

# A Brief Survey of Railway and Aircraft Accidents in Japan and Investigations Thereof

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## A Brief Survey of Railway and Aircraft Accidents in Japan and Investigations Thereof

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#### I. Railway Accidents in Japan and Investigations Thereof

A. The Railway Industry in Brief

Of its domestic passenger transportation services during 1994, the Japanese railway industry held a 33.5% share in terms of the number of passengers and 34.4% in terms of passenger-kilometers. With respect to its freight transportation during the same year, its shares were 1.2% and 4.5%, respectively, in terms of tonnage and ton-kilometers.

In this country, the railway remains a very important means of transportation despite the recent developments in automobile transport. The railway plays an extremely significant role particularly in the day-to-day transportation of commuters to and from greater urban areas, and of passengers on trunk lines between larger cities.

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Year*	All Train Accident	Significant Train Accident	Injured	Killed
1990	1,308	8	549	456
1991	1,241	2	498	451
1992	1,154	8	914	415
1993	1,180	2	670	415
1994	1,073	5	486	383

Table 1: Selected railway accidents statistics in the latest five years

\*Fiscal.

Source: The Railway Bureau of the Ministry of Transport.

As of October 1995, the number of Japanese railway companies totaled 202, of which 142 are passenger railway companies.

Railway accidents in Japan during the last five years are tabulated in Table 1. Most of them happened at railway crossings, with the numbers of railway accident victims likewise occurring largely at crossings.

B. Severe Railway Accidents in Postwar Japan

The railway era in Japan began in 1872, when the first railway line was laid down between Tokyo and Yokohama. As railways expanded, accidents occurred from time to time that left dozens of people dead. The railway symbolized the modernization of industries, but on the other hand, also brought about a large number of tragedies. The greatest railway accident occurred before World War II was an upset of a train that resulted in destruction by fire: It happened in 1940 at the Ajikawaguchi Station, Nishinari Line, JNR (Japanese National Railways), leaving 181 passengers dead and 92 injured. In the chaos immediately after the end of World War II, serious railway accidents took place one after another. In the one-year period following the end of the war on August 15, 1945, railway accidents involving 10 or more people killed occurred as follows:

August 20, 1945 — an accident of collision between trains on Ohmuta line of Nishi Nipphon Railways Company, 40 killed, 83 injured.

August 22, 1945 — an accident in the tunnel on Hisatsu line of JNR, 49 killed, 20 injured.

August 24, 1945 – an accident of head-on collision on Hachiko line of JNR, 105 killed, 67 injured.

September 6, 1945 — an accident of collision at Sasago Sta. on Chuo line of JNR, 60 killed, 91 injured.

November 18, 1945 – an accident of derailment and overturn on Sinyu line of Kobe-Dentetsu Railways, 45 killed, 131 injured.

November 26, 1945 – an accident of derailment on Ibaragi line of Ibaragi Kotsu Railways, 10 killed, 142 injured.

December 6, 1945 – an accident of derailment on Kouya line of Nankai Railways Company, 27 killed, 224 injured.

January 21, 1946 – an accident of collision on line of Fujisanroku-Dentetsu Railways, 26 killed, 82 injured.

January 28, 1946 – an accident of derailment and overturn on Odawara line of Odakyu Railways, 30 killed, 165 injured.

March 14, 1946 – an accident of derailment on Rumoi line of JNR, 17 killed, 97 injured.

July 26, 1946 — an accident of rear-end collision in the tunnel on Tokaido line of JNR, 15 killed, 68 injured.

August 13, 1946 – an accident of derailment and overturn on line of Onomichi Railways Company, 37 killed, 101 injured<sup>3)</sup>.

A year after Japan's surrender, railway accidents started decreasing in number. But serious accidents, each involving at least 10 passengers killed, continued to take place between 1946 and 1963, as follows:

December 19, 1946 – an accident of derailment and overturn on Shinetsu line of JNR, 11 killed, 26 injured.

February 25, 1947 – an accident of derailment and overturn on Hachiko line of JNR, 184 killed, 497 injured.

April 16, 1947 – an accident of train fire on Nara line of Kinki Nippon Railways, 28 killed, 64 injured.

July 1, 1947 – an accident of derailment and overturn on Sanyo line of JNR, 15 killed, 72 injured.

January 5, 1948 – an accident of derailment on Seto line of Nagoya Railways Company, 35 killed, 154 injured.

March 31, 1948 – an accident of rear-end collision on Nara line of Kinki Nippon Railways, 49 killed, 272 injured.

April 24, 1951 – an accident of train fire at Sakuragicho Sta. on Keihin-Tohoku line of JNR, 106 killed, 92 injured.

October 15, 1956 – an accident of collision and derailment on Sangu line of JNR, 40 killed, 96 injured.

December 12, 1960 – an accident of collision at level-crossing on Kishin line of JNR, 10 killed, 57 injured.

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 <sup>&</sup>quot;Simplified table of postwar serious accidents," by Mainichi Shimbun newspaper, Tokyo, 1991.

October 26, 1961 – an accident of derailment on Betsudai line of Ohita-Kotsu Railways, 31 killed, 38 injured.

May 3, 1962 – an accident of triple collision of trains at Mikawajima Sta. on Joban line of JNR, 160 killed, 296 injured.

November 9, 1963 — an accident of triple collision of trains at Tsurumi Sta. on Yokosuka line of JNR, 161 killed, 120 injured<sup>4)</sup>.

After the Yokosuka Line collision accident of 1963, grave railway accidents — each of which involved dozens of deceased victims — ceased to be reported, as the result of improved countermeasures and effective safety precautions taken by the railway companies. Nevertheless, more than 1,000 railway accidents, occurring principally at railway crossings, have been reported annually.

Serious accidents that occurred from 1963 to date are as follows:

March 4, 1971 – an accident of collision at level-crossing on line of Fuji Express Railways, 14 killed, 68 injured.

October 25, 1971 – an accident of head-on collision in the tunnel of Kinki Nippon Railways, 25 killed, 236 injured.

November 6, 1972 – an accident of train fire in Hokuriku tunnel of JNR, 31 killed, 637 injured.

December 28, 1986 – an accident of trains fall from the railway bridge on Sanin line of JNR, 6 killed, 6 injured.

December 5, 1988 - an accident of rear-end collision on Chuo

<sup>4)</sup> Mainichi Shimbun newspaper, op. cit.

line of  $JR^{5)}$  East, 2 killed, 109 injured, first accident after the privatisation of JNR.

May 14, 1991 – an accident of head-on collision on line of Sigaraki-Kogen Railways, 42 killed, 614 injured.

December 27, 1995 – an accident at Mishima Sta. on Shinkansen line of JR Central, a passenger killed. This was the first fatal accident since the inauguration of Shinkansen line in  $1964^{6}$ .

C. Legislation Applicable to Railway Accidents, and Problematic Areas

## C.1 Authorities Controlling Railway Accidents

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The Ministry of Transport is in charge of handling railways accidents in Japan, with the *Ministry of Transport Establishment Law* being the statutory basis thereof. The main text of Article 3 (sub-sub-paragraph 102 of sub-paragraph 2) of the *Ministry of Transport Establishment Law* states that insuring the safety of railways, rail lines, cableways and trolley trains, as well as accidents occurring with respect thereto, are the responsibility of the Ministry of Transport.

Specifically, as provided for in article 47 of the Minister Order on the *Ministry of Transport Establishment Law*, the Operation Safety & Rolling Stocks Division of the Railway Bureau of the Ministry of Transport is responsible for administering matters

<sup>5)</sup> On April 1, 1987, JNR was divided and privatized. The breakup of the public corporation resulted in 11 JR Group companies including JR East.

<sup>6)</sup> Mainichi Shimbun newspaper, op. cit.

relating to vehicle accidents involving railways, etc.

C.2 Duty of Informing Railway Accidents to Minister of Transport

The Railway Industry Law and Railway Accident Reports Regulation thereunder require a railway company to give notice to the Minister of Transport of railway accidents.

The Railway Industry Law reads, in part, as follows:

Article 19. In the event any serious railway accident and/or disaster occurs that is related to a railway as defined by the *Regulation* of the Ministry of Transport, such as a train collision or fire, any legal entity that operates such a railway shall without delay report the accident, the cause thereof and all other matters as may be required by the *Regulation*, to the Minister of Transport.

An outline of the *Regulation* is as follows:

Article 1. Reports required for railway accidents, disasters and cableway accidents by Article 19 of the *Railway Industry Law* shall be prepared in accordance with this *Regulation*.

Article 3 (Paragraph 1). In this *Regulation*, "railway operation accident" shall include the following accidents as defined in each sub-paragraph:

(1) "Train Collision Accident" shall mean an accident where a train collides or makes other contact with another train or vehicle.

(2) "Train Derailment Accident" shall mean an accident where a train is derailed.

(3) "Train Fire Accident" shall mean an accident where a fire breaks out in or on a train [regardless of the original source of the fire].

(4) "Railway Crossing Obstruction Accident" shall mean an accident where a train or vehicle collides or makes contact with a person or vehicle at a railway crossing while passing through the crossing.

(5) "Road Obstruction Accident" shall mean an accident on any road other than a railway crossing, where a train or vehicle collides or makes contact with a person or vehicle on such road.

(6) "Railway Personal Injury Accident" shall mean an accident where death or bodily injury is caused by the operation of a train or vehicle (excluding any death or bodily injury caused by accidents as defined in (1) through (5) above).

(7) "Property Damage Railway Accident" shall mean an accident caused by operation of a train that results in damages to property of not less than \$5 million (excluding any damages caused by accidents as defined in (1) through (6) above).

Article 3 (Paragraph 3). In this *Regulation*, "Operation Obstruction Accident" shall mean an accident where the operation of a train or transport vehicle is obstructed, other than in a Railway Operation Accident.

Article 3 (Paragraph 3). In this *Regulation*, "Disaster" shall mean any damage caused to railway facilities and/or vehicles by a storm, heavy rain, heavy snow, flood, high tide, earthquake, tidal wave or other unusual natural phenomenon; or by large fire, explosion or other significant accident.

Article 4. In the event any of the "railway operation accidents" or "operation obstruction accidents" indicated below occurs, the railway company shall immediately make a summary oral report either in person or by telephone to the Director of the regional

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department of the Ministry of Transport, which report shall include, but is not limited to, the date, time, location and cause of the accident; the emergency measures taken, the plan for restoring services, and the estimated time and date for such restoration. Furthermore, in the event of a railway operation accident as defined in (a), (b) and (d) below, the railway company shall, within one week of the accident date, submit a railway operation accident report to the Director of the regional department of the Ministry of Transport with all drawings and documents deemed necessary to investigate the accident.

(a) An accident involving the death of any passenger.

(b) An accident involving the death of or injury to not less than five passengers.

(c) An accident deemed likely to obstruct operation of a railway for not less than six hours.

(d) An accident deemed to be especially unusual.

Article 4 (Paragraph 2). In the event a railway operation accident occurs, a railway company shall submit a railway operation accident report to the Director of the regional department of the Ministry of Transport by the 10th day of the month following the month in which the accident occurred.

Article 4 (Paragraph 3). In the event of a railway crossing obstruction accident, road obstruction accident or railway personal injury accident, a railway company shall submit a railway operation accident report that includes all such accidents occurring during any one calendar month to the Director of the regional department of the Ministry of Transport, which report shall be made not later than the 10th day of the month following the month in which any of such accidents occurred. Article 4 (Paragraph 4). In the event a railway operation obstruction accident results in the suspension of train operations or causes a delay of not less than 30 minutes in a passenger train schedule, and not less than one hour in the delay of a schedule for trains other than a passenger train, a railway company shall submit an operation obstruction accident report that lists all such accidents occurring during any one calendar month, which report shall be submitted not later than the 10th day of the month following the month in which any such accident occurs.

Article 7. In the event a disaster occurs, a railway company shall promptly inform the Director of the regional department of the Ministry of Transport of that fact and the other information indicated in Article 4 (Paragraph 1); and if damages are greater than ¥10 million shall, within ten days after completion of emergency measures relating to the Disaster, submit a disaster report to the Director of the regional department of the Ministry of Transport in accordance with the requirements described in Article 4 (Paragraph 1).

## C.3 Parties Holding Responsibility and Power for Railway Accident Investigations

Except for penal provisions contained in Japan's Criminal Code, there is no Japanese law providing for the power or manner of investigation of railway accidents. Nor do Japanese laws or ordinances provide for powers held or procedures to be followed by the Minister of Transport for investigations of railway accidents or for use of results thereof (e.g. recommendations to the concerned parties).

If, in the event of a railway accident, there is deemed to exist any

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factual evidence requiring a penalty to be imposed, criminal investigation authorities, such as police and prosecutors, will set out judicial criminal searches in accordance with the Criminal Procedure Law. Searching activities by police are carried out by local police of the respective prefectural unit having jurisdiction over the site of the accident.

C.4 Problematic Areas of Railway Accident Investigations

Investigations of railway accidents by police and prosecutors in Japan are subject to the following limitations:

First, there are tight restrictions under the provisions of judicial criminal procedures as to the release of information on the accident and the search thereof. Information on only areas directly related to criminal liability is disclosed after a criminal sentence is ultimately determined.

In addition, the causes of an accident are looked into by the investigation authorities solely for the purpose of instituting a criminal case. From the viewpoint of precluding recurrences of a railway accident, many important facts are overlooked. This is a serious problem.

Secondly, the staff members of prefectural police forces are not usually experienced and talented professionals when it comes to complex railway technology. For this reason, in the early stage of searching activities, more than a few vital facts are likely to be left out, or oftentimes a lot of extra time spent on specialized studies, with the result that more time is spent for examining the cause of accident than is actually needed. **12** (92)

Thirdly, searching activities by respective local police units are pursued with the aim of criminal prosecution. As a result, the knowledge of and procedures for safety to which approaches are made and acquired in the course of the accident investigation are not kept, on a nationwide basis, on the part of the concerned parties.

The causes of an accident are investigated also by the railway company that caused it. Results of such investigations are very rarely published, however.

In some cases, the Ministry of Transport independently conducts its own investigation of railway accidents, on which basis it renders administrative guidance to the railway company involved. Very seldom, however, are the results of the investigation made generally available to the public. As a matter of fact, if such investigation results are released to the public at all, they are simple and superficial.

It follows, therefore, that it is extremely difficult for those with an interest in railway accidents, including the bereaved families of victims, to gain access to the general details and causes of accidents, lessons revealed about the accidents as the result of investigations, recommendations made by the Ministry of Transport to the parties concerned with the accident, and the like.

## II. Investigation of Aircraft Accidents in Japan

A. Air Passenger Transport Services and Aircraft Accidents in Brief

During 1994, 38.86 million passengers used international air transport facilities in Japan. Of this figure, 81.3% represented those

who departed or arrived at either of the two international airports at Tokyo (Narita) and Kansai (Osaka), the remaining 18.7% being those via other airports. As of July 1996, 57 foreign airliners landed at an airport or airports in Japan. Of Japanese airline companies, four consisting of Japan Air Lines (JAL), All Nippon Airways (ANA), Japan Air System (JAS), and Japan Asia Airways (JAA) have international airliner services. Sixty-one airlines, both Japanese and foreign, are handling the above mentioned 38.86 million passengers.

Japan's domestic air travelers during 1994 totaled 74.55 million. Six airline companies, consisting of JAL, ANA, JAS, Japan Transocean Airline, Air Nippon (ANK), and Japan Air Commuter, have domestic passenger liners. Of the three larger domestic liners, ANA has a share of 48% in the market, JAL 22% and JAS 21%.

Aircraft accidents that occurred in Japan over the past five years are listed in Table 2, with an average of 35.6 accidents occurring annually.

Year*	All Aircraft Accident	Large Aircraft Accident	Injured	Killed
1990	48	3	59	44
1991	44	2	76	23
1992	24	3	13	11
1993	32	4	197	6
1994	30	3	14	277

Table 2: Selected aircraft accidents statistics in the latest five years

\*Fiscal.

Source: The Civil Aviation Bureau of the Ministry of Transport.

B. Aircraft Accident Investigation Commission of Japan in Brief

## B.1 Background of Establishment of Aircraft Accident Investigation Commission

Falling under the jurisdiction of the Ministry of Transport is the Aircraft Accident Investigation Commission, hereinafter referred to as "the Commission," which is an official, technical investigative organ instituted in 1974 for investigation of aircraft accidents. The principal purpose of the Commission is the prevention of aircraft accidents<sup>7</sup>, and the existence of the body is provided for in Article 1 of the Law for Establishment of the Aircraft Accident Investigation Commission, as follows:

"The purpose of this Law is to establish an Aircraft Accident Investigation Commission to properly carry out investigations into the causes of accidents and promote the prevention of aircraft accidents."

Prior to 1974 when the Commission was established, there was no specialized governmental agency for the investigation of aircraft accidents in Japan. Thus, whenever a serious aviation accident took place, the Civil Aviation Bureau of the Ministry of Transport organized an emergency technical investigative team to conduct technical

(iv) Contact with another aircraft.

<sup>7)</sup> An "aircraft accident" is defined in the *Civil Aeronautics Law* as that falling under any one of the following:

<sup>(</sup>i) The fall, collision or fire of an aircraft.

<sup>(</sup>ii) Bodily injury, including death therefrom, or property damage by an aircraft.

<sup>(</sup>iii) Death or missing status of any person while on board an aircraft.

<sup>(</sup>v) Any accident of an aircraft otherwise provided for in a Ministry of Transport ordinance.

studies of the accident. In 1966, grave accidents occurred one after another, as follows:

February 4, 1966 – An ANA B-727 plunged into Tokyo Bay, immediately in front of Haneda Airport, killing all 133 crew members and passengers.

March 4, 1966 – A Canadian Pacific Airline DC-8 crash-landed at Haneda Airport, suffering heavy damage and fire, and killing 64 persons.

March 5, 1966 - A BOAC B-707 broke up in flight in the skies over Mt. Fuji due to turbulence, killing all 124 persons aboard.

November 13, 1966 — An ANA YS-11 crash-landed Matsuyama Airport, killing all 50 crew members and passengers<sup>8)</sup>.

The investigative team organized by the Civil Aviation Bureau concluded that causes of the accidents involving the ANA B-727 and ANA YS-11 were unidentifiable. A number of complaints were brought against such investigative findings:

Firstly, members of the team included parties having some stake in the accident. This gave rise to the question of neutrality and impartiality in the investigation being conducted, followed by severe criticism from the public. In particular, members of the investigative team included supporters of that particular model of aircraft, representatives of the craft's body manufacturer, and users of the airplane involved in the accident. In addition, directors of the Civil Aviation Bureau of the Ministry of Transport were also named as members of the team. Thus, the criticisms were based

<sup>8)</sup> Mainichi Shimbun newspaper, op. cit.

on an influence very likely to have tangibly or intangibly been exerted by the transport authorities themselves.

Secondly, the team was temporary in nature. Unfamiliar with the complex construction of airplanes, the team members, in the early stages, had to start with preliminary studies on construction of and systems incorporated into jet airplanes.

Thirdly, there was no definite consensus of ideas by the team members as to the purpose and means of the proposed accident investigation that was to be accomplished<sup>9)</sup>.

In 1971, furthermore, two serious aircraft accidents occurred:

July 3, 1971 – A Toa Domestic Airlines YS-11 crashed into Mt. Yokotsu near Hakodate Airport. All 68 crew members and passengers were killed.

July 30, 1971 - An in-flight collision took place between an ANA B-727 and a training plane of the Air Self-Defense Forces, resulting in the deaths of all 162 crew members and passengers aboard the ANA B-727.

In consequence of those consecutive air disasters, approaches for the establishment of an ad hoc investigation facility were vigorously made by the Japan Aircraft Pilot Association, among others, to the national government and the Diet. The administration also realized by then that it was not efficient, being delayed in the processing of its task as such to organize a temporary investigative team whenever an incident took place.

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<sup>9)</sup> Kunio YANAGIDA, Kouku Jiko (Aircraft Accidents), Tokyo, Chuo-Koron-Sha, 1975, pp.208-218.

On September 19, 1973, a law was enacted with regard to the establishment of an ad hoc commission specializing in the investigation of aircraft accidents, modeled after the NTSB (National Transportation Safety Board) in the United States.

The newly enforced law, officially known as the "Aircraft Accident Investigation Law," is composed of 26 articles, with titles that follow:

Purpose (Article 1), Establishment (Article 2), Matters Taken Care of (Article 3), Exercise of Function (Article 4), Organization (Article 5), Appointment of Chairman and Members of the Commission (Article 6), Term of Office (Article 7), Removal (Article 8), Meeting (Article 9), Duties (Article 10), Salary (Article 11), Technical Advisers (Article 12), Restriction of Business (Article 13), Secretariat (Article 14), Aircraft Accident Investigation (Article 15), Notification of Occurrence of Aircraft Accident (Article 16), Assistance by Minister of Transport (Article 17), Cooperation of Competent Authorities (Article 18), Hearings Involving Persons Relevant to the Cause of an Accident or Other Persons (Article 19), Reports (Article 20), Recommendation (Article 21), Proposals (Article 22), Delegation to Cabinet Orders (Article 23), Prohibition of Discrimination (Article 24), and Penal Provisions (Articles 25 and 26).

B.2 Aircraft Accident Investigation Commission

Based on the provisions of the *Aircraft Accident Investigation Commission Law*, the nature of the commission is briefly described as follows: The Commission was established under the Ministry of Transport (Article 2), and is responsible for (i) carrying out investigations to discover the cause of aircraftaccidents, (ii) making recommendations for measures to be taken for prevention of aircraft accidents, based on the investigations so made, (iii) proposing to the Minister of Transport measures to be adopted for the prevention of aircraft accidents, and (iv) conducting such investigations and carrying out any necessary research (Article 3). Article 4 of the Law provides that "The chairman and each member of the Commission shall independently make a determination on Commission matters," prescribing the Commission's independence.

In addition, the Law contains provisions with respect to the Chairman and members thereof, among other things, that their appointment as such by the Minister of Transport shall be subject to the consent of both Houses of the Diet, that their capacity is subject to certain strict legal restrictions, that there shall be certain terms of their office, and that their positions are guaranteed.

Article 5 provides for the organization of the Commission, composed of a Chairman and four members, of which two shall be on a part-time basis.

Article 6 provides that, in connection with the appointment of the Chairman and the members, "The Chairman and members of the Commission shall be appointed by the Minister of Transport, with the consent of both Houses of the Diet from among persons possessing scientific and impartial judgment to conduct the matters in the charge of the Commission." The term of the office is three years, as provided for in Article 7.

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The official status, capacity and duties of the Chairman and members are stipulated in Articles 6, 10 and 13, to the following effect: Firstly, an officer or employee of an aircraft or equipment maker, sales company or airline company is prohibited from serving as Chairman or member of the Commission. Secondly, while in office the Chairman and members are also prohibited from joining any political activities. Thirdly, while in office the Chairman and full-time members shall not engage in any profit-making business without specific approval from the Minister of Transport. Fourthly, the Chairman or other members deemed likely to be closely related to the cause of an aviation accident shall not be involved in the investigation thereof.

For reference, the Chairman and members of the Commission are identified as of July 10, 1996, as follows:

Chairman: Kazuyuki TAKEUCHI, former head of National Aerospace Laboratory.

Member, full-time: Tetsuichi KOBAYASHI, former Director, Administration Department, Maritime Safety Agency, Ministry of Transport.

Member, full-time: Tsutomu KAWAI, former Director-General for Engineering Affairs, Civil Aviation Bureau.

Member, part-time: Minoru HIGASHIGUCHI, incumbent Professor, Tokyo Engineering University.

Member, part-time: Yasuyuki AIHARA, incumbent Professor, Tokai University.

Article 12 provides that the Commission may have technical advisers to investigate technical matters. The technical advisers are

appointed by the Minister, from among persons possessing learning and experience, after he has consulted with the Commission. They serve on a part-time basis.

To manage the affairs of the Commission, a secretariat was established in the Commission (Article 14). The secretariat includes, among others, the director-general and aircraft accident investigators. As of July 10, 1996, the Commission has a director general, 18 aircraft accident investigators and 13 other employees.

Article 15 provides that, to the extent necessary for investigation, the Commission is authorized to, among other things, take reports from the parties concerned in the aircraft accident, make on-the-spot inspections, require accident-related property to be produced and take custody of same, issue an order for preservation of same, prohibit the relocation of same, and prohibit unauthorized individuals from gaining access to the accident site.

Before completing an investigation, the Commission gives an opportunity to those persons having an interest in the cause of the accident and, with respect to any commercial passenger aircraft involved in an accident causing public concern, is required to hold a hearing (Article 19).

After completion of the investigation, the Commission is required to prepare an accident report, with any minority opinions also reflected therein, to submit it to the Minister of Transport and to make it public (Article 20).

After completion of the investigation, the Commission may make recommedations to the Minister of Transport as well as proposals to the Minister of Transport or heads of competent authorities, as the case may be, with respect to such measures to be taken as are deemed necessary (Articles 21 and 22). Once any such recommendation is made, the Minister is required to report the Commission of any measures taken, based on the recommendation. With respect to any such proposal, the Minister is not required to so report the Commission of any actions taken. (Articles 21 and 23).

Article 24 prohibits the discharge or other discriminative treatment of any person because of any his compliance with the disposition of the investigation made by the Commission.

Apart from the Aircraft Accident Investigation Commission Establishment Law, there has been in effect an agreement between the Commission and the National Police Agency stipulating that, except for lifesaving purposes, either party that reaches the accident site before the other shall be responsible for the preservation of the scene of the same, which responsibility shall then be taken over by the National Police Agency if it reaches there later, and that an on-the-spot inspection shall be made in the presence of investigators from the Commission and policemen.

The law does not provide for the budget of the Aviation Accident Investigation Commission. Incidentally, for 1996, not counting the payroll of the Commission for the Chairman, Commission members and secretariat employees, ¥49 million was appropriated for investigation and research, traveling, etc.

B.3 Principal Civil Aviation Accidents and Investigations Thereof by the Aircraft Accident Investigation Commission

Principal aircraft accidents investigated by the Commission

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since 1974, when the Commission started operations, are as follows:

#### February 9, 1982 – JAL DC-8 Accident

While making a landing approach at Haneda Airport in Tokyo, a JAL DC-8 from Fukuoka plunged into the sea about 300 meters before the runway, leaving 24 dead and 149 injured. The Commission made a proposal to reviewing the system of health examinations of crew members then in effect.

## August 26, 1982 – Nansei Airline B-737 Accident

A Nansei Airline B-737 from Naha, Okinawa, was badly damaged and burnt up when it overran during landing at Ishigaki Airport, leaving 48 injured. Based on its investigation, the Commission made two proposals: one concerning the escape and rescue of aircraft crew and passengers in cases of emergency, and the other concerning the cockpit voice recorder (CVR).

## March 11, 1983 - Nippon Kinkyori Koku YS-11 Accident

While approaching Nakashibetsu Airport for landing, a Japan Kinkyori Airline YS-11 from Okadama plunged into a growth of trees before the runway, injuring 52 people aboard. The Commission made an investigation of the incident but did not make any proposal or recommendation.

## August 12, 1985 – JAL B-747 Accident

A JAL B-747 bound for Osaka from Tokyo lost contact in mid-flight and was discovered the next morning crashed and burnt up in the mountains, with 520 persons dead and four injured. After the investigation, the Commission made recommendations on securing aircraft airworthiness.

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## April 26, 1994 – China Air Lines A-300 Accident

A China Air Lines A-300 crash-landed at Nagoya Airport and was burnt up, killing 264 passengers and crew members, and severely injuring seven persons. The Commission found that the accident was a result of "multiple causes involving crew members and the body of the aircraft." The Commission submitted one recommendation each to Taiwan, where the airline company was based, and France, where the aircraft manufacturer was based.

The Commission has made quite a few investigations of aircraft accidents, centering around the above mentioned cases. As far as we can ascertain, the Commission has made three recommendations and eight proposals.