various companies and organizations.

We select a topic suitable for the audience and explain case studies,



Zengyoren

prevention measures, and lessons learned from past accident investigations in an easy-to-understand manner.

The following is a list of some of the seminars that JTSB lecturers were dispatched to in 2013.

Major seminars that JTSB lecturers were dispatched to (2013)

Date	Name / Sponsor	Participants	Theme	Lecturers (Office)
June 27, 2013	Discussion among users of Light Plane ASI-NET [Association of Air Transport Engineering and Research]	30 aircraft and helicopter pilots	Helicopter accident investigations and safety lessons	Aircraft accident investigator (JTSB Secretariat)
June 28, 2013	J-MARISIS briefing session [JF Zengyoren]	Approximately 50 employees of the fishermen's union and others	About J-MARISIS	Marine accident investigator (JTSB Secretariat)
July 11, 2013	2013 Special Course for Railway Technology Training [On-site Inspection]	25 on-site inspectors	The roles of railway accident investigations	Railway accident investigator (JTSB Secretariat)

	[Kashiwa Training Center, College of Land, Infrastructure, Transport, and Tourism]			
July 29, 2013	13th Maritime Promotion Seminar [Kyushu Transport Development Center]	Approximately 100 persons engaged in maritime affairs	About marine accidents in the Kyushu region: Situation of marine accidents drawn from the hazard map	Director General, marine accident investigator (JTSB Secretariat)
August 21, 2013	6th Engineering Ethics Training [Institute of Electrical Engineers of Japan]	Approximately 50 IEC members, students, and others	Transport accident investigation and ethics for engineers	Board member (JTSB)
September 10, 2013	The 45th Meeting of the Prevention of Mariner Accidents [Shikoku branch of the Association for Accident Prevention Among Seafarers]	Approximately 80 employees, crew members, and others from shipping companies	Application examples of J-MARISIS and examples of marine accidents with casualties: Information on accidents, risks, and safety found out from the map	Regional accident investigator (Hiroshima Office)
October 23, 2013	2013 Special Training for Aviation Security and Disaster Prevention Personnel (II) [Aviation Safety Dept., Civil Aviation Bureau]	10 aviation security and disaster prevention personnel	Case studies and verification of aircraft accidents	Aircraft accident investigator (JTSB Secretariat)
December 5, 2013	First crew training for 2013 [Kanto Passengerboat Association]	Approximately 60 seamen who work as members of the association	Prevention of passenger ship accidents: Summary and analysis of accident and incident investigations	Accident prevention investigator (JTSB Secretariat)
December 10, 2013	2013 Special Courses for Building Guidance, Elevator Safety, and Accident Training [College of Land, Infrastructure, Transport, and Tourism]	29 elevator safety and accident-related personnel	Investigation of railway accidents	Railway accident investigator (JTSB Secretariat)

7 Provision of information for accident victims and their families

Following the alleged disclosure of information during the investigation of the Train Derailment Accident between Tsukaguchi and Amagasaki Stations on the Fukuchiyama Line of the West Japan Railway Company, we established a meeting consisting of victims of the accident and members of their families, as well as experts and bereaved families. The purpose of the meeting was to verify the reliability of the accident's investigation report. The verification meeting compiled a proposal for the future of the JTSB.

Based on this proposal, we established the Duty Improvement Action Plan, which specified four action principles. In line with the plan, we are striving to improve our duties by combining all of our resources. We set “consideration for the victims” as one of the four principles, and we are making efforts to take the feelings of the victims and their families, or the bereaved, into account in an appropriate manner. We are also making efforts to provide them with information regarding the accident investigation in a timely and appropriate manner, and to sincerely respond to their input. To this end, in April 2011, we established a contact point for providing information regarding accident investigations. To further promote the provision of related information, we also established the Victims and their Families Liaison Office, as stipulated in the official directive in April 2012. Furthermore, contact points were established at our regional offices to deal with situations in coordination with the Tokyo Headquarters.

Through these contact points, we strive to ensure mutual communications with victims and their family members. We do so by carefully listening to their perspectives and concerns and using these opportunities to further improve our duties.

In May 2012, we adopted the “Information Provision Manual” as a specific effort to better provide information to victims and their family members. At their request, we provide investigation reports and other information on investigations; we also listen to their opinions or requests at all times. We have also prepared an information card to be distributed that contains handy information about contact points.



Information Card for Victims and their Families

In addition, we have organized lecture meetings with victims and their family members where we have invited them to be guest speakers. This has allowed us to further our understanding of their situations and feelings, as well as their expectations for our investigations and information provision activities. Doing so, we try to improve the skills of our staff. At a meeting held in September 2014, a member of a family bereaved in the Japan Airlines Flight 123 Accident spoke about information provision regarding the accident investigation from the perspective of bereaved families.



Lecture meeting