

On the 10th Anniversary of the Japan Transport Safety Board



Norihiro Goto
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The Japan Transport Safety Board was founded in 2008 and will mark its 10th anniversary on October 1, 2018.

As I recall, air accidents in 1971 -- a Toa Domestic Airlines plane dubbed “Bandai-go” crashing into Yokotsudake (Mt. Yokotsu) and a midair collision involving All Nippon Airways’ B727 and the Air Self-Defense Force’s F86 jet fighter over Shizukuishi -- led to the establishment of the Aircraft Accident Investigation Commission, the origin of the JTSB, in January 1974. Since then, 44 years have passed. The Shigaraki Kohgen Railway collision accident in 1991, the Naka-Meguro derailment on the Hibiya Line in 2000 and other accidents increased calls for ensuring the safety of trains. With railway accident investigations added to the commission’s task, its name was changed to the Aircraft and Railway Accidents Investigation Commission in October 2001. In addition, international rules under the International Maritime Organization, a specialized agency of the United Nations, stipulating that investigations into marine accidents should be oriented toward determining causes, separated from disciplinary action, were converted into a treaty (effectuated in January 2010). As a result, the Aircraft and Railway Accidents Investigation Commission and the Japan Marine Accident Inquiry Agency were reorganized into the JTSB as an extra-ministerial bureau of the Ministry of Land, Infrastructure, Transport and Tourism under Article 3 of the National Government Organization Act on October 1, 2008. Established through such a process, the JTSB’s mission has three modes, namely aviation, railways and marine, and scientifically determines the causes of accidents and serious incidents in them while in operation and prevents the recurrence of such accidents and serious incidents and reduces damage when an accident occurs from a fair and neutral perspective.

In March 2012, the JTSB clarified its mission in written form as follows:

“We thoroughly unveil the causes of accidents and damage incidental to them through appropriate accident investigations and urge the implementation of necessary policies and measures through the issuance of safety recommendations and opinions or provision of factual information to contribute to the prevention of accidents and reduction of damage caused by them, enhance the safety of transportation and protect people’s life and living while deepening the social awareness of transport safety.” At the same time, we announced the Duties Improvement Action Plan mainly consisting of four action guidelines: 1. Conduct of appropriate accident investigations, 2. Timely and appropriate transmission of information, 3. Consideration of victims and 4. Strengthening the foundation of our organization.

While 10 years have passed since the establishment of the JTSB through the abovementioned process, there

remain a number of challenges conceived at that time.

First is a steep increase in overall accident handlings, including marine accidents. There is an impression that the work is fully functioning due to a large increase in investigators including those at regional organizations. But the way of assigning investigators and other issues need to be addressed.

Second, the JTSB is tasked with preventing the recurrence of accidents and reducing damage caused by them rather than apportioning blame or liability. Some people mistakenly consider that the apportionment of blame or liability is part of our mission and this misunderstanding leads to criticisms against our methods of investigation and investigation results. Nevertheless, it is important to conduct investigations by reconfirming our mission, compile reports and offer recommendations and opinions.

Third, we need to recognize changes in the nature of accidents and incidents in line with technological advances in aircraft, railways and ships and their operation systems. We must increase our knowledge to address the changes and advance our methods of investigation. We are required to make such efforts.

In addition, Professor Seiji Abe, chairman of the Advisory Meeting for Duty Improvement of the JTSB, pointed out in his message on the fifth anniversary of the board, that even if investigation reports we compile are technologically advanced in content, the format and writing style should make them easy to read and understand for the public at large. While the point raised by him has been well understood by the JTSB and put into practice, I want the board to pay greater attention to it in each investigation.

Taking these matters into consideration, I am recalling accidents and serious incidents that have occurred over the past 10 years. In the sector of aviation where I chaired the Aircraft Committee, I vividly remember a “B787-8 airliner catching fire from its lithium ion battery on April 1, 2014.” I have recently been involved in the Japan Soaring Association and the Japan Students Aviation League and am considering how to deal with accidents and serious incidents occurring in the field of general aviation including gliders. Under a system to examine operating skills introduced in the field on April 1, 2014, examinations of operating skills have started. I hope for upgrading of the system and enhancement of safety. I also recall and pay attention to investigation activities regarding “a collision between a bulk carrier (25,074 tons) and a fishing boat (119 tons) off the east of Kinkazan, Ishinomaki, which occurred in September 2012” in the marine sector and “a trouble involving a bullet train car on the Tokaido Shinkansen Line (West Japan Railway) that occurred in December 2017 (under investigation)” and others in the railway sector.

I contribute this message as former chairman of the JTSB and former director of the Aircraft Committee, hoping that the board will carry out its task while keeping its mission and challenges in mind and that parties concerned will further cooperate with each other.

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Akira Matsumoto
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To Recall Work Done by the JTSB

The Japan Transport Safety Board will mark the 10th anniversary of its foundation in October 2018. When it comes to railways, it has a history of 17 years if the seven years as the accident investigation commission are added. I spent nine years in the JTSB including one year at the accident investigation commission. Before the establishment of the Aircraft and Railway Accidents Investigation Commission in 2001, I was involved in investigations to determine the causes of an accident on the Teito Rapid Transit Authority's Hibiya Line and of the Shigaraki Kohgen Railway collision accident. I therefore would like to write about the history of the accident investigation commission and the JTSB and wishes I have for the future of the board.

The Aircraft and Railway Accidents Investigation Commission, the first official railway accident investigating organ, was founded in October 2001. Investigations to determine the causes of the Naka-Meguro derailment and collision accident on the Hibiya Line, which occurred in March 2000, were jointly conducted by the railway accident investigation and study panel in the Ministry of Transport and the Tokyo Metropolitan Police Department. Although the panel was not an official body eligible for a budget, it consisted of researchers and engineers in related areas in Japan and could determine the causes, including matters unexplained at that time, in cooperation with the TMPD. Masakazu Iguchi, professor emeritus at the University of Tokyo, who chaired the panel, said, "Japan needs an official railway accident investigation body." Based on the proposal and support from the Tetsudo Anzen Suishin Kaigi (TASK) or the Railroad Safety Promotion Conference, a nonprofit organization that has been actively conducting activities since the Shigaraki Kohgen Railway collision accident, the Aircraft and Railway Accidents Investigation Commission was established.

As you know, subsequent accidents, such as the derailment accident on the Fukuchiyama Line in the railway sector and a series of serious incidents in the aviation sector as well as social pleas in the marine sector, such as the IMO's policy of separating organs for investigations from those for the apportioning of blame or liability, led to the establishment of the JTSB. I think the JTSB, which has become a comprehensive investigative organ in the three modes of aviation, railways and marine, has played social roles in each transport mode. Accidents and incidents that drew public attention, such as the derailment of Shinkansen trains caused by two earthquakes in the railway mode, a Boeing 787 plane's fire incident related to a lithium-ion battery in the aviation mode and a tour boat capsized on Tenryu River in the marine mode, occurred. But I think grave accidents are decreasing as a whole. Effects of activities by the JTSB cannot be quantified but I think the board has been steadily generating results.

Wishes for the future of the JTTSB

The JTTSB has grown much bigger as an organization and improved its management since I became a member of it. But I think there is room for improvements at the board. I would like to point them out, taking a somewhat harsh stance including remorse I feel when I recall the days of my membership.

As the most important improvement desired, the JTTSB should release investigation reports in the fastest possible manner. I think that reports released by the board to date have been almost sufficient in terms of accuracy and meticulousness but somewhat inadequate as far as expeditiousness is concerned. When I read released reports, I often thought the JTTSB had taken “so much time” for release because of elaborate experiments and deliberations. But many reports on serious accidents failed to live up to the principle of release within one year. When I was a member of the board, I thought “timely reports are better than grand reports released after everyone has forgotten.” Reflecting on what I failed to accomplish, I hope that such reports will be realized. The JTTSB can address the question of expeditiousness, among other options, by releasing information such as progress reports before a final report. Above all, it should be noted that if an accident is followed by a similar accident before the JTTSB releases a report on the original one, the board is regarded as failing to fulfill its responsibility for preventing the recurrence of accidents.

The promotion of information disclosure is the second most important improvement desired. Although I believe that the issue has drastically improved since I joined the JTTSB 10 years ago, I think there remains room for improvements. While information gathered from investigations is disclosed only through reports in principle at present, I think information, which does not cause any trouble if released through other means, may well be disclosed as reference material for studies on ways of preventing the recurrence of accidents and enhancing safety. It may be also recommendable for the JTTSB to convene a session, say once a year, to release reports or explain them in an open-doors manner and listen to outside researchers and experts. Although there may be a variety of hurdles for creating such an opportunity, the board can learn from a variety of external opinions.

In closing, after writing many matters of concern from my own perspective, I would like to pay respect to the incumbent investigators and board members involved in accident investigations on a daily basis and hope that accident investigations useful for enhancing safety will continue.

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Tetsuo Yokoyama
Former Director
Marine Committee
Japan Transport Safety Board

I engaged in marine accident investigations during my six-year membership on the Japan Transport Safety Board. I heartily congratulate the JTSB for its 10th anniversary this year.

More than 6,900 investigation reports on marine accidents were released while I was with the board, revealing causes of various accidents and incidents. A person at the helm of a ship recognizes the surrounding conditions based on reports from lookouts and makes judgments on handling of the vessel and other operations. Many accidents occur due to flaws in the work process.

Based on investigations into a marine accident caused by a ship handler's slumber, the JTSB presented the Minister of Land, Infrastructure, Transport and Tourism in May 2010 with an opinion that measures to prevent slumbering for non-international coastal vessels of less than 500 gross tons and others should be studied, such as requiring them to install an anti-slumbering device (bridge navigational watch alarm system). As a result, the Ministry of Land, Infrastructure, Transport and Tourism made it mandatory in May 2011 for ships, including non-international coastal vessels of less than 500 gross tons, to install devices such as an anti-slumbering machine.

In September 2012, a cargo carrier and a fishing boat collided off the east of Japan, causing 13 crew members of the fishing boat to go missing.

The operator of the cargo carrier saw the lights of the fishing boat but failed to confirm the boat on the radar under rainfall and high waves. He was also unable to gain information from the automated identification system and the two vessels are considered to have come closer to each other and eventually collided while he was trying to determine the cargo carrier's location vis-à-vis the fishing boat.

As fishing vessels are not required to install an AIS, the boat in question was not equipped with it. There are cases in which radar fails to detect a small ship due to effects of rainfall and waves or depending on how it is tuned.

An AIS is less affected by rainfall and other conditions and can promptly and stably gather information on other ships' locations and other matters of concern. With the system expected to be effective in preventing collisions, the widespread use of it was recommended as a measure to prevent the recurrence of accidents similar to the collision. The JTSB presented the director-general of the Fisheries Agency with opinions concerning the widespread use of the system and other issues. The agency thus launched a financial support program for fishing boats installing an AIS.

Lookout is the base of safe navigation and the Act for Preventing Collisions at Sea requires maintaining a proper lookout at all times. But an anti-slumber device, which triggers an alarm when a ship handler falls asleep

to warn him or her of the slumber as well as crew members, is expected to be highly effective in such work as securing proper lookouts. In addition, an AIS reinforces the act of keeping watch as it can promptly and readily grasp other ships' movements. Ideally, the system should be adopted by ships regardless of their sizes and types.

Based on findings by investigations into accidents, the JTSC offers opinions on ways of preventing the recurrence thereof in order to prompt improvements in the systems and other issues and enhance safety. I hope the board will continue to promote its activities by taking the actual conditions of accidents into consideration.

Marine accidents are occasionally caused by tidal currents and other conditions in waters. It is therefore extremely important for the operators of ships to understand tidal currents and other conditions in waters where they sail.

Needless to say, information of such a kind should be obtained from nautical charts and publications. At the end of May 2013, furthermore, the JTSC began to provide the Japan-Marine Accident Risk and Safety Information System on the internet enabling users to gain access to reminders and other information related to marine accident investigation reports, conditions under which accidents occurred, navigation and other matters of concern. The JTSC has recently released the mobile version of the system. I hope that the system will be widely used for the safety of navigation as information on conditions in water, useful for preventing accidents, can be easily obtained from it.

As mentioned above, the JTSC has continued offering a large amount of information for preventing the recurrence of accidents. I hope that the JTSC will continue contributing to the prevention of accidents and reduction of damage and further enhance the safety of transport by stepping up efforts to offer viable information.