
**JUDGMENT OF
TOKYO DISTRICT COURT (November 25, 1999)
ON JAPAN AIRLINES
FLIGHT TIME / DUTY TIME LIMITATIONS**

**MAIN TEXT OF COURT DECISION AND
CHAPTERS RELATED TO SAFETY CONSIDERATIONS IN
THE PART 5 OF THE COURT DECISION**

Attached at the end of this document are translation of
the SUMMARY OF THE REASONS OF COURT JUDGMENT issued by the Court,
FLIGHT TIME DUTY/TIME LIMITATION TABLES and some definitions.

(Prepared by Japan Airlines Flight Crew Union, Japan Airlines Captains Association and Japan Airlines Senior Flight Engineers Union in March 2000. This is an unofficial translation of selected chapters of the Court's judgment delivered in Japanese language. Japan Airlines Flight Crew Union, Japan Airlines Captains Association and Japan Airlines Senior Flight Engineers Union do not assume any responsibilities for errors in translation that may be contained herein.)

Plaintiff: Members of Japan Airlines Flight Crew Union

Defendant: Japan Airlines

Presiding Judge: Saburo Takase

Judge: Chizuko Matsui

Judge: Tomohiko Ueda

Civil Court No. 19 - Tokyo District Court

DECISION BY TOKYO DISTRICT COURT (Excerpt)

(1) MINIMUM CREW ONE LANDING TWO-CREW AIRCRAFT

Tokyo District Court affirms that:

-There is no obligation on the part of the plaintiffs to perform flight duties where scheduled flight time exceeds 9 hours or scheduled duty time exceeds 13 hours within any consecutive 24 hours on two-pilot-configuration aircraft with one scheduled landing without relief crew.

(JAL Work Rule: up to 11 hours flight time /15 hours duty time) ("Flight time" is from "blocks-out" to "blocks-in". "Duty time" is from company show-up to the completion of post flight duty.)

(2) MINIMUM CREW TWO LANDINGS

Tokyo District Court affirms that:

-There is no obligation on the part of the plaintiffs to perform flight duties where scheduled flight time exceeds 8 hours 30 minutes or scheduled duty time exceeds 13 hours within any consecutive 24 hours with two scheduled landings without relief crew. (JAL Work Rule: up to 9 hours 30 minutes flight time and 14 hour duty time)

(3) REGARDING COMPANY'S POLICY OF "PRINCIPLE OF COMPLETION OF FLIGHT DUTY"

Tokyo District Court affirms that:

-There is no obligation on the part of the plaintiffs to complete their flight duty (i.e. to arrive at all scheduled destinations) in such circumstances where flight time limitation or duty time limitation set forth for specific number of landings has already been exceeded, or where such flight time limitation or duty time limitation will be exceeded if the flight crews continue their flight duty unless the pilot-in-command judges, on the basis of consultation with other flight crew members, that safety of flight is not compromised in any way.

(Note: This part is about unscheduled occasions of prolonged flight/duty hours due to weather diversion or departure/arrival delay due to mechanical troubles etc. "To complete flight duty" means "to arrive at all scheduled destination(s) on that scheduled flight assignment.)

(4) DOMESTIC FLIGHTS

Tokyo District Court affirms that:

-Flight assignment for domestic flights shall not exceed 3 consecutive days.

(JAL Work Rule: up to 5 consecutive days)

(5) STAND-BY DUTY FOR INTERNATIONAL FLIGHT

Tokyo District Court affirms that:

-With respect to stand-by duty for international flights, there is no obligation on the part of the plaintiffs to perform flight assignment unless such flight assignment is for either of the two flights specified in advance or a flight that is scheduled to depart between the departure times of the aforementioned two specified flights.

The end of the excerpt of the court ruling

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PART 5. JUDGMENT BY THE COURT (Volume 3)

Chapter 1. Omitted

Chapter 2. Judicial Regulations on Working Hours and other Working Conditions of Flight Crew and the Safety of Operation of Aircraft

1. Standards of Crew Scheduling in the Operations Manual and the Safety of Operation of Aircraft

Although the operation of aircraft involves risks with certain probability, its considerable social benefits seem to make it a commonly supported way of thinking that aircraft is to be operated while taking effective and proper measures to avoid risks if the actualization of such risks could be minimized to such an extent as may be tolerated in the prevailing general understanding of the society.

One of the purposes of the Civil Aeronautics Law of Japan (the “Law”) is to provide for a method for ensuring the safety of the operation of aircraft (Article 1 of the Law), and the Civil Aeronautics Law provides for the requirements that aircraft has to satisfy and the measures to ensure the satisfaction of the same (“Chapter 3: Safety of Aircraft”, Article 10 of the Law and thereafter), the measures to ensure the competence and the physical condition required for airmen (“Chapter 4: Airmen”, Article 22 of the Law and thereafter), the designation and the maintenance of airways, aerodromes and air navigation facilities (“Chapter 5: Airways, Aerodromes and Air Navigation Facilities”), and the requirements that concerned parties must comply with when aircraft is operated (“Chapter 6: Operation of Aircraft”, Article 57 and thereafter). In other words, it can be considered that the Civil Aeronautics Law provides necessary regulations with a premise that possible risks in the operation of aircraft could be kept minimal by the following measures: by ensuring that aircraft has required performance for safe operation and that aircraft is fully serviced, by ensuring conditions in which flight crew can perform their operation service, who have adequate flying competence for the aircraft they operate and necessary knowledge of flight routes as well as departure and arrival routes for airports, who, under normal situation, can maintain good mental and physical conditions, and make

judgments and take appropriate actions for varied conditions, by properly designating and maintaining airways, aerodromes and air navigation facilities and by taking necessary and adequate measures for ensuring safe operation, by examining, at the time of operation, meteorological conditions for any problems and by allowing take-off, landing and flight operation only under meteorological condition which do not pose significant problems to the operation of aircraft and by requiring personnel to comply with all regulations for the operation of aircraft. However, even if all such requirements are fully satisfied, the safety of flight operations cannot be ensured if a flight crew is so fatigued that he is unable to make judgment or take appropriate actions for varied occasions. Therefore, measures need to be taken so that flight crew will not have accumulation of fatigue to such a degree that may cause impediments to the flight operations. In this regard, the Civil Aeronautics Law regulates the “flight time” and working hours other than the period of flight duty of flight crew by providing standards for crew scheduling.

Namely, the Article 68 of the Civil Aeronautics Law provides that “no person who manages an air transport services shall permit any airman to act as a member of the flight crew of an aircraft used in its service unless the crew schedule is made in accordance with the standards specified by Ordinances of the Ministry of Transport”. This crew schedule is governed by the Operations Manual, which needs to be approved by the Minister of Transport. (The Article 104 paragraph 1 of the Civil Aeronautics Law requires that “any scheduled air carrier shall prepare an operation and maintenance manuals that include provisions concerning the operation and maintenance of the aircraft, as specified by Ordinances of the Ministry of Transport and shall obtain an approval from the Minister of Transport”, and the Article 104 paragraph 2 of the Law requires that “the Minister of Transport shall grant approval under the preceding paragraph when he confirms that the operation and maintenance manuals under the said paragraph conform to the technical standards specified by Ordinances of the Ministry of Transport”, and the Article 214 of the Civil Aeronautics Regulation of Japan (the “Regulations”) requires that the flight crew scheduling is a matter which shall be governed by the Operations Manual and the flight crew scheduling shall be made, as a technical standard, in accordance with the standards under the Article 157-(3) of the Regulation.) The Article 157-(3) of the Regulation provides the standards of crew scheduling as follows: the matters to be considered concerning the flight time

limitation of aircraft crew are the type of aircraft and, concerning the pilot, the number of other pilots on board who are engaged in operation at the same time and the presence of aircraft crew on board other than pilots, the state of the route along which the aircraft flies and the distance between aerodromes on the route, the method of flight, whether said aircraft is equipped with appropriate facilities for sleeping or not, and the said Article requires that the flight time of aircraft crew shall be limited at least within a scope of 24 hours, one calendar month, three calendar months and one calendar year, taking above-mentioned matters into account and it requires that the “flight time” and working hours other than the “flight time” of an aircraft crew shall be so distributed that the safety of the operation of said aircraft shall not be adversely affected by fatigue of the aircraft crew. In short, the Civil Aeronautics Law and the Civil Aeronautics Regulation consider it necessary to prevent excessive fatigue from accumulating on flight crew so that risks in the operation of aircraft are controlled to minimal ones, and for that purpose, they further consider that the limitation of the “flight time” as well as the proper distribution of the “flight time” and working hours other than the “flight time” are necessary and therefore they provide for the matters to be taken into account when those periods of service are to be decided.

While each one of the above-mentioned factors for consideration enumerated by the Civil Aeronautics Regulation also relates to whether aircraft in question is two-crew cockpit aircraft or three-crew cockpit aircraft as described below, and whether the flight is operated by single crew complement (no relief crew) or multiple crew complement (augmented) or double crew complement (augmented), and whether it is a long-haul route, since the purpose of the provisions of the Civil Aeronautics Law and the Regulations is to take measures to prevent excessive fatigue from accumulating on flight crew for the purpose of controlling risks in the operation of aircraft to minimal ones, it is especially necessary to give consideration, based upon the results of scientific researches, to the actual conditions of fatigue suffered by flight crews in the cases of single-crew-formation(no relief crew) long-haul flight operations in two-crew cockpit aircraft or in three-crew cockpit aircraft as well as to the influence of multiple-time-zone crossing which is inevitable in long-haul flight operations. And considering the fact that the limitation of the flight time as well as the proper distribution of the flight time and working hours other than the flight time is required, it must be reasonably interpreted that the

Civil Aeronautics Law and the Regulation provide that rest hours before and after the flight time and working hours other than the flight time as well as contents and hours of work performed prior to the flight duty shall be properly prescribed. Since these factors in crew scheduling can affect the levels of flight crew fatigues in varied ways depending on individual and specific circumstances of different flights such as operation schedules, unless a scheduled air carrier formulates crew schedules which reflects actual situations in accordance with individual and specific circumstances of different flights such as operation schedules, it is difficult to prevent a situation where excessive accumulation of crew fatigue compromises the safety of flight operations. Therefore, it has to be interpreted that, for the approval of Operations Manual, the Civil Aeronautics Law does not require the Minister of Transport to fully examine individual and specific circumstances of different flights before he judges whether the crew scheduling standard satisfies required criteria. The Minister of Transport cannot help performing generalized and customary examinations when he approves Operations Manuals, and attention has to be paid to the fact that the above-mentioned standards of crew scheduling provided for in the Civil Aeronautics Law and the Regulation have such inherent limitation. In other words, the Minister of Transport merely performs generalized and perfunctory examination on crew scheduling standards with view to judging whether a scheduled air carrier can be expected to formulate crew schedules, as mentioned above, which will meet the needs of actual circumstances based on individual and specific circumstances of different flights such as operation schedules. Therefore, even if a Operations Manual is approved with acceptable crew scheduling standards, such approval is never intended to mean any assurances that the safety of flight operation will not be compromised under any circumstances as long as the scheduled air carrier follows the approved crew scheduling standards. The assurance of safety of flight operations can be achieved only when a scheduled air carrier performs reasonable crew scheduling in accordance with individual and specific circumstances of different flights such as operation schedules. In this regard, a scheduled air carrier is not allowed to assume that the safety of the flight operation is ensured as long as it follows the standards prescribed in the Operations Manual on the grounds that the Minister of Transport has approved the Operations Manual. It is essential for the scheduled air carriers to formulate crew schedules based on individual and specific circumstances of different flights to meet actual situations with the standard for crew scheduling as a framework

(upper limit) in such a way that crew schedules effectively prevent excessive fatigue from accumulating on flight crew. The scheduled air carriers have to be fully aware that they have the responsibility to reasonably apply more restricting standards than prescribed in the Operations Manual where these standards are too lenient. In this sense, the Civil Aeronautics Law and the Regulation merely set forth the criteria for approval of the Operations Manual with the premise that the scheduled air carrier formulates crew schedules on its own responsibility in accordance with individual and specific circumstances of different flights which conforms to the actual situations so that the safety of the flight operation will not be compromised, and the Civil Aeronautics Law and the Regulation do not require the Minister of Transport to examine the content of the crew schedules in accordance with individual and specific circumstances of different flights such as actual flight schedules. In this sense, the flight crew scheduling standard prescribed in the approved Operations Manual simply carries the significance of a broad framework (upper limit) of limitation of “flight time” as well as of the distribution of the “flight time” and working hours other than the “flight time” with an implication that these limitations must not be exceeded in the worst case. Although it is not a common knowledge, the liability of a scheduled air carrier is regulated by the Convention on the Unification of Certain Rules Relating to the International Carriage by Air (Warsaw Convention), The Hague Protocol and the special contract entered into between the carrier and passengers, and the scheduled air carrier, apart from the regulation by the Civil Aeronautics Civil Aeronautics Law, assumes the obligation of ensuring safety for passenger based on the contract for carriage of passenger. And the scheduled air carrier also assumes the obligation of ensuring safety to flight crews on the basis of employment contract. If a scheduled air carrier simply follows the standard of crew scheduling prescribed in the approved Operations Manual, it can not be acknowledged that the carrier is fulfilling its obligation of ensuring safety. This also endorses the discussion above. With respect to the latter point of this discussion, in order to fulfill the obligation that a scheduled air carrier owes to flight crews on the basis of employment contracts, the scheduled air carrier must formulate crew schedules in accordance with individual and specific circumstances of different flights to meet the needs of actual situations. The situations where a scheduled air carrier formulates crew schedules in accordance with individual and specific circumstances of different flights meeting the needs of actual situations are at the time of

conclusion of work agreements through negotiations between labor and employer, at the time of establishment or alteration of the Work Rules by an employer and at the time of conclusion of labor contract, whereby working hours or other detailed working conditions of a specific job are determined. While we will discuss these points later, the Civil Aeronautics Law and the Civil Aeronautics Regulation merely impose a framework (upper limit) to be referenced, when detailed working conditions in the above-mentioned sense are to be determined, to ensure that such working conditions do not compromise the safety of flight operation within the limitations on the flight time as well as with the proper distribution of the flight time and working hours other than the flight time based upon the points to be considered as mentioned above. The provisions of the Article 157-(3), considering the circumstances as mentioned above, merely provide that the flight time of aircraft crew shall be limited at least within the scope of 24 hours, one calendar month, three calendar months and one calendar year and that the flight time and working hours other than the flight time of an aircraft crew shall be so distributed that the safety of the operation of said aircraft shall not be adversely affected by fatigue of the aircraft crew, and the wording of “at least” is to be construed to indicate the intent of setting forth the minimum acceptable standard.

What we have stated above can be endorsed also from the aspect of the examination of the crew scheduling. That is to say, the crew scheduling shall be governed by the Operations Manual which needs to be approved by the Minister of Transport (the Article 104 of the Civil Aeronautics Law, the Article 214 of the Regulation), and any offenders of the Article 104 paragraph 1 shall be subject to the punishment (the Article 157 paragraph 1 of the Civil Aeronautics Law). However, with respect to the approval of Operations Manuals, while the Article 104 paragraph 2 provides that “the Minister of Transport shall grant approval under the preceding paragraph when he confirms the Operations Manual under the said paragraph conforms to the technical standards specified by Ordinances of the Ministry of Transport”, Article 214 of the Regulation merely requires that the aircraft crew scheduling shall be based on the standards under the Article 157-(3) of the Regulation (further, the Article 213 of the Regulation sets forth the application for approval of the Operations Manual), and no provisions are set forth to require the Minister of Transport, when he approves the Operations Manual, to examine and judge whether the Operations Manual, which is applied for

approval, limits the flight time and distributes the flight time and working hours other than the flight time of an aircraft crew so that the safety of the operation of said aircraft shall not be adversely affected taking into account a variety of facts as mentioned above and making provisions for a variety of circumstances. In this sense, it can be reasonably understood that the Civil Aeronautics Law and the Regulation do not intend to cope with a variety of individual and specific circumstances of different flights in a comprehensive manner but that they merely provide for a broad framework in the above-mentioned meaning. The official notice entitled “The standard concerning the flight time limitation for consecutive 24 hours and the crew complement for the flight crew engaged in international operation by scheduled air carriers” formulated by the Director-General, Engineering Department, Civil Aviation Bureau of the Ministry of Transport (enactment: Kukou No. 577, June 26, 1990, Partial Amendment: Kukou No. 204, March 31, 1992, Partial Amendment: Kukou No. 985, December 21, 1992, the Defendant’s evidences No. 87 and 88) sets forth detailed technical standards regarding the above-mentioned subject(flight time limitations and crew complements) with specific numbers based upon the opinions of scholars and experts with professional and technical knowledge. However, since it cannot be said that the content of the said standards took into account a variety of individual and specific circumstances of different flights as mentioned above making provisions for all different kinds of situations, it is reasonable to interpret as mentioned above.

2. Working Hours and Other Working Condition of Flight Crew and Safety

What we have discussed in 1 above concerns the assurance of safety of the operation of aircraft, and we can separate it for the time being from the working condition of flight crew. That is to say, the intent of the Civil Aeronautics Law and the Civil Aeronautics Regulation in regulating flight crew scheduling to prevent fatigue is to ensure the safety of the flight operations, and its purpose is different from that of the regulation on the working hours prescribed in the Labor Standards Law which provides for the minimum standards of working condition to meet the needs of workers to live wholesome life. However, when the working conditions are to be determined, the safety of life and body must also be ensured, and this point can also be regarded as the purpose of determination of working conditions. Determining the working conditions to ensure the safety of life and body of flight

crew means the same thing as formulation of crew schedules to ensure the safety of flight operations. As we have stated earlier, the Civil Aeronautics Law and the Regulation merely provide for the broad framework (upper limits) in the above-mentioned meaning. Therefore, even if an Operations Manual is approved, it simply depends on individual and specific circumstances of different flights whether or not it can be said that the crew scheduling standards in the Operations Manual does not cause reasonable doubts to the safety of the flight operations from the standpoint of fatigue of flight crew, and the scheduled air carrier must formulate and implement crew schedules based on individual and specific circumstances of different flights conforming to actual circumstances for the purpose of ensuring the safety of flight operations. This must be indeed carried out at the stage of establishing working conditions and the issuance of work orders. Naturally, as a principle, crew schedules as regulation of working hours can not be considered rational simply on the grounds that the schedules are made in accordance with the standards of the approved Operations Manual, and it is reasonable to interpret that the working conditions and detailed content of service of flight crew need to be determined by labor agreements, company work rules and labor contracts based fully upon the individual and specific circumstances of different flights so as not to cause adverse effect on the safety of life and body of flight crew due to their fatigue. Since flight crew, in accordance with employer's general and/or specific work order pursuant to the labor contract, assumes the obligation to be engaged in the operations of aircraft, to take off from designated departure point and land in designated destination point. Therefore, if the employer orders a flight crew to take the duty on aircraft which operates on a specific route, that flight crew assumes, during the time from taking off from the departure point to arriving at the destination point, the obligation of boarding on the aircraft designated by employer, of engaging in the flight operation of the aircraft and of completing the operation in accordance with the operation schedule made by the employer. To enable the flight crew to perform this obligation in proper manner, apart from ensuring such external and physical factors as the confirmation of acceptable meteorological conditions, performance of aircraft and well-maintained aircraft, it is essential to make such an arrangement that a flight crewmember with adequate flying skill and knowledge are able to maintain his/her mental and physical conditions at sound state in which he/she can make appropriate judgments and take appropriate actions as situation requires during flight

operations. What is distinctive here is that mental and physical conditions of flight crew and his flying skill and competence in judgment affect not only the safety of flight operation but also the safety of the flight crew himself indeed. Therefore, with respect to the mental and physical conditions of flight crew, while it is necessary to perform thorough medical examinations to confirm his qualification so that the safety of flight operations is not adversely affected, there are further requirements. It is further required to take preventive measures to avoid such a situation where a flight crew is so excessively fatigued that his ability of mental concentration and competence in judgment suffer degradation to a point where he can not take proper actions at the time of landing or in the cases of sudden change of circumstances.

A flight crew obviously has to make his own efforts to maintain his mental and physical condition by such measures as the adjustment of sleeping hours etc. to prepare for flight duties. However, since it is the employer who makes flight timetables and crew schedules, the scope of the personal efforts by flight crew is naturally limited. Therefore the employer is required to establish reasonable limitations on the flight time and the working hours other than the flight time as well as on other working conditions in order that the flight duty hours are not excessively long and that fatigue suffered by flight crew during flight operation, together with fatigue accumulated through a work performed prior to the flight operation, will not adversely affect the safety of flight operation. The employer assumes the obligation to operate aircraft which is sufficiently maintained for safe operation, and to obtain and furnish to flight crew appropriate information relating to airways, aerodrome and meteorological condition etc., which are indispensable for the safe operation. In addition, it is reasonable to interpret that the employer assumes the obligation to set up crew complement, recess and nap period of flight crew so that he can perform his operation service safely, and thus to ensure the safety of life and body of flight crew by giving consideration to the operation schedule or crew schedules which he controls and decides, the departure time (block out time) and arrival time (block in time) of aircraft, length of flight time (block-out to block-in time), time zone differences, degree of fatigue which flight crew will have during the specific flight operation etc. When we consider based upon these elements, it is reasonable to interpret as mentioned above. Therefore, the provisions of the Work Rules which incorporate equivalent of crew-scheduling standards prescribed in Operations Manual as standards of

labor working condition can not be considered to be rational standards suitable to ensure the safety of life and body of flight crews on sole grounds that the Operations Manual has been approved by the Minister. Therefore, it is reasonable to interpret that the Court may examine and judge whether the provisions of the Work Rules are appropriate ones that can ensure the safety of life and body of flight crews.

The defendant argues that the safety standards for flight operation are intended to ensure the level of safety which are acceptable to the general public in the light of the prevailing views in the society based on the prevalent knowledge, and that it defines a upper limit in a sense that there are risks that fatigue suffered by flight crew might adversely affect the safety of flight if the volume or density of work exceeds certain amount and that the full compliance with such safety standards cannot fully prevent occurrence of accidents. These arguments are correct. And as acknowledged also by the defendant, flight time and duty time concern the safety of the flight operation in a sense that that the length of flight time and duty time may or may not cause such excessive fatigue that can adversely affect the safety of the operation. For that reason, effective and proper measures must be taken for the purpose of preventing accidents based upon the studies of how individual and specific circumstances of different flight lead to an accident. If stringent flight time and duty time limitations leave flight crew with a good amount of stamina or strength to spare, then there will be a safety margin (degree of allowance for safety) which will enable flight crews to ensure, with his own efforts, that safety of operation is not compromised. However, if flight time/duty time limitations are made less and less stringent with increased hours of flight duty, the flight crews will have less and less stamina or strength to spare, and the safety margin (degree of allowance for safety) will become smaller. Depending on the degree of easing of flight time/duty time limitations, there may be occasions where personal efforts by flight crew fall short, and events affecting the safety of flight may possibly take place. It must be pointed out that the defendant shall be responsible for formulating crew schedules giving consideration to the individual and detailed circumstances of flights in such a way that those crew schedules will meet the need of actual situations and that the defendant shall be responsible for ensuring adequate safety margin (the degree of allowance for safety) by creating such crew schedules that will effectively prevent accumulation of excessive fatigue on flight crews. This must be carried out at the time of

establishing the labor working conditions and detailed content of flight duties. It is reasonable to interpret that the working conditions and detailed content of flight duty of flight crew must be determined by labor agreement, work rules and labor contract based fully upon the consideration of individual and detailed circumstances of flights in such a way that the crew fatigue will not compromise the safety of life and body of flight crews. The reason is that it is rational to interpret that the employer assumes the obligation to provide flight crews with well-maintained aircraft for safe operation, and further to determine crew complement, periods of rest/sleep in flight based on considerations of flight time needed to fly specific route by specific aircraft, time zone differences, degree of fatigue which flight crew will have during the operation etc. so that the crews can perform their flight operation safely, and thus to ensure the safety of life and body of flight crews. Therefore, it is reasonable to interpret that, if an employer is to establish standards of working conditions of flight crew by means of work rules, the rationality of such work rules can be acknowledged only when the standard of working conditions will not compromise the safety of life and body of flight crews. The defendant claims that the working standards prescribed in the Work Rules of this lawsuit should be examined from the viewpoint whether it has the social suitability which is a criteria of rationality as a requirement for disadvantageous alteration of work rules. This claim cannot be admitted.

3. Rationality of Provisions of the Work Rules which prescribes the Working Conditions of Flight Crew and Rationality of Disadvantageous Alteration of Work Rules

The business of transporting passengers by aircraft is subject to the Labor Standards Law (Article 8 subparagraph 4 of said Law) and is subject to the limitation of working hours prescribed under the Article 32 of said Law. However, with respect to this limitation, pursuant to the Article 32-(2) of said Law, in the event that an employer stipulates in Work Rules or equivalent that the working hours per week during a fixed period of not more than one month will not exceed 40 hours, the employer may have a worker work in excess of the working hours under the Article 32 paragraph 2 of said Law on specified day or days and, with respect to rest under the Article 34 paragraph 1 of said Law, the employer may give no rest period pursuant to the Article 32 of the Enforcement Ordinances for the Labor Standards Law. In this sense, the regulations under the Labor Standards Law remains

lenient, and the employer may establish different standards by mean of Work Rules etc. in accordance with the above-mentioned Articles, and, if the flight time, working hours other than the flight time and the standards of other working conditions are set forth in accordance with the standard of crew scheduling prescribed in the approved Operations Manual, there is no violation of compulsory provisions. However, as mentioned above, working hours and other working conditions as well as detailed content of service of flight crew need to be determined by labor agreement, company work rules and labor contract based fully upon the consideration of individual and specific circumstances of different flights so that crew fatigue will not adverse affect the safety of life and body of flight crews. If working hours and the standard of other working conditions of flight crew are determined by means of labor agreement and if they are identical to or within the scope of the standard of crew scheduling prescribed in the approved Operations Manual, the violation of public order by said labor agreement is hardly imagined, and it can be supposed that the reasonable content has been agreed upon based on an equal basis between labor and management taking into account individual and specific circumstances of different flights. If working hours and other working conditions of flight crew are determined by individual labor contract, the case of violation against public order can be imagined, but if it is not the case, it can be supposed in a similar manner. On the contrary, in the event that the employer makes or alters Work Rules and unilaterally determines the flight time, working hours other than the flight time and the standard of other working conditions without concluding labor agreement or individual labor contract, whether or not reasonable limitation is established on the flight time, working hours other than the flight time and other working conditions depends upon whether the judgment of the employer (scheduled air carrier) is reasonable or not.

If the employer establishes Work Rules and defines the flight time and the standard of other working conditions of flight crew, Work Rules are binding upon a flight crew who does not agree to such Work Rules so long as their provisions are reasonable (22 MINSHU 13-3459, Grand Bench, Supreme Court, December 25, 1968). To affirm the rationality of the Work Rules, reasonable limitations has to be provided on the flight time and working hours other than flight time and other standards of working conditions to ensure that the time period for the flight operation is not excessively long and that fatigues accumulated in the flight duty together with fatigue accumulated through works performed

prior to the flight duty will not compromise the safety of flight operations. The sole fact that the standards of Work Rules are within the scope of flight time/duty time limitations prescribed in the standards of crew scheduling in the Operations Manual approved under the Civil Aeronautics Law and the Regulation does not warrant the rationality of said Work Rules. With respect to the case of the defendant, since the plaintiff's evidence No. 4 shows that Work Rules of this case have a provision which is prescribed under the Article 32-(2) paragraph 1 of the Labor Standards Law, there is no violation of the said Law. However, particularly when the employer sets up the flight time exceeding 8 hours and if he decides to give no rest period (Article 32 of Enforcement Ordinance of the Labor Standards Law), he must ensure that the flight time is not excessively long with due consideration to individual and specific circumstances of different flights taking into account the actual situations of specific flights. And whether or not the flight time falls within the standards of crew scheduling in the Operations Manual approved by the Minister of Transport does not have any relevance in this context.

In this regard, if the employer (scheduled air carrier) establishes or amends the standards of flight time and working hours other than the flight time and the standard of other working conditions of flight crew by means of making or altering Work Rules, such Work Rules will permit the employer to issue work order to the maximum allowable extent within such Work Rules, and this directly concerns the safety of the flight operations. Therefore, in order for the rationality of said Work Rules to be acknowledged, it is necessary that the reasonable limitations are established on the flight time and working hours other than the flight time and the standard of other working condition in order that the flight duty hours are not excessively long and that fatigue suffered by flight crew during flight operation together with fatigue accumulated through a work performed prior to the flight operation will not compromise the safety of flight operation. A sole fact that the provisions of Work Rules are within the scope of crew scheduling standards contained in approved Operations Manual do not warrant the rationality of said Work Rules. The rationality of establishing or altering said Work Rules can only be acknowledged when there are reasonable grounds to prove that the flight operation for the flight time specified in the Work Rules will not, taking into account the fatigues on a flight crew accumulated through works done prior to the flight duty, will not pose any problem to the safety of flight operations in actual circumstances. As mentioned earlier, a commonly supported way of thinking is that aircraft is

to be operated while taking effective and proper measures to avoid risks if the actualization of such risks could be minimized to such an extent as may be tolerated in the prevailing general understanding of the society. Therefore, the Work Rules can be considered to have reasonable grounds if the provisions are judged to be rational from scientific, professional and technical points of view as well as from the review of past experiences. In order to verify this, it has to be studied and judged whether the provisions of said Work Rules are rational from the scientific, professional or technical points of view as the standards governing actual works involved, whether they are not inferior to those of other airlines (including those of foreign countries) and are not substandard, and whether they are free from any particular problem in the light of past operation histories and past cases of accidents. However, in recent years, while the airline industry has no other choice but to adopt the 24-hour-operation order to meet social and economic demands, technical advancement of aircraft has enabled a prolonged hours of continuous flight with less number of minimum flight crews than in the conventional types of aircraft. Since the central challenge is the establishment of new standards, it must be acknowledged that in fact a situation has emerged where the application of conventional standard no longer is satisfactory.

Then, in the cases where conventional standards are exceeded and where there are adequate assurance from scientific, technical and professional points of view that the content of the Work Rules is reasonable enough to govern the specific work involved, it can be concluded that such operation is based on reasonable grounds provided that the employer (scheduled air carrier operator), after adequately evaluating the safety of operation in advance, takes effective and appropriate measures against risks/hazards/dangers, and that the employer (scheduled air carrier operator) decides the content in such a way that it is within a reasonable extent within which the safety of flight is not compromised in any way, and that after implementing the Work Rules, the employer (scheduled air carrier operator) establishes a feed-back system by which the operator gathers necessary information and make assessment of the safety and take appropriate corrective actions whenever there is any concern, and such feed-back system is determined to be functioning effectively.

To affirm the rationality of the cases where conventional standards are exceeded, evaluation and judgment have to be made from the following points of view:

- To what extent the employer (scheduled air carrier operator), before establishing the Work Rules, took into consideration the separate and specific circumstances of different flights as described above, and upon what grounds the employer decided the content of the Work Rules.
- The actual situations of flight operations based on the implemented Work Rules.
- Whether a feed-back system is established and maintained in such a way that the actual situation of flight operations conducted based on the Work Rules is evaluated, post-flight appraisal of the safety of flight is performed, and appropriate corrective actions are taken whenever there is any doubt/concern/problem.
- Whether such feedback system is determined to be functioning effectively.

As mentioned above, in the cases where working hours and other working conditions of flight crew have been established by labor agreement, it can be surmised that the reasonable content has been agreed upon between labor and management on equal basis taking into account individual and specific circumstances of different flights, and therefore, if Work Rules in question are established or altered after work agreements are concluded between the employer and employees where the employer thoroughly negotiates with a labor union and the union deems the work agreements acceptable, it can be surmised that the content of Work Rules in question are reasonable. If this is the case, then it can be regarded as indirect evidence to endorse that an employer has made above-mentioned study in advance in a sufficient manner.

As mentioned earlier, in order to determine whether the employer has established or altered Work Rules on reasonable grounds or not, judgments have to be made to determine whether the Work Rules are reasonable from scientific, technical and professional points of view, whether they are not inferior if compared with those of other airlines (including those of foreign countries), whether they satisfy commonly accepted standards considering conventional practices, whether there are assurances that provisions of Work Rules in question are rational from scientific, professional or technical points of view as the standards governing specific works involved, and whether the employer (scheduled air carrier) in formulating the Work Rules in question, is fully aware of foreseeable risks, and gave adequate considerations to individual and specific circumstances of different flights and decided the provisions of Work Rules within a reasonable scope so as to prevent these risks from actualizing

based on grounds which can be deemed reasonable, and whether after implementation of the Work Rules risks are judged to be adequately controlled in the actual operations, and whether a feed-back system is established and maintained in such a way that the actual situation of flight operations conducted on the basis of the Work Rules are evaluated, post-flight appraisal of the safety of flight is performed, and appropriate corrective actions are taken whenever there is any doubt/concern/problem, and whether such feed-back system is determined to be functioning effectively.

With respect to the alteration of Work Rules, the requirements and criteria for the disadvantageous alterations of Work Rules have been manifested by past rulings of the Supreme Court (22 MINSHU 13-3459, Grand Bench, Supreme Court, December 25, 1968; 130 MINSHU 505, 2nd Bench, Supreme Court, November 25, 1983; 42 MINSHU 2-60, 3rd Bench, Supreme Court, February 16, 1988; 165 MINSHU 185, 2nd Bench, Supreme Court, July 13, 1992; 50 MINSHU 4-1008, 3rd Bench, Supreme Court, March 26, 1996; 51 MINSHU 2-705, 2nd Bench, Supreme Court, February 28, 1997). In accordance with the ruling at 2nd Bench of the Supreme Court, February 28, 1997 (Dai-Yon Bank Case), judgments as to whether provisions in question have the sufficient rationality to justify its legal norm in the relations between labor and management after due consideration is given to the disadvantages to be suffered by plaintiffs through the alteration of Work Rules have to be made from the view points of both the necessity of alteration and the rationality of provisions of Work Rules after such alteration. If the provisions of the changed work rule is such that the hours of service of flight duty is so excessively long as to be detrimental to the safety of flight, the rationality of the content of the Work Rules is disaffirmed. Furthermore, since more than permissible amount of risk to the safety of life and body of flight crew exists, the degree of detriments to the interest of the employees is extraordinarily large. Therefore, no rationality exists to affirm the judicially binding norm in the implemented Work Rules even if such changes had been highly necessary, and it has to be concluded that the changed Work Rules does not have legally binding norm for the employees who are opposed to the changes of the work rules.

Therefore, irrespective of whether it is in the case of establishing or altering Work Rules, the rationality of establishing or altering Work Rules is to be acknowledged only when it is determined through comprehensive studies from the above viewpoints and in the light of the distinctive

characteristics of flight operation that the engagement in the flight duty for the flight time specified in the Work Rules will not, burdened with fatigues to be accumulated on a flight crew through works performed prior to the flight operation, will not pose any problem in actual flight operation, and that reasonable limitations are provided on the flight time and working hours other than flight time and other standards of working conditions to ensure that the time period of flight duty is not excessively long and that the safety of flight is not compromised by fatigue accumulated in the flight duty and through works performed prior to the flight duty.

In the following chapters, we will examine the rationality of the change of Work Rules in each specific areas of working standards the plaintiffs are contending from the following points of view;

- Whether the Work Rules under this lawsuit is rational for the purpose of governing the specific works involved from scientific, technical and professional points of view.
- Whether they are not inferior to those of other airlines (including airlines of foreign countries) and they are compatible with prevailing standards.
- Whether they are free from any deficiency in the light of past experiences and past records of accidents.
- To what extent the defendant, before establishing the Work Rules, took into consideration the separate and specific circumstances of different flights as described above, and upon what grounds the employer decided the content of the Work Rules.
- How are the actual situations of flight operations based on the implemented Work Rules.
- Whether a feed-back system is established and maintained in such a way that the actual situation of flight operations conducted based on the Work Rules is evaluated, post-flight appraisal of the safety of flight is performed, and appropriate corrective actions are taken whenever there is any concern, and whether such feed-back system is determined to be functioning effectively.
- How was the process of the negotiation between the defendant and the union.

With respect to the limitation of the flight time and duty time etc., since the provisions of Work Rules of this case after the change concerns the safety of flight operation, we will simply study the rationality of provisions of Work Rules of this case after alteration from the viewpoint as to whether reasonable limitation has been established on the flight time and working hours other than the flight time and other

working standard to avoid the situation in which the safety of operation is compromised. If the rationality of provisions of Work Rules of this case after alteration can be acknowledged, we will further study whether or not the changes are disadvantageous to the plaintiffs or not, and if they are determined to be disadvantageous to the plaintiffs, we will determine, from the standpoints of both the necessity of change and the rationality of provisions per se after the change, whether a provisions in question, with due consideration to the disadvantage to be suffered by the plaintiffs, have the rationality to justify a legal norm in the relationship between the labor and the management. Further, with respect to other working standards, we will examine whether or not they are disadvantageous to the plaintiff, and if they are determined to be disadvantageous, we will determine, from points of view of both the necessity of alteration and the rationality of provisions per se after the alteration, whether provisions in question, with due consideration to the disadvantage of alteration, have the rationality to justify legal norm in the relationship between the labor and the management.

Chapter 3-17 Omitted

Chapter 18. The Rationality of Provisions of the Work Rules concerning Limitation of “Flight Time” and “Duty Time” for Operation of Two-Crew Cockpit Aircraft with One Scheduled Landing without Relief Crew

1. The Rationality of relevant provisions in the Work Rules under this lawsuit from scientific, technical and professional points of view

Based on the result of study from scientific, technical and professional points of view that we have already acknowledged, we will study the rationality of provisions of Work Rules under this lawsuit as follows:

(1) With the advent of advanced technology aircraft, endurance of aircraft has increased, flight duty period of flight crew has been prolonged, and long-range flights, involving considerable time differences and crossing multiple time zones within a short time, are being operated. Such long-range flight operation brings about disruption of circadian rhythm and sleep disorder (sleep deficit) on flight

crews. Flight operated in different time zone of a day will have a different influence on sleep deficit and fatigue. Flight crews are engaged in a prolonged flight duty in a cockpit with constant background noise, dim lighting and automated flight equipment etc. Although the workload during cruise period is not so heavy, as this last for a extended period of time, the level of performance and alertness of flight crew decline as time progresses. And since the problem of complacency, which are unique to long-range flights, arises, having flight crew engaged in long-range flights without giving rest period in flight induces a risk of serious errors, by reasons of fatigue, sleepiness or sleep loss, such as deviations from (planned) altitude, erroneous fuel calculation, flight track deviation, landing without clearance or landing on incorrect runways. As the number of long-range flights increases and flight crews repeatedly perform this kind of flight, sleep deficit and fatigue may accumulate resulting in the decline in the performance of flight crews and thus the safety of flight may be compromised.

(2) According to a research titled “Operation of Long-Range Flight - A Summary of Recent Studies” by DLR-German Institute of Aerospace Medicine Linder Hohe, the following result was turned out:

- With respect to an approximately 12 hours flight from Hamburg to Los Angeles (U.S. West Coast) flight crew did not feel so much fatigue until 9 hours after departure and were fully awoken, and the work competency was within a scope which was not dangerous;
- From 10 hours after departure, flight crew were generally in a condition of being slightly tired, and from 11 hours after departure, some flight crew felt substantial fatigue;
- With respect to the return flight of approximately 12 hours flight from Los Angeles to Hamburg, flight crew generally were in a tired condition from 5 hours after departure, and from 9 hours after departure, they were in a substantial fatigue;

The above-mentioned result was turned out. This is a result of westbound flight, and the result would be different if the departure was at different time of a day. It is noteworthy that flight crew were in a slightly tired condition from 9 to 10 hours after departure, and that in another 2 hours some of them felt considerable fatigue. Based on this result, this research points as follows:

- The standard “flight time” of two-crew cockpit aircraft without relief crew(s) must not exceed 10 hours.
- The extension of this standard working hours should only be exceptionally permitted considering such

factors as the length of working hours to be extended, time of day of landing or frequency of flight per week;

- Particularly, during the flight duty which includes night flight, there is a possibility in which alertness and work competency of flight crew would decline due to the influence of sleep deficit or circadian rhythms, and it points out that the operation of long-haul flights performed by two-crew cockpit aircraft without relief crew(s) will lead to serious deterioration of performance of flight crew.

(3) According to a technical memorandum of U.S. National Aeronautics and Space Administration (NASA) titled "Principles and Guidelines for Duty and Rest Scheduling in Commercial Aviation", it is recommended that cumulative flight duty period should desirably not exceed 10 hours within a 24-hours period, that it can be extended to 12 hours within a 24-hours period and that extension of another 2 hours may be exceptionally permitted. The data indicate that performance-impairing fatigue does increase if flight time exceeds 12 hours and it could reduce safety margin (degree of allowance for safety). Flight duty period hereunder means the period of time that begins when a crewmember is required to report for a duty period (company show-up) that includes a flight duty and ends at the arrival time (block-in time) of the final flight segment. This period includes work for the preparation of flight (pre-flight work) and flight time. In the case of the Defendant, the "flight time" is calculated based on block time (block-out to block-in), and the show-up time of flight crew for international flights is fixed at 1 hour 45 minutes or 1 hour 30 minutes prior to the departure time (this fact is verified by the Plaintiff's evidences No. 3 and 4), and the flight duty period (NASA) is "flight time"(block to block) plus 1 hour 45 minutes or 1 hour 30 minutes. Therefore, according to NASA's recommendation, "flight time"(block to block) of the Defendant should be limited, in principle, to 8 hours 15 minutes to 8 hours 30 minutes, or if extended, to 10 hours 15 minutes to 10 hours 30 minutes. And since it is desirable that the standard flight time (block to block) shall not be scheduled in excess of 8 hours 30 minutes, if the flight time is to be extended to the above-mentioned maximum, additional rest period must be given to compensate the extended portion of the duty period. While the above-mentioned recommendation by NASA incorporates safety margins (degree of allowance for safety), the longer the flight duty is scheduled beyond recommendation, the smaller the safety margin (degree of allowance for safety) will become.

(4) The results of scientific, professional/technological study are as mentioned above and they are summarized into following 2 points:

-1- Since having flight crew engaged in long-range flights without giving rest period in flight induces a risk of serious errors, by reasons of fatigue, sleepiness or sleep loss, such as deviations from (planned) altitude, erroneous fuel calculation, track deviation, landing without clearance or landing on incorrect runways, the flight time needs to be limited to ensure safety margin (degree of allowance for safety). No evidence has been submitted against this finding.

-2- With respect to the continuous “flight time” in the case of having flight crew engaged in long-range flights without in-flight rest period, it is reasonable to conclude that the standard scheduled “flight time” should not exceed 9 hours to ensure dependable safety margin (degree of allowance for safety), or 10 hours for modest safety margin. If normal scheduled “flight time” is shorter than this recommendation, the safety margin (the degree of allowance for safety) will increase. If schedule “flight time” is longer than this recommendation, the safety margin will be smaller.

Since consideration has to be given to the necessity and the economy of the flight operations, it is not practical to seek infinitely larger safety margin (degree of allowance for safety). While we abide by the premise that the safety of flight must not be compromised, we have to seek to determine the length of “flight time” which will incorporate necessary safety margin while consideration is duly given to the necessity and the economy of the flight operation. It can be said that NASA’s recommendation and the research titled “Operation of Long-Range Flight - A Summary of Recent Studies” by DLR-German Institute of Aerospace Medicine Linder Hohe are intended for similar purposes to the one mentioned above. As we review the results of these studies in a comprehensive manner, we can understand that it is deemed reasonable that the standard flight time must not be scheduled in excess of approximately 9 to 10 hours.

On the other hand, the Study Committee (JAPA-Japan Aircraft Pilot Association) proposed 12 hours as the limitation of “flight time” (block-out to block-in). It can be surmised that the Study Committee judged with premise that safety margin must be incorporated into flight time limitations that the limitation of 12 hours flight time poses no problem to the safety of flight operation. With these background, in the following section we will first examine the proposal made by the Study Committee

as mentioned above, then proceed to examine whether we should adopt NASA's recommendation and the results of research titled "Operation of Long-Range Flight - A Summary of Recent Studies" by DLR-German Institute of Aerospace Medicine Linder Hohe or the proposal made by the Study Committee as mentioned above as reasonable recommendation.

(5) The Study Committee (JAPA) has judged, as mentioned above, that the amount of workload of captain and copilot of new generation two-crew cockpit aircraft is equal to or less than the workload of captain and copilot of three-crew cockpit aircraft, and based on this judgment, it has concluded that the limitation of "flight time" of new generation two-crew cockpit aircraft may well be the same as that of three-crew cockpit aircraft. The reason why the Study Committee made such a judgment is that they considered it a premise that the level of workload had substantial influence on fatigue as mentioned above.

However, as mentioned earlier, it has been pointed out that having flight crew engaged in long-range flights without period of rest induces risks of serious errors, by reasons of fatigue, sleepiness or sleep loss, such as deviations from (planned) altitude, erroneous fuel calculation, track deviation, landing without clearance or landing on incorrect runways etc. Before we study the issue of the flight time limitation of two-crew cockpit aircraft, firstly we need to squarely address those problems and study how the problems can be remedied. That is to say, with emergence of newer aircraft with extended flight range, central to the issue of the limitation of "flight time" of three-crew cockpit aircraft and two-crew cockpit aircraft what should be the maximum length of flight time for prolonged flight without relief crews (single crew complement - no relief crew). Therefore, the following points must be addressed:

-1- Can the flight time limitation of three-crew cockpit aircraft without relief crew be considered reasonable in the light of past operation records or experiences? (It is feared that long hours of non-stop flight without relief crew can adversely affect the safety of flight operation because of the accumulation of fatigue on flight crew. Then what kinds of problems are there? How such problems were solved or still remain unsolved?)

-2- Is a long-range flight of two-crew aircraft (without relief crew) any different from that of three-crew aircraft? What are the factors to be considered? (Is the difference in workload the sole factor

to be considered?)

The amount of workload can certainly be considered to have substantial effects on fatigue, and for that reason, the difference of workload (between two-crew and three crew configuration aircraft) must be examined. However, as mentioned earlier, with newer aircrafts with more advanced technology, the flight range and the flight time for flight crew has increased considerably and more flights involve crossing of multiple time zones. With this background, the following points have been raised as factors to be addressed:

- On what part of a day is a flight operated?;
- How does multiple time zone crossing affect flight crews?
- The problem of complacency, which is unique to long range operation, is anticipated to become more serious with reduced workload. How should this issue be properly addressed?

In this respect, apart from the need for the comparison of workload, we consider it essential to seriously address the problem of flight crew sleepiness and fatigue which are caused by long period of low workload in extended range flights with multiple time zone crossing. However, it can be surmised that the Study Committee (JAPA) did not squarely examine the problems under the operation of long-range flight without relief crew, and they placed the implementation of two-crew operation without relief crew as a given premise on the basis of past records/experiences of long-range operations of three-crew aircraft without relief crew. The Study Committee then judged that, although the quantitative relationship between workload and fatigue had not been established, the amount of workload could exert great influence on fatigue, and they carried out a comparison of the degree of fatigue and workload with respect to new generation two-crew cockpit aircraft and conventional three-crew cockpit aircraft. That is to say, the point of study carried out by the Study Committee lay in this comparison (of workload). The research of degree of fatigue as mentioned earlier was also intended for the principal objective of the comparison between the two (types of aircraft), and it is surmised that the study carried out by the Study Committee (JAPA) did not squarely address the issue of sleepiness and fatigue which arise, as the result of the work with a long period of low workload, on flight crews engaged in long range flights with substantial time zone change. In short, the Study Committee (JAPA) did not fully study, nor give sufficient consideration to, the problems inherent in

long-range flight operations which had emerged from experiences of long-range flight operation by three-crew cockpit aircraft without relief crew, and the court cannot help but point out that they drew conclusion solely by the comparison between new generation two-crew cockpit aircraft and conventional three-crew cockpit aircraft.

While we will deal with past records/experiences of long-range flight operations of three-crew cockpit aircraft without relief crew in section 2, we hereby examine, bearing above issues in mind, whether past records/experiences of long-range flight operations of three-crew cockpit aircraft without relief crew can serve as the ground (proof) of safety of flight operation of two-crew cockpit aircraft without relief crew.

When we study whether or not the workload of captain and copilot of new generation two-crew cockpit aircraft is equal to or less than that of captain and copilot of three-crew cockpit aircraft, naturally the total workload of both aircraft needs to be compared in similar flight duties. However, since the previous limitation of flight time of two-crew cockpit aircraft without relief crew was 9 hours, for the flight operations of two-crew cockpit aircraft without relief crew exceeding such previous flight time limitation of 9 hours, we must be aware that that the focal point of judgment is whether or not the workload of captain and copilot of two-crew cockpit aircraft engaged in flight operation beyond 9 hours without relief crew is equal to or less than that of captain and copilot of three-crew cockpit aircraft without relief crew (for the same length of time).

Judging from this perspective, it can be said that new generation two-crew cockpit aircraft generally have reduced amount of routine workload for captain and copilot and that their workload is equal to or less than that of captain and copilot of three-crew cockpit aircraft. Therefore, for flight duties up to 8 to 9 hours into flight after take-off, even in the events of in-flight irregularities the minimum crew of two pilots on two-crew cockpit aircraft without relief crew will be able to cope with such irregularities with the allowance created by the reduction of routine workload.

However, when flight duty continues beyond the above-mentioned time, it cannot be denied that over a long duration of flight time, even with small workload, fatigue gradually accumulates on captain and copilot and the competence for judgment etc. suffers impairment. With such fatigued flight crews, if any flight irregularity occurs and results in such events as go-around (rejected landing), holding (waiting

in the air before landing) or diversion (to an alternative airport), flight crews' workload will increase not only for the control of aircraft but also for communications with air traffic control (ATC), the company, cabin attendants, information for passengers, mutual confirmation of intention among crewmembers, continuous updating of changing meteorological conditions etc. In the case of three-crew cockpit aircraft with a flight engineer on board, the workload on captain and copilot can be kept from increasing by sharing these works among three crewmembers, whereas in two-crew cockpit aircraft, all of these tasks have to be handled by captain and copilot, and the substantial increase of their workload including mental strain cannot be ignored.

In the event that one of the two pilots of two crew configuration aircraft is incapacitated in flight and loses his ability to judge and operate aircraft, unlike on three-crew cockpit aircraft, remaining one pilot has to deal with all kinds of matters. With one crew incapacitated, outside vigilance for collision avoidance for example, unlike in three-crew cockpit aircraft, will involve difficulty in two-crew aircraft. And if these events as mentioned above occur at the time of landing etc., those events possibly might directly result in an accident. The mere premise that "single pilot operation is possible" does not preclude the above-mentioned risks, because this premise holds true only for normal operations. As mentioned above, no evidences have been submitted to support the following:

- Reduction of workload and improvements to compensate for the increased crew duty time due to increased flight range is incorporated into the design concept of the cockpit of B747-400;
- Any effective countermeasures have been taken to cope with the situation in which fatigue is accumulated on captain and copilot and competence for judgment is impaired as a result of prolonged hours of work with low workload.

On the basis of above, it can be said that new generation two-crew cockpit aircraft without relief crew is capable of performing, like three-crew cockpit aircraft without relief crew, flight operations of up to 10 to 12 hours on the premise that the flight is a normal one without any particular flight irregularity. However, if any flight irregularity occurs or if one of two pilots is incapacitated and is incapable of judging and operating aircraft, depending on the degree of seriousness of the event, it cannot be denied that the increase in the workload of captain and copilot of two-crew cockpit aircraft without relief crew is greater than the increase of workload in three-crew cockpit aircraft without relief crew. In this

regard, if such contingency occurs after 8 to 9 hours of flight after take-off, it has to be judged that the level of safety of two-crew cockpit aircraft without relief crew is inferior to that of three-crew cockpit aircraft without relief crew.

Therefore, past records/experiences of long-range flights of three-crew cockpit aircraft without relief crew do not constitute any evidence/grounds for the safety of flight of two-crew cockpit aircraft without relief crew. Thus, the recommendation on flight time limitation by the Study Committee (JAPA) of 12 hours for two-crew cockpit aircraft without relief crew based on the past records/experiences of long-range flights of three-crew cockpit aircraft without relief crew can not be judged to be founded on rational grounds, and the recommendation is not reasonable.

(6) In summary, it can be concluded as follows:

- Standard scheduled duty “flight time” needs to incorporate safety margin (degree of allowance for safety);
- If such safety margin (degree of allowance for safety) is not incorporated, except for cases where a flight is uneventful without any irregularities, there are risks of situations where a flight crew has to deal with flight irregularities with his performance impaired by fatigue;
- In the light of NASA’s recommendation and the research titled “Operation of Long-Range Flight - A Summary of Recent Studies” by DLR-German Institute of Aerospace Medicine Linder Hohe, if safety margin (degree of allowance for safety) is to be incorporated modestly, it is reasonable to require that the standard scheduled “flight time” (block to block) should not be in excess of 10 hours (without relief crew);
- The defendant’s Work Rules set forth different “flight time” and “duty time” limitations for different the time of day of reporting (company show-up), and the Work Rules are reasonable in this respect;
- However, the said Work Rules prescribes “flight time” (block to block) of 10 hours 30 minutes for the time of day of reporting from 06:00 until 07:59 and from 15:00 until 21:59, and “flight time” (block to block) of 11 hours for the time of day of reporting from 08:00 until 14:59;
- And on the basis of the said Work Rules, the defendant actually is scheduling such prolonged hours of non-stop flight duty mentioned above without any relief crew and therefore without any period of rest.
- In fact, the Defendant’s winter schedule for 1998 included flight operation schedules of 10 hours 55

minutes from San Francisco to Narita (no relief crew), and therefore the rationality of the Defendant's Work Rules are questionable from scientific, technical and professional points of view.

2. Comparison with other Airlines (Two-Crew Cockpit Aircraft with One Scheduled Landing without Relief Crew)

(1) Comparison with Long-Range Flight of other Airlines operating Two-Crew Cockpit Aircraft without Relief Crew:

Among the examples of long-range flight operated by two-crew cockpit aircraft without relief crew, the followings are the only routes of which "flight time" exceed 9 hours at the time of conclusion of oral proceedings:

(i) From Narita to Helsinki (return route): "flight time" - 10 hours 25 minutes: one of routes by FINNAIR between Narita and Helsinki (Trans-Siberian Route); and

(ii) From Vancouver to Narita (outward route): "flight time" - 10 hours 9 minutes: one of routes by Canadian Airlines International between Vancouver and Narita (Trans-Pacific Route).

The Defendant operated two-crew aircraft on the route from San Francisco to Narita without relief crew with scheduled "flight time" of 10 hours 55 minutes. This was a long flight-time flight exceeding that of other airlines. With "flight time" exceeding 10 hours, the longer the "flight time" is, the smaller safety margin (degree of allowances for safety) becomes. Therefore, compared to "flight time" of 10 hours 9 minutes and 10 hours 25 minutes, the safety margin (degree of allowances for safety) for "flight time" of 10 hours 55 minutes is small. For this reason, with respect to the safety of its operation, the Defendant cannot avail himself of records/experiences of other air carriers to which its level of safety is inferior.

(2) Comparison with Long-Range Flight of other Airlines operating Three-Crew Cockpit Aircraft Without Relief Crew:

The limitations of different airline companies on "flight time" for three-crew cockpit aircraft without relief crew is between 8 hours to 12 hours 30 minutes, and it can be assumed that the past records/experiences of flight operation are similar to these figures. As mentioned above:

- The Study Committee conducted a comparative study of workload and degree of fatigue on each

captain and copilot with respect to new generation two-crew cockpit aircraft and three-crew cockpit aircraft;

- The Study Committee judged that workload and degree of fatigue on captain and copilot of new generation two-crew cockpit aircraft were the same as or smaller than those on captain and copilot of three-crew cockpit aircraft;

- The Study Committee concluded on the basis of this judgment that the limitation of “flight time” of new generation two-crew cockpit aircraft may be the same as that of three-crew cockpit aircraft;

- However, there are insufficient points in the above-mentioned study and judgment by the Study Committee and are not reasonable.

Past records/experiences of long-range flights of three-crew cockpit aircraft without relief crew do not constitute any evidence/grounds for the safety of flight of two-crew cockpit aircraft without relief crew.

3. Study in the light of Past Records/Experiences and Accident Cases (Two-Crew Cockpit Aircraft with One Scheduled Landing without Relief Crew)

(1) While Narita - San Francisco route etc. have been operated for six years since the alteration of Work Rules under this lawsuit, no evidences have been submitted to support the occurrence of accidents resulting in injury or death. This fact has a meaning as indirect evidence that may substantiate the safety of the operation.

However, on the other hand, a flight crew who actually took the flight duty on Narita - San Francisco route pointed out that the total amount of sleep he had during the three-night layover in San Francisco were approximately 16 to 18 hours, within which less than half period falls in body-clock (circadian) night, and that it was difficult for him to resist sleepiness during the homebound flight duty. A flight crew who took the flight duty on Narita - Los Angeles route described his experience that his judgment and reaction slowed down as he approached and landed at Los Angeles airport and that his control of the airplane tended to be late and tardy. As some of these statements show, hardship is seen in the actual circumstances of these flights, and the situation is such that it can be said that there is no safety margin in terms of flight crew fatigue. It cannot be denied that there are risks in which flight

crew cannot fully cope with any irregular situations because he does not have enough energy to spare.

In this sense, these facts substantially neutralizes the significance of the fact that no accidents resulting in injury or death have occurred on Narita- San Francisco routes etc. in the past six years since the alteration of Work Rules under this lawsuit as an indirect evidence to substantiate the safety of the limitation of “flight time” and of “duty time” prescribed in Work Rules under this lawsuit.

(2) Most of aircraft accidents, although the number of occurrence is limited, take place during the phases of taking-off and landing. It is legitimately feared that a flight crew may become so fatigued on long-range flight that he makes errors in his recognition and judgment. Among the such cases of accidents, there are not so many cases for which fatigue of flight crew has been raised as the cause of accident, and there has been no cases where flight crew fatigue sustained on long-range flight operation on two-crew or three-crew cockpit aircraft without relief crew was determined to be the cause of the accident. In this connection, referring to the Guantanamo Bay accident of American International Airways (AIA), the United States National Transportation Safety Board (NTSB) judged that scheduling of flight crew was a cause of fatigue and decreased performance and pointed out as follows:

- Generally, it is difficult for an individual to accurately recognize his/her fatigue condition, and, in many cases, there is a strong tendency in which he/she judges that he/she is not so tired;
- It is not realistic to expect, in the increasingly severe competition, that any flight crew who is extremely tired resists the company’s pressure and asks the company, by self-assessment and self-declaration, not to order further flight duty, and to expect that the safety mechanism functions by this action of flight crew;
- Under a severer competitive pressure, airline companies possibly operate their flights at the upper limit of the limitation of flight duty period prescribed in the Federal Aviation Regulation for purposes of enhancing the productivity of flight crew and of maximizing company’s profit;
- Since it is considered that the company will never change its policy or each flight crew will never be more active than present in recognizing his/her limitation of fatigue, laws and regulations need to be amended for the purpose of avoiding the recurrence of accidents caused by fatigue.

The United States National Transportation Safety Board (NTSB) pointed out as mentioned

above and, taking advantage of this accident, recommended to the Federal Aviation Administration, as a priority implementation item, to expedite the review and improvement of the limitation of flight duty period and working hours under the federal aviation legislation so that the latest research result on fatigue and sleep would be incorporated.

The accident involved (Guantanamo Bay) is not a case where flight crew fatigue on long-range flight in two-crew or three-crew cockpit aircraft without relief crew was the cause of the accident. However, the recommendation made by the NTSB is valuable for the purpose of consideration of assurances of the safety of aircraft operations.

(3) In conclusion, the Defendant's sole records/experiences of flight operation of two-crew cockpit aircraft without relief crew do not constitute sufficient evidence to substantiate the safety of the operations. In addition, although there has been no cases of accident for which flight crew fatigue due to long-range flight with two-crew or three-crew cockpit aircraft without relief crew was found to be the cause of accident, since long-range flights of two-crew cockpit aircraft without relief crew has a shorter history than long-range flights of three-crew cockpit aircraft without relief crew, the fact that there has been no records of accident for which flight crew fatigue due to long-range flight was found to be the cause of accident should reasonably be accounted to represent the records/experiences of flight operation of three-crew cockpit aircraft without relief crew.

4. Study and Consideration made by the Defendant at the time of Review of Working Standard and Alteration of the Work Rules (Two-Crew Cockpit Aircraft with One Scheduled Landing without Relief Crew)

Prior to the alteration of Work Rules under this lawsuit, the Defendant made studies, from February 1989 to July 1989, on the limitations on "flight time" and "duty time" at the Advisory Group Conference. At the time of this study, the study was made with view to establishing working conditions which would reflect the time of the day of "duty time" and "flight time", flight route composition and time zone changes etc., while the distinctive characteristics of flight duty, pattern of daily life and health of flight crew etc. were to be taken into consideration. And the initial concept of the alteration was as follows:

- The limitation (maximum allowable length of time) has to be adjusted according to the time of the day, which is a reasonable thinking;
- The establishment of other associated working conditions is essential before the “flight time” “duty time” limitations are decided.
- The introduction of new rules into specific routes on trial basis should also be considered.

However, in practice, in the process of reviewing the working conditions and changing Work Rules under this lawsuit, the Defendant only adopted the concept, among those mentioned above, that the limitations had to be adjusted according to the time of the day, and did not incorporate other concepts. And apart from giving consideration to the time of the day, the Defendant eased the limitation of “flight time” and “duty time” across the board.

This was because Defendant considered that working conditions to be set forth in Work Agreement or Work Rules should be studied from the viewpoint that they should be within the safety standards prescribed in the Operations Manual and that they should be reasonable and appropriate labor working conditions. This was also because the Defendant altered Work Rules under this lawsuit from the standpoint of enhancing human productivity by improving the efficiency of personnel utilization for the purpose of strengthening international cost competitiveness as a part of series of structural reform measures as well as from the standpoint of making working condition more rational to meet the changes in route composition and enhancement of aircraft performance. With respect to the relaxation of the limitation of “flight time” and “duty time” for an uninterrupted flight duty, the Defendant, after all, fixed the limitation of “flight time” at 11 hours as the working standard on the basis of the recognition that the flight safety is ensured if it was within the limitation of the Operations Manual and in accordance with the following considerations:

- The Government’s standard was changed to 12 hours also for two-crew cockpit aircraft without relief crew with an official notice of the Director General of Engineering Department (Civil Aviation Bureau);
- Not only airlines in foreign countries but also All Nippon Airways fixed the limitation of “flight time” set forth in the Operations Manual at 12 hours.

The Defendant, despite the concept they had in the study made in 1989 as mentioned earlier,

did not seek opinions of the flight crews in management positions to establish working conditions which would reflect the time of the day of “duty time” and “flight time”, flight route composition and time zone changes etc., while the distinctive characteristics of flight duty, pattern of daily life and health of flight crew etc. were to be taken into consideration. Instead, the meetings of flight crew Department Managers were held several times, and they simply decided on the alteration of the flight crew working condition.

That is to say, in reviewing the working conditions and in changing the Work Rules under this lawsuit, the Defendant did not give any considerations to the aforementioned individual state of affairs or actual circumstances, but rather, upon receiving the official notice of the Director General of Engineering Department (Civil Aviation Bureau) (The standard concerning the limitation of “flight time” and the flight crew complement (amended, 1992)), the Defendant solely amended its Operations Manual to replicate the provisions of the official notice, and altered the Work Rules under this lawsuit on the basis of the amended Operations Manual. The Defendant solely based its decision on the consideration of the final report of the Study Committee (JAPA) which was the basis of the official notice of the Director General of Engineering Department (Civil Aviation Bureau) (The standard concerning the limitation of “flight time” and the flight crew complement (amended, 1992)), and other than that the Defendant did not give any consideration to separate and specific circumstances of flight operation as mentioned earlier.

5. Judgements on the part of Workers manifested in the Negotiation of the Labor Agreement (Two-Crew Cockpit Aircraft with One Scheduled Landing without Relief Crew)

Prior to the alteration of Work Rules under this lawsuit, the Defendant, beginning on January 29, 1993, gave explanation to Japan Airlines Flight Crew Union (“Flight Crew Union”) on the outlines of the Defendant’s tight financial conditions and the necessity of improvement of personnel cost utilization by means of reviewing corporate structure, then proposed the alteration of the “Work Agreements of Flight Crewmembers” and other agreement. Over a period of nine months ending on November 1, 1993, the Defendant and the Flight Crew Union had a series of meetings and discussions including 19 meetings of staff level negotiations and 26 sessions of collective bargaining. So it is a

fact that that the Defendant made efforts to obtain the understanding of the Flight Crew Union. However, despite the negotiations, no agreement was reached, and the Defendant cancelled all the labor agreements such as Work Agreement, and the Defendant changed and established the Work Rules under this lawsuit. The negotiation for concluding labor agreement belongs to the area governed by the principle of free transaction, and the results of the adjustment of interests between labor and management are embodied into the conclusion of labor agreement. Therefore, the Court does not deny the possibility that the Flight Crew Union was opposed to the alteration of the “Work Agreement of Flight Crew” and other agreements from the standpoint of gain and loss that does not concern safety of flights. However, such working standard relative to the limitation of “flight time” and “duty time” influences the safety of the flight operations, and the matters can not simply be considered in the category of “the reluctance of added volume of work” or “the demand for monetary compensation”. Rather, such working standard involves an issue of flight crew fatigue in flight operations, and it concerns the risks of life of the flight crews. Flight crews, in the light of their own experiences, are capable of judging whether or not a flight operation can be safely performed under working conditions proposed by the Defendant on the “flight time” and “duty time” limitations. And such judgment carries an important significance as it is based on the first-hand experiences of flight crew who actually performs flight operations. If flight crews judge that flight operation can be safely performed under such working conditions, then such judgment must be considered to have the significance as an assurance of the safety of flight. However, flight crew unions including Japan Airlines Flight Crew Union, Japan Airlines Captains Association, Japan Airlines Senior Flight Engineers Union voiced their objection against the change of the Work Rules under this lawsuit, and as many as 883 flight crews, which accounts for approximately 60% of all the copilots, flight engineers and the trainees, have brought a lawsuit and contended that the provisions of working conditions set forth in the revised Work Rules under this lawsuit is unjustifiable. Therefore, it has to be concluded that working conditions concerning the limitation of “flight time” and of “duty time” prescribed in the changed Work Rules do not have any assurance of safety of flight operation in the meaning as mentioned above.

6. Safety Feedback System based on the post-flight evaluation of safety (Two-Crew Cockpit

Aircraft with One Scheduled Landing without Relief Crew)

The Defendant's Operations Manual has provisions for Captain Report and Safety Report. And thus, it can be said the Defendant has a safety feed-back system established and maintained whereby the actual circumstances of flight operation performed in accordance with the changed Work Rules is examined, the level of safety is evaluated in a retrospective manner, and appropriate corrective measures are taken whenever there is any concern or problem. However, there was an occasion where a Japan Airlines Captain submitted a Captain Report to the Defendant in which he described the situation of his flight duty on March 15, 1999 from San Francisco to Narita and he reported the actual flight time and that during the cruise portion of his actual flight duty period, he felt an overwhelming sleepiness and that he felt so fatigued that he could hardly maintain his normal physical condition for the flight duty. However, the Defendant's B747-400 Flight Crew Department and Operation Planning Department merely raised the following points and made them as their reply to the above-mentioned captain report:

- The flight duty pattern in question was established in accordance with the Work Rules which was within the standard of Operations Manual, and they thought that the completion of flight duty based on the crew scheduling standards would pose no problems on flight safety;
- They were aware that flight duty on San Francisco route in winter schedule is a hard one, but they would like to ask for the efforts to perform safe operations.

There is no evidence to show that, after the Captain Report was received, the Defendant took any corrective measures such as evaluation of flight crew fatigue on the San Francisco to Narita routes.

As mentioned earlier, the Notice for Proposed Rule Making by United States Federal Aviation Authority as well as recommendations by U.S. National Transportation Safety Board indicate the need to establish scientifically based flight time/duty time limitations that will provide predictable work and rest schedules and consider circadian rhythms and human sleep and rest requirements.

It is not an easy task to establish such rational limitations of "duty time" and "flight time", and such difficulty can be seen in the fact that the amendments proposed by the U.S. Federal Aviation Authority have not yet materialized as legislation. However, although it may be difficult to put it into practice promptly, it is important to continue to study and to seek to realize it for the sake of the safety

of flight operations. On the other hand, since there are needs for long-range flight operations, such need must be satisfied, and even though the above-mentioned study is yet not fully completed, the limitation of “duty time” and on “flight time” somehow need to be fixed for the time being at such a level that would be generally accepted as being rational in the light of prevailing understanding in the society. Therefore, it is inevitable that a scheduled air carrier performs flight crew scheduling and operate flights in accordance with its own limitations of “duty time” and “flight time”. However, since it has not yet been verified as to whether such limitations of “duty time” and “flight time” are safe ones satisfying the needs of the actual circumstances, it is necessary, while operating on provisional basis with evaluation of actual operations, to continue to study the rationality of crew scheduling based on the “duty time”/“flight time” limitations and the efforts have to be made to ensure the safety of flight. Scheduled air carriers are required to make efforts to know actual circumstances of flight operation, to fully study problems pointed out by flight crews, to re-evaluate the level of safety and to take necessary corrective actions/measures. It is only when such safety feed-back system is judged to be functioning in a realistic and effective manner that it can be said that there is an assurance of safety in the light of prevailing understanding in the society.

With regard to this lawsuit, as mentioned earlier, the final report submitted by the Study Committee (JAPA) did not give sufficient consideration to circadian rhythms and the human requirements of sleep and rest, and their proposed limitation of “flight time” does not have adequate grounds/reasons. And therefore, the rationality of the standards prescribed by the Director General of Engineering Department of Civil Aviation Bureau of the Ministry of Transport is nothing more than a tentative and limited one. Therefore, in order to make the provisions of the Defendant’s Work Rules rational, the Defendant is required to make efforts to have correct understanding of actual circumstances of flight operations, thoroughly study problems pointed out by flight crews, re-evaluate the level of safety and take necessary corrective measures. And only when such a feedback system is judged to be functioning in a realistic and effective manner, then it can be said that requirements set forth in the Article 157-(3) of Civil Aeronautics Regulation are satisfied. As mentioned earlier, it can be said that new generation two-crew cockpit aircraft without relief crew is capable of performing, like three-crew cockpit aircraft without relief crew, flight operation of 10 to 12 hours on the premise that

the flight is uneventful without any particular irregularities; however, it can be said that new generation two-crew cockpit aircraft without relief crew is capable of performing, like three-crew cockpit aircraft without relief crew, flight operations of up to 10 to 12 hours on the premise that the flight is a normal one without any particular flight irregularity. However, if any flight irregularity occurs or if one of two pilots is incapacitated in such a way that he can no longer judge nor operate the aircraft, depending on the degree of seriousness of the event, it cannot be denied that the increase in the workload of captain and copilot of two-crew cockpit aircraft without relief crew is greater than the increase of workload in three-crew cockpit aircraft without relief crew. And it has been already indicated that a flight crew working for the Defendant had pointed out such problems to the Defendant. However, judging from the contents of the Defendant's reply to above-mentioned Captain Report regarding flight duty on San Francisco route, it is apparent that the Defendant did not make any re-evaluation of the level of safety on the basis of the opinion of the captain. Therefore, the Court has to conclude that the Defendant's feed-back system for the safety of flight operation is not functioning in realistic and effective manner with regard to the limitation of "flight time" and "duty time" for flight operation with two-crew cockpit aircraft without relief crew.

7. Conclusion on Rationality of Provisions of the Work Rules concerning the Limitation of "Flight time" and "Duty time" for Operation of Two-Crew Cockpit Aircraft without Relief Crew with One Scheduled Landing

Safety margin (degree of allowance for safety) needs to be incorporated into the standard scheduled "flight time". If safety margin is not incorporated, except for cases in which a flight is uneventful without any particular irregularity, there are risks of situations where flight crew must deal with flight irregularities with his performance impaired by fatigue. Based on the result of scientific, technical and professional study, it is reasonable, as mentioned earlier, to conclude that the standard scheduled "flight time" should not exceed 9 hours to ensure dependable safety margin (degree of allowance for safety), or 10 hours for modest safety margin.

However, by means of the alteration of the Work Rules under this lawsuit, the Defendant newly established maximum "flight time" limitations of 9 hours, 10 hours 30 minutes and 11 hours depending

on the time of day of reporting (company show-up). In terms of safety consideration, the essence of the matter is that the Defendant reduced the safety margin of flight operations for reasons of financial/business needs. Therefore, the Defendant needs rational grounds/reasons to prove that the Defendant's limitations on "flight time" will not compromise the safety of flight operation (safety margin greater than minimum required amount is incorporated). However, no such rational grounds/reasons have been found.

As mentioned earlier, although Narita-San Francisco route etc. have been operated by two-crew cockpit aircraft without relief crew for six years since the alteration of the Work Rules under this lawsuit, no particular accidents have occurred. Although this is a retrospective circumstance, this fact has a meaning as the indirect evidence that endorses the level of safety. However, on the other hand, the Defendant's "flight time" limitations (maximum allowable "flight time") are uncommon and outstanding (outstandingly long) as compared with those of other airlines (including foreign airlines). The Defendant, as the employer (scheduled air carrier), altered the Work Rules under this lawsuit solely on the basis of the official notice of the Director General of Engineering Department (Civil Aviation Bureau) (The standard concerning the limitation of flight time and the flight crew complement (amended, 1992)). And the Defendant amended its Operations Manual by replicating the standards of the official notice, and further altered the Work Rules under this lawsuit based on such Operations Manual. The Defendant solely based its decision on the consideration of the final report of the Study Committee (JAPA) which was the basis of the official notice of the Director General of Engineering Department (Civil Aviation Bureau) (The standard concerning the limitation of "flight time" and the flight crew complement (amended, 1992)), and other than that the Defendant did not give any consideration to separate and specific circumstances of flight operation as mentioned earlier.

While it can be acknowledged that the Defendant gave partial consideration to individual and specific circumstances of different flights because the Defendant adjusted "flight time" limitations depending on the time of the day of reporting (company show-up), since the "flight time" (non-augmented) of 10 hours 30 minutes and 11 hours drastically reduces safety margin, the Defendant should have taken measures to provide alternative way of ensuring safety margin or should have implemented such flight operation for the above "flight time" on tentative basis performing re-evaluation of level of safety based

on records/experiences of such flight operations. However, the Defendant did not take any such alternative measures. And on an occasion when a Japan Airlines' flight crew reported a problem in the flight operation conducted in accordance with the Work Rules under this lawsuit based on his own experience, the Defendant did not make any re-evaluation of the level of safety of flight operation on the basis of the opinion of the captain. Therefore it has to be concluded that the feedback system relative to the safety of flight is not functioning in realistic and effective manner. From the beginning, it is not the case that the Defendant changed its Work Rules after the Defendant fully negotiated with Flight Crew Union, that Flight Crew Union considered it acceptable, and that labor agreement was concluded. The fact is that the Defendant unilaterally and forcibly altered Work Rules under this lawsuit despite the opposition of Flight Crew Union. With this background, in terms of assurance of safety, the Defendant should have made through evaluation of the level of safety based on individual and specific circumstances of different flights. The Defendant also should have made studies that to confirm that the reduced safety margin would not create any safety problem for reasons of alternative measures or in the light of actual circumstances of flight operation. However, the fact is that the Defendant revised the Work Rules solely on the grounds in terms of safety that the "flight time" and "duty time" standards in the new Work Rules are within the standards set forth by the Government.

The Defendant, in deciding the provisions of the Work Rules, did not give consideration to above-mentioned individual and specific circumstances of different flights. And it cannot be acknowledged that any alternative measures have been taken to compensate the reduced safety margin. The Defendant's safety feedback system is not functioning in realistic manner.

Considering the fact that the final report of the Study Committee (JAPA), on which the official notice of the Director General of Engineering Department (Civil Aviation Bureau) (The standard concerning the limitation of "flight time" and the flight crew complement (amended, 1992)) on which Defendant depended was based, had above-mentioned problems,

The official notice of the Director General of Engineering Department (Civil Aviation Bureau) (The standard concerning the limitation of "flight time" and the flight crew complement (amended, 1992)) is based on the final report of the Study Committee (JAPA). The final report of the Study Committee

(JAPA) contains problems as were mentioned earlier. Therefore, after all, the Defendant's Work Rules can not be considered rationally founded because the Work Rules were based on the official notice of the Director General of Engineering Department (Civil Aviation Bureau).

Consequently, the fact that no particular accidents have occurred on the routes between Narita and San Francisco route etc. in the past six years after the alteration of the Work Rules does not provide adequate grounds/reasons to substantiate the safety of flight operations. With respect to the operations of two-crew cockpit aircraft without relief crew, the provisions contained in Work Rules under this lawsuit concerning the limitation of "flight time" without relief crew with one scheduled landing are not valid since they lack the rationality in its provisions per se.

With respect to provisions contained in Work Rules under this lawsuit concerning the limitation of "duty time" for flight operations without relief crew with one scheduled landing, since such provisions (of "duty time") cannot be separated from the provisions on the limitation of "flight time" in terms of objectives, contents and influence on flight operation. So the rationality of the limitation of "duty time" can be considered parallel to the rationality of the limitation of "flight time". Since the rationality of provisions contained in Work Rules concerning the limitation of "flight time" for two-crew cockpit aircraft without relief crew with one scheduled landing cannot be affirmed, the rationality of the provisions on the limitation of "duty time" for two-crew cockpit aircraft without relief crew with one scheduled landing cannot be affirmed either, and those provisions in the Work Rules are not valid.

In this regard, with respect to the Plaintiffs who will benefit from the court affirmation, working standards on this issue will matter. Since it is reasonable to understand that the reasonable intentions of the two parties involved in the labor contract (between the Plaintiff and the Defendant) are to tentatively maintain working conditions that existed before the implementation of the Work Rules under this lawsuit. Thus, it is rational to conclude that, for the working standard concerning the limitation of the "flight time" and of "duty time" for flight operation with two-crew cockpit aircraft without relief crew with one scheduled landing, the "flight time"(from block-out to block-in) shall not exceed 9 hours, and that the "duty time"(from reporting to the completion of post-flight duty) shall not exceed 13 hours within any consecutive 24 hours respectively.

Chapter 19. The Rationality of Provisions of the Work Rules concerning Limitation of “Flight Time” and “Duty Time” for Operation of Three-Crew Cockpit Aircraft with One Scheduled Landing without Relief Crew

The Rationality of Relevant Provisions in the Work Rules under this Lawsuit from Scientific, Technical and Professional Points of View

In the cases of long-range flights of three-crew cockpit aircraft as well, performance and alertness of flight crew may decline, and the problem of complacency, which is unique to long-range flights, may occur. Therefore having flight crew engaged in long-range flights without giving rest period in flight induces a risk of serious errors due to fatigue, sleepiness and sleep deficit.

From scientific, technical and professional points of view, with respect to the continuous flight time in the case of having flight crew engage in long-range flights without in-flight rest period, it is reasonable to conclude that the standard scheduled flight time should not exceed 9 hours to ensure dependable safety margin (degree of allowance for safety), or 10 hours for modest safety margin. Therefore, in the case of the "flight time" of 11 hours (the limitation for three- crew cockpit aircraft without relief crew prescribed in the Work Rules), it is worried that safety margin (allowance for safety) is not incorporated. However the situation of long-range flight of three-crew cockpit aircraft without relief crew is different from that of two-crew cockpit aircraft.

On an occasion where captain and copilot have accumulated fatigue as a flight progresses, and the competence for judgment etc. starts to be impaired, if any flight irregularity occurs and results in such events as go-around (rejected landing), holding (waiting in the air before landing) or diversion (to an alternative airport), a flight engineer can share some part of the workload of communications with air traffic control (ATC), the company, cabin attendants, information for passengers, mutual confirmation of intention among crewmembers, continuous updating of changing meteorological conditions etc., and thus the captain and copilot can channel their efforts to the flying. Furthermore, as shown in the results of the research conducted by Ames Research Center of NASA ("Effects of Planned Cockpit Rest on Crew Performance and Alertness in Long-Haul Operations"), given the opportunity of planned nap, flight crews can have good-quality sleep in the cockpit seats, and such naps can prevent

involuntary/spontaneous sleep due to sleep deficit experienced in long-haul flight operations, thus reducing operational risks associated with involuntary/spontaneous sleep. Such measure as the planned cockpit rest is possible in three-crew cockpit aircraft, but in the aforementioned study such, the planned cockpit rest is not recommended for two-crew cockpit aircraft. Therefore, in the case of three-crew cockpit aircraft, even without relief crews, the existence of flight engineer has the significance of safety margin (allowance for safety), and it can be stated that there is adequate grounds that the safety of flight is not compromised on long-range flight (without relief crew).

2. The flight time limitations of three-crew cockpit aircraft without relief crew of other airlines range from 8 hours to 12 hours and 30 minutes. It can be presumed that actual periods of flight duty of those airlines are about the same as these limitations. The operation of three-crew aircraft without relief crew in long-haul routes has been performed for more than 10 years in the past, and no particular accident happened. The period of flight time limitation prescribed by the Defendant is not outstandingly longer than those of other airlines including foreign airlines.

3. It cannot be denied that the work involved in the actual operation of three-crew aircraft without relief crew is demanding. However, as shown in above 1. And 2., a certain amount of safety margin (allowance for safety) is provided by the existence of flight engineer, and there have been adequate experiences of such operation. Therefore, it is not quite appropriate to conclude that flight operation of three-crew cockpit aircraft without relief crew (in accordance with the flight time limitation of the revised Work Rules) is detrimental to the safety of flight. Therefore, with respect to the flight time limitation of the operation of three-crew cockpit aircraft without relief crew, the rationality of the alteration of the Work Rules has to be examined from the standpoint of the rationality of disadvantageous change as discussed in later chapter.

Chapter 20. Omitted

Chapter 21. The Rationality of Provisions of the Work Rules concerning Limitation of “flight

time” and “duty time” for operation with Two Scheduled Landings without Relief Crew (Either two-crew or three crew cockpit aircraft)

1. The Rationality of relevant provisions in the Work Rules under this lawsuit from scientific, technical and professional points of view

From scientific, technical and professional points of view, with respect to the continuous “flight time” in the case of having flight crew engaged in long-range flights without in-flight rest period, it is reasonable to require that the standard scheduled “flight time” shall not exceed 9 hours to ensure dependable safety margin (degree of allowance for safety), or 10 hours for modest safety margin, and scheduled “duty time” shall not exceed 12 to 13 hours. In the cases of flight duty involving two landings, in the light of the fact as mentioned below that Lufthansa German Airlines incrementally shortens scheduled maximum “duty time” by 15 minutes to 2 hours for flights with two or more scheduled landings, it is considered to be desirable that the standard scheduled “flight time” shall be limited to approximately 9 hours to compensate for the increase of workload for the first landing. The standard scheduled “flight time” here (approximately 9 hours) is a figure incorporating safety margin (degree of allowance for safety).

If normal scheduled “flight time” is shorter than this, the safety margin (the degree of allowance for safety) will increase. And if normal schedule “flight time” is longer than this, the safety margin will be smaller.

In this respect, the implementation of the Work Rules under this lawsuit has extended the maximum “flight time” from the original 8 hours 30 minutes to 9 hours 30 minutes, and, maximum “duty time” from 13 hours to 14 hours. With two scheduled landings, the Court is concerned that safety margin (degree of allowance for safety) may be almost nil toward end of the second flight leg.

2. Comparison with Regulations of Foreign Countries and other Airlines (including foreign Airlines) (Two Scheduled Landings)

(1) The limitation of maximum “duty time” in case of minimum crew in foreign countries is generally as follows (for easy comparison, minute differences are ignored):

Great Britain: two-crew aircraft = 9 hours (shortest) to 12 hours 30 minutes (longest), three-crew aircraft = 9 hours (shortest) to 14 hours (longest);

Germany: no difference between two-crew aircraft and three-crew aircraft: 10 hours (shortest) to 14 hours (longest);

France: no difference between two-crew aircraft and three-crew aircraft: 8 hours (shortest) to 14 hours (longest);

The Netherlands: no difference between two-crew aircraft and three-crew aircraft: 14 hours (shortest) to 16 hours (longest);

Switzerland: no difference between two-crew aircraft and three-crew aircraft: 11 hours (shortest) to 14 hours (longest);

Denmark: no difference between two-crew aircraft and three-crew aircraft: 10 hours (shortest) to 14 hours (longest);

Australia: no difference between two-crew aircraft and three-crew aircraft: 11 hours;

Singapore: no difference between two-crew aircraft and three-crew aircraft: 16 hours;

Canada: no difference between two-crew aircraft and three-crew aircraft: 15 hours;

Hong Kong: no difference between two-crew aircraft and three-crew aircraft: 9 hours (shortest) to 14 hours (longest);

(2) Evidences (Plaintiff's Evidences No. 57, No. 79-(2), No. 334-(4)) shows the following facts:

Northwest Airlines: no difference depending on number of scheduled landings: scheduled maximum "duty time" = 13 hours, actual "duty time" = within 15 hours;

United Airlines: except for case of 1 scheduled landing, scheduled maximum "duty time" = 12 hours, actual "duty time" = within 14 hours;

British Airways: in case of two-crew aircraft or three-crew aircraft without relief crew with 2 scheduled landings: scheduled maximum "duty time" = 12 hours 30 minutes depending on the time of the day of reporting (company show-up) for departure from the base;

Air France (French National Airlines): scheduled maximum "duty time" = 13 hours 30 minutes depending on the time of the day of reporting (company show-up);

Lufthansa German Airlines: scheduled maximum "duty time" = 14 hours in case of three-crew

aircraft without relief crew with 1 scheduled landing depending on the time of the day of reporting (company show-up): if number of scheduled landings are 2 or more, this scheduled maximum “duty time” is incrementally reduced by 15 minutes to 2 hours;

KLM Royal Dutch Airlines: scheduled maximum “duty time” = 12 hours 30 minutes in case of three-crew aircraft without relief crew if number of scheduled landings are 2 or less: KLM calculates “on-top hours” according to actual “duty time” depending on the time of the day of reporting (company show-up) and adjusts so that the aggregated hours are within the scope of the above-mentioned scheduled maximum “duty time”;

QANTAS Airways: irrespective of number of scheduled landings, scheduled maximum “duty time” = 11 hours and maximum actual “duty time” = 12 hours in cases of three-crew aircraft without relief crew;

Singapore Airlines: in cases of two-crew aircraft and three-crew aircraft without relief crew with 2 scheduled landings: scheduled maximum “duty time” = 12 hours 30 minutes depending on the time of the day of reporting (company show-up) for departure from the base.

(3) Judging from above information, scheduled maximum “duty time” of 14 hours under revised Work Rules under this lawsuit is not so outstandingly long as compared with general standards in foreign countries. However, when we compare the scheduled maximum duty time to those of other airlines, it belongs to a lenient group in terms of “scheduled” duty time (as opposed to “actual” duty time).

3. Study in the light of Past Records/Experiences of Flight Operation and the Cases of Past Accidents (Two Scheduled Landings)

(1) Relevant flight patterns are as follow:

-1- Narita - Hong Kong One Day roundtrip Pattern (Narita to Hong Kong to Narita)

Narita to Hong Kong : 5 hours (1998 Winter Flight Duty Schedule)

Hong Kong to Narita: 3 hours 40 minutes (1998 Winter Flight Duty Schedule)

“Flight time”: 8 hours 40 minutes,

“Duty time”: 12 hours 20 minutes

-2- Narita - Manila One Day roundtrip Pattern (Narita to Manila to Narita)

Narita to Manila: 4 hours 40 minutes (1998 Winter Flight Duty Schedule) and Manila to Narita: 4 hours (1998 Winter Flight Duty Schedule) ;

“Flight time”: 8 hours 40 minutes, “Duty time”: 12 hours 20 minutes

Narita to Manila: 4 hours 40 minutes (1998 Winter Flight Duty Schedule)

Manila to Narita: 4 hours (1998 Winter Flight Duty Schedule)

“Flight time”: 8 hours 40 minutes, “Duty time”: 12 hours 20 minutes

-3- Denpasar (Bali Island) to Jakarta to Kansai One Day Pattern

Denpasar to Jakarta: 1 hour 35 minutes

Jakarta to Kansai: 6 hours 25 minutes

(2)

-1- According to Defendant’s Evidence No. 100 (No. 53 Bunch) and testimony by Witness Minoru Hara (Witness’s Protocol dated June 26, 1998, Items No. 184 and 185), it is indicated that, although Minoru Hara experienced Narita to Hong Kong to Narita one day roundtrip flight duty many times since November 1, 1993, he did not feel any concern for the safety during his round-trip flight.

-2- On the contrary, according to Plaintiff’s evidence No. 270 and the result of the principal inquiry to Plaintiff Makoto Narita (Principal Protocol dated December 18, 1997, Items 148 through 168 inclusive and Principal Protocol dated March 4, 1998, Items 120 through 141 inclusive), it is indicated as follows:

- Plaintiff Makoto Narita took roundtrip flight duty on Hong Kong route many times as copilot;

- His schedule on a day when Plaintiff Makoto Narita takes flight duty to Hong Kong departing Narita at 10:15 a.m., he gets up at 5:00 a.m., leaves his house at 6:00 a.m., arrives in Narita Operation Center at around 7:45 a.m., reports (company show-up) at 8:45 a.m., leaves Narita at 10:15 a.m., arrives in Hong Kong at 2:15 p.m. (Japan Time), leaves Hong Kong at around 3:25 p.m. (Japan Time) (this is not explicitly shown in above-mentioned evidences) and arrives in Narita at around 8:05 p.m. (according to Plaintiff’s respective evidence No. 552-(1), 1998 Winter Flight Schedule shows that Flight No. 731 leaves Narita at 10:00 a.m., arrives in Hong Kong at 2:00 p.m. (Japan Time), and Flight No. 732 leaves Hong Kong 3:10 p.m. (Japan Time) and arrives in Narita at 7:50 p.m., and based on these facts, it can be surmised that the schedule of Plaintiff Makoto Narita was generally the

same as mentioned above. Among testimony of Plaintiff Makoto Narita himself, a portion that contradicts such surmise cannot be adopted.);

- When Plaintiff Makoto Narita arrived in Narita at past 8:00 p.m., he was considerably exhausted, he was almost overcome by sleepiness/drowsiness and really felt that his concentration was down despite his efforts.

Above-mentioned facts are admitted. Further, according to Defendant's Evidence No. 459 and the result of the principal inquiry to Plaintiff Makoto Narita (Principal Protocol dated March 4, 1998, Item 141), there were no flight crews who were not given a holiday after the flight duty with two (2) landings to which Plaintiffs raised concern. However, it is admitted that Yoshimaru Okawa who filed lawsuit afterwards engaged in one-day roundtrip flight duty on Nagoya - Manila route on two consecutive days. In addition to the above, some captains voiced opinions as follows:

- With respect to flight duty on Hong Kong route, one-day roundtrip flight duty from Japan to Hong Kong, Manila, Guam and Saipan are quite exhausting, that in such flight operations the safety and the effectiveness of operation are obviously compromised, and that if a diversion to alternate airport should occur, continuation of flight duty to final destination would be out of question. (Plaintiff's evidence No. 308, page 11);

- Outbound flight is OK, but on the homebound flight he feels so fatigued that he does not want to talk, and he feels that he is prone to making small mistakes. (Plaintiff's evidence No. 326, page 7);

- Flight duty of cargo aircraft on Southeast Asian route involving two (2) midnight landings on Kuala Lumpur - Bangkok - Narita sector with 12 hour "duty time", is physically exhaustible and detrimental to the safety. At the time of landing at Narita early in the morning, the foreign flight engineer was unconscious when he was to read Landing Checklist. (Plaintiff's evidence No. 308, page 9);

- On the homebound flight on Denpasar route involving all-night operation with two (2) landings, the landing at Kansai Airport early in the morning is very hard. (Plaintiff's evidence No. 308, page 11).

The above-mentioned opinions are expressed in written statement. Although those are proofs made with written statement, there are no specific problems for creating conviction by such proofs if:

- The statements prove such facts which can be regarded as belonging to those category which Defendant does not positively contend the truth so long as Defendant does not submit a written

statement of opposing effects or seek opportunity of cross-examination by inquiring witness, although they are typical or external facts and as such Defendant is capable of verifying and they are to be verified by Defendant or they belong to those category of scientific/technological knowledge etc. or other objective facts. Although the above-mentioned opinions are not such facts and are based on the experience of one's own, but each one of them should be regarded as being an opinion that can be considered factual. Although the validity of these proofs is limited, it can be seen that flight duty with two (2) landings which Plaintiffs consider problematic is considerably tough according to the result of the inquiry to Plaintiff Makoto Narita as well as to each of the above-mentioned opinion. Like Plaintiff Makoto Narita's case in which he took flight duty of Hong Kong bound flight departing Narita at 10:15 a.m., it is predictable that if one works under working conditions where he gets up at 5:00 a.m., reports (company show-up) at 8:45 a.m., leaves Narita at 10:15 a.m., arrives in Hong Kong at 2:15 p.m. (Japan Time), leaves Hong Kong at around 3:25 p.m. (Japan Time) and arrives in Narita at around 8:05 p.m., then he becomes considerably fatigued and his concentration is weakened when he lands at Narita. Therefore it can be surmised that the flight crews have to make extraordinary efforts to perform second landing fighting with difficulties of fatigue. If a flight crew is a seasoned captain, he might not feel that safety is being compromised. However, it is not always appropriate to generalize flight crew as a whole. Therefore, the above-mentioned facts do not necessarily contradict the above-mentioned testimony of witness Minoru Hara.

(2) There are no past cases of accident in which the cause of accident is attributed to the "duty time" exceeding 14 hours in either two-crew or three-crew cockpit aircraft without relief crew with two scheduled landings. This fact has a meaning as the indirect evidence that substantiates the level of safety.

4. No evidence has been submitted to prove that the Defendant made adequate evaluation of the safety with consideration to individual and specific circumstances of different flights before the Defendant extended the limitation of "flight time" and of "duty time" by one hour respectively for flight operations without relief crew with two (2) scheduled landings. And as was mentioned in 18-5, there is no assurance of safety by the judgments on the part of flight crews.

5. On the basis of the above-mentioned discussion, the Court concludes that:

-With respect to the fact that with the implementation of the Work Rules under this lawsuit the maximum “flight time” was extended from 8 hours 30 minutes to 9 hour 30 minutes and that the maximum “duty time” was extended from 13 hours to 14 hours, with two landings for the flight crews to perform, the Court is concerned that safety margin (degree of allowance for safety) may be almost nil toward end of the second flight leg.

- The scheduled maximum duty time of 14 hours under the revised Work Rules under this lawsuit is not so outstandingly long as compared with general standards in foreign countries. However, when the scheduled maximum duty time is compared to “scheduled” maximum duty time of other airlines, it belongs to a lenient group in terms of “scheduled “duty time (as opposed to “actual” duty time).

- There have been no past cases of accident in which the cause of accident has been attributed to the “duty time” exceeding 14 hours in two-crew or three-crew cockpit aircraft without relief crew with two scheduled landings. This fact has a meaning as indirect evidence that substantiates the level of safety. However, since these flight duties are considerably severe for flight crews, the Court is concerned that safety margin (degree of allowance for safety) may be almost nil toward end of the second flight leg.

- No evidence has been seen to prove that the Defendant, before the change of the Work Rules, made thorough evaluation of the safety with consideration to individual and specific circumstances of different flights. No evidence has been seen to prove that the Defendant took appropriate corrective measures on the basis of evaluation of safety after the implementation of the Work Rules. Also there is no assurance of safety by the judgments on the part of flight crews. These facts indicate that there is no assurance that minimum safety margin (degree of allowance for safety) exists toward the end of the second flight leg.

- If such flight operations are performed repeatedly and routinely under such working standards, and then if it becomes unexceptional that flight crews perform such flight operations on two consecutive days as seen in the actual example where the same flight crew performed single-day roundtrip flight duty between Nagoya and Manila on two consecutive days, the safety of flight operations may be

compromised.;

- This means that the rationality of pertaining provisions in the revised Work Rules under this lawsuit is questionable in terms of standard of working conditions.

Therefore, the Court can not affirm the rationality of the provisions in the revised Work Rules under this lawsuit concerning the limitation of “flight time” and of “duty time” with regard to flight operation without relief crew with two scheduled landings.

The same as in 18-7 applies with respect to the working standards, and since it is reasonable to understand that the reasonable intentions of the two parties involved in labor contract are to tentatively maintain working conditions which existed before the implementation of Work Rules under this lawsuit, it is rational to conclude that working standards concerning the limitation of the “flight time” and of “duty time” for flight operation without relief crew with two scheduled landings shall not, within consecutive 24 hours, exceed 8 hours 30 minutes for “flight time” and 13 hours for “duty time” respectively.

Chapter 22-23. Omitted

Chapter 24. Rationality of the Provisions of the Work Rules concerning the Company’s Policy “Principle of Completion of Flight Duty”

The Article 12 paragraph 1 of the Work Rules under this lawsuit provides that “In principle, a flight duty of a series of flights on crew schedule, once started, shall be completed. However, such flight duty must be discontinued if the pilot in command judges that the continuation of work is detrimental to the safety of flight operation upon consultation with other crewmembers with consideration to the circumstance of flight, degree of fatigue of crewmembers and other conditions”. It is reasonable to conclude that:

- This provision is not intended to require such self-explanatory matter that aircraft shall be landed after take-off.

- Rather, it clarifies the principle that in an event where, before the completion of scheduled flight duty,

the limitation of “flight time” or “duty time” is exceeded for such reasons as weather, airport, malfunction of equipment etc., flight operation must be continued to complete the scheduled work (such as diversion) even in a situation where flight crew would discontinue further operation if they judged solely from the viewpoint of the operation of aircraft, and

- It also defines the requirements for discontinuation of flight duty, which is an exception from the principle.

1. Study from scientific, professional/technical points of view in the light of accident cases (Principle of Completion of Flight Duty)

As mentioned above, referring to the Guantanamo Bay accident of American International Airways (AIA), the United States National Transportation Safety Board (NTSB) judged that scheduling of flight crew was a cause of fatigue and impaired performance and pointed out as follows:

- Generally, it is difficult for an individual to accurately recognize his/her fatigue condition, and, in many cases, there is a strong tendency in which he/she judges that he/she is not so tired;
- It is not realistic to expect, in the increasingly severe competition, that any flight crew who is extremely fatigued resists the company’s pressure and asks the company, by self-assessment and self-declaration, not to order further flight duty, and to expect that the safety mechanism functions by this action of flight crew;
- under a severe competitive pressure, airline companies possibly operate their flights at the upper limit of the limitation of flight duty period prescribed in the Federal Aviation Regulation for purposes of enhancing the productivity of flight crew and of maximizing company’s profit;
- since it is considered that the company will never change its policy or each flight crew will never be more active than present in recognizing his/her limitation of fatigue, laws and regulations need to be amended for the purpose of avoiding the recurrence of accidents caused by fatigue.

The United States National Transportation Safety Board (NTSB) indicated to the above effect.

The Work Rules under this lawsuit explicitly define it as a principle (requirement) to complete a flight duty, once commenced, of a series of flights on crew schedule. On the other hand, it also states that a flight duty must be discontinued, as an exception to said principle, if captain judges that the

continuation of such flight duty is detrimental to the safety of flight operation. While the Work Rules clearly defines the principle but it does not provide any specific criteria for the exceptions. The Work Rules simply requires a pilot in command to make his own judgment as to whether such continuation of flight duty is detrimental to the safety of flight operation, considering the circumstance of flight operation, degree of fatigue of crewmembers and other conditions, in a circumstance where the limitation of “flight time” and/or “duty time” is already exceeded and flight crew is burdened with accumulation of fatigue. In the light of the above-mentioned remarks by the United States National Transportation Safety Board (NTSB), it has to be concluded that the provision of the Work Rules is not appropriate as a way of establishing “safety valve” to ensure the safety of flight operations.

2. Comparison with the Standards of Other Airlines (Principle of Completion of Flight Duty)

The following facts are acknowledged in accordance with Plaintiff’s evidences No. 334-(4) (pages 15, 52, 55), No. 340-(1) (page 9) and Defendant’s evidence No. 104-(3) (page 24):

United Airlines makes it a principle that the company can order the extension without the agreement of pilot up to 1 hour 30 minutes and that the extension cannot be made exceeding 14 hours 30 minutes of aggregated “duty time” even if pilot agrees. But the limitation by such aggregated “duty time” is not set forth on Trans-Pacific and Trans-Atlantic routes.

British Airways has a rule by which “duty time” can be extended over the limitation of “duty time” if captain can guarantee the safety of operation but that such extension over the standard limitation of “duty time” is, except for a case of emergency, up to maximum 3 hours.

Lufthansa German Airlines has labor agreement which leaves everything to the judgment of captain, but this rule is subject to the restriction by law which regulates the extension up to 2 hours.

3. Actual Circumstance in Flight Operations (Principle of Completion of Flight Duty)

The Plaintiff’s evidences No. 316 (pages 5 through 6 inclusive), No. 327 (pages 18 through 19 inclusive) and the result of the principal inquiry to Plaintiff Makoto Narita (Principal Protocol dated December 18, 1997, Items 121 through 144 inclusive) show the opinions of captains and copilots that a captain is in a position where it is difficult for him to decide to discontinue a flight duty under the

principle of completion of flight duty provided for in the Work Rules under this lawsuit.

4. The above-mentioned provision of the principle of completion of flight duty in the Work Rules under this lawsuit places the entire responsibility for the safety of flight operations on a pilot in command, who is in a position where it is difficult for him to decide to discontinue a flight duty, possibly in a situation where extreme difficulties may exist, without providing any specific criteria for his decision. And therefore, it has to be concluded that said provisions are not rational based on the study from scientific, technical and professional points of view in the light of the past cases of accidents and on the basis of the comparison with the standards of other airlines, that the said provision has a risk of adversely affecting the safety of flight operations and that there is no rationality in this provision.

5. Therefore, there are reasons in Plaintiffs' claim (limited to such Plaintiffs who have interests of confirmation) which seeks to confirm the non-existence of obligation in which flight crew shall complete a flight duty, if commenced, in an uninterrupted series of flights on crew schedule unless captain judges that the continuation of work is detrimental to the safety of flight operation upon consultation with other crewmembers and based on consideration of the situations of flight, the degree of fatigue on crewmembers and other circumstances.

Although Plaintiffs additionally seek to confirm the non-existence of obligation in which flight crew shall take flight duty (work) exceeding the respective limitation of the number of landings, "flight time" and "duty time" during one uninterrupted series of flights on crew schedule unless captain decides to discontinue after consulting with other crewmembers, the contents of such claim is, other than the confirmation of the non-existence of obligation as affirmed above, nothing but the non-existence of obligation of taking flight duty (working) exceeding the respective limitation of the number of landings, "flight time" and "duty time". These contents duplicate the contents that are separately claimed by Plaintiffs, and therefore, the claim of duplicated confirmation is not legitimate.

Chapter 25. Omitted

Chapter 26. Rationality of the Provisions in the Work Rules providing for Maximum Consecutive Days (5 days) of Flight Duty on Domestic Routes

1. Study from scientific, professional/technical points of view

(Maximum Consecutive days of Domestic Flight)

Formerly, number of consecutive days of flight duty on domestic routes was maximum three (3) days by work agreement. But this has been extended to maximum five (5) days by the alteration of Work Rules under this lawsuit. No evidences have been submitted to prove that the number of maximum consecutive days of flight duty on domestic routes under the altered Work Rules under this lawsuit (maximum 5 days) are reasonable from scientific, professional/technical points of view (no evidences themselves exist on this point).

2. Comparison to Other Airlines (Maximum Consecutive days of Domestic Flight)

In accordance with Plaintiff's evidence No. 358 (page 30), it is acknowledged that All Nippon Airways and Japan Air System have rules in which number of consecutive days of flight duty on domestic routes is provided for as maximum four (4) days and that such number of days includes standby days. Compared to them, maximum consecutive five (5) days of flight duty on domestic routes under Work Rules under this lawsuit is long in its duration.

3. Study of actual experiences of flight operation and from past cases of accidents (Maximum Consecutive days of Domestic Flight)

In accordance with Plaintiff's evidences No. 321 and No. 379 (pages 3 through 4 inclusive), although his case does not fit a pattern of maximum consecutive five (5) days of flight duty on domestic routes, the following are acknowledged with respect to a flight crew who experienced flight duty of four (4) consecutive days or nearly five (5) consecutive days including international routes:

- He suffered accumulated fatigue on and after the 4th day;
- During the flight duty on 4th day, he was prone to more small mistakes including mistakes in communication with air traffic control (ATC);

- During flight duty on the 5th duty, he felt lack of alertness in the phases of approach and landing.

The following is a case of accident in the United States of America (Guantanamo Bay accident):

- In a four-day flight duty pattern, the flight crew took off in the midnight of the 1st day and performed two (2) landings on the same day;

- After 11 hours of rest, they took off in the midnight of the following day and performed three (3) landings and made another take-off;

- The airplane crashed short of runway on their approach for their 4th landing;

- The “duty time” of three (3) crewmembers until the accident were 18 hours and the total “flight time” was approximately 9 hours.

Although this accident cannot be a direct precedence, it shows that the actual characteristics of an uninterrupted series of flights and the consecutive days of flight duty can combine to be a complex cause of accidents.

4. Rationality of the provisions in Work Rules setting forth maximum consecutive days (5 days) of flight duty on domestic routes

To evaluate the rationality of the provisions in working standards prescribing maximum consecutive days of flight duty on domestic routes, it is reasonable to study in a comprehensive manner with consideration to the limitations of “flight time” and “duty time” as well as the regulation on number of landings with respect to one uninterrupted series of flights.

Defendant’s maximum consecutive five (5) days of flight duty on domestic routes is longer in its duration than those of other airlines in Japan, and the Work Rules under this lawsuit does not include any such measures as:

- To apply more restricting standards than in the limitation of “flight time” and “duty time” with respect to work, especially in the case of flight duty of consecutive five (5) days, in connection with one uninterrupted flight duty on 4th and 5th day;

- To set forth special provisions for further limiting number of landings;

- To provide additional rest period,

Therefore, there is a risk of such crew scheduling where the flight duties of up to five (5) consecutive days and the flight duties scheduled close to the upper limits of “flight time” and “duty time” limitations

for one uninterrupted series of flights are combined without any reasonable restriction. Since the Defendant actually is assigning 4-day or 5-day consecutive flight duty including international flight after the alteration of the Work Rules, the possibility cannot be denied in which the flight schedules will be operated under above-mentioned combinations in the future. And since this is a matter of the rationality of provisions in working standard, the rationality cannot be acknowledged by the fact that Defendant does not presently operate at the upper ceiling of the limitations. No evidences have been seen to prove that the Defendant, before increasing the number of maximum consecutive days of flight duty by the alteration of the Work Rule, made detailed studies to ensure that the safety of flight operations will not be compromised in terms of the limitation of “flight time” and “duty time” as well as the regulation of the number of landings in one uninterrupted series of flights and the combined effects of these conditions.

It follows that the provisions in Work Rules under this lawsuit setting forth maximum consecutive five (5) days of flight duty on domestic routes can possibly compromise the safety of flight operations depending on how crew scheduling are performed and that these provisions are not rational.

The same as in 18-7 applies with respect to working standards concerning this point, and since it is reasonable to understand that the reasonable intentions of the two parties involved in labor contract are to tentatively maintain working standards which existed before the implementation of Work Rules under this lawsuit, it is rational to conclude that working standards concerning the consecutive days of flight duty on domestic route shall be maximum three (3) days.

5. Therefore, there are reasons in Plaintiffs’ claim (limited to such Plaintiffs who have interests of confirmation) which seeks to confirm the non-existence of obligation in which flight crew is required to take flight duty exceeding three (3) days of consecutive days on domestic route.

Chapter 27. Omitted

Chapter 28. The Rationality of the Alteration of the Limitation of “Flight Time” and “Duty Time” in the Work Rules for Operation of Three-Crew Cockpit Aircraft without Relief Crew

with One Scheduled Landing

As mentioned earlier, the Court does not acknowledge that the limitation of “flight time” and “duty time” for one scheduled landing in three-crew cockpit aircraft without relief crew prescribed in the revised Work Rules compromises the safety of flight operations.

Formerly, maximum “flight time” was 9 hours before the alteration of the Work Rules under this lawsuit. But it was extended by 2 hours to the maximum of 11 hours with the alteration of the Work Rules. Since the flights are being operated as mentioned above, there is no doubt that flight crews suffer disadvantages as compared to the condition of the former standard, and the degree of disadvantage must be substantial judging from the opinions/claims made by the flight crews on the basis of their actual experiences as mentioned above. And the disadvantage may possibly be added to by the fact that the altered Work Rule deals with flight time/duty time limitations in terms of a flight duty of a series of flights.

However, since the long-range operation without relief crew can be made possible by the extension of the maximum “flight time” with minimum crew to 11 hours by the alteration of that Work Rules, in the light of the business/financial requirements of the Defendant, the existence of the necessity of the change can be acknowledged.

And, with respect to the problems involved in long-range flight operations of three-crew cockpit aircraft without relief crew, since the existence of a flight engineer on board provides a certain amount of safety margin (degree of allowances for safety) and since there has been plenty experiences of such operation, it is not quite appropriate to conclude that flight operation of three-crew cockpit aircraft without relief crew in accordance with the flight time limitation of the revised Work Rules is detrimental to the safety of flight. Also the limitation of “flight time”(maximum 11 hours) is not outstandingly longer than the state standards of foreign countries and standards of other airlines. With respect to the rest period, the Work Rules requires that:

- Before a flight duty of a series of flights, a rest period of 12 consecutive hours shall be scheduled;
- If scheduled “flight time” is more than 9 hours but not exceeding 10 hours, 6 hours shall be added to the 12 hour rest period;

- If scheduled “flight time” is more than 10 hours but not exceeding 11 hours, 9 hours shall be added to the 12 hour rest period;
- If scheduled “flight time” is more than 11 hours, 12 hours shall be added to the 12 hour rest period;
- If a flight is scheduled to operate between 22:00 and 5:00 of the local time of the departure point, such duration of time shall be added to the rest period;

And therefore, measures were taken to alleviate the disadvantage caused by the extension of the limitation of “flight time” from former 9 hours to maximum 11 hours. It has to be noted, however, that the Work Rules allows the rest period to be shortened to the minimum of 10 hours if standard rest period cannot be provided because of such contingency as late arrival of aircraft etc. before the next flight duty of a series of flights. (If the rest period is less than the ten-twelfth of scheduled rest period, one extra holiday shall be given after returning to the base apart from normal holidays). For long-range flights with scheduled “flight time” exceeding 9 hours, there is no separate provision for increased (minimum) rest period commensurate with long flight hours. Therefore, if the arrival for layover is long delayed due to late arrival of aircraft etc., the rest period will become shortened by such amount of time of delay. These arrangements cannot be considered sufficient measure to alleviate the disadvantage of the extension of “flight time” to up to the maximum of 11 hours. If this provision for exception is taken into consideration, the limitation of “flight time” for three-crew cockpit aircraft without relief crew as the result of the alteration of the Work Rules can adversely affect the safety of flight operations relative to next flight duty following said rest period, and its rationality is questionable. However, it is reasonable to construe that this provision for exception is applicable only to the flights with scheduled “flight time” of less than 9 hours. That is to say, the altered Work Rules requires that if scheduled “flight time” exceeds 9 hours, additional rest period shall be provided, as mentioned above, in addition to the rest period of 12 consecutive hours which is to be scheduled before a flight duty of a series of flights. Thus it is appropriate to interpret that provisions in the Work Rules are designed to ensure the required rest period as above even in such cases of late arrival of aircraft etc.

As mentioned earlier, since a certain amount of safety margin (degree of allowances for safety) is provided (with the existence of a flight engineer on board) and in the light of the past experiences of such operation, it is not quite appropriate to conclude that flight operation of three-crew cockpit

aircraft without relief crew in accordance with the flight time limitation of the revised Work Rules is detrimental to the safety of flight. The “flight time” involved is not markedly longer than the state standards of foreign countries and the standards of other airlines. The rest period before departure is reasonably provided. When these points are considered, the rationality of the provision of the maximum “flight time” of 11 hours for three-crew cockpit aircraft without relief crew can be affirmed.

When all above is considered in a comprehensive manner, the Court concludes as follows.

-The alteration of the Work Rules involving the extension of maximum “flight time” to 11 hours for three-crew cockpit aircraft without relief crew creates substantial disadvantage for the flight crew.

-However, the provisions are rational and are based on the significant necessity of such a degree that associated disadvantage shall be endured in terms of judicial judgment.

The "duty time" limitation of the altered Work Rules for three-crew cockpit aircraft without relief crew is up to maximum 15 hours, and it can not be denied that this period of duty time is substantially longer than those of other airlines. The disadvantage suffered by flight crew is mainly caused by prolonged "flight time" in which flight crews is engaged in the operation of aircraft. The detailed content of the disadvantage caused by long "duty time" other than "flight time" is not exactly known except that working period is long. The "flight time" that is a major part of "duty time", as mentioned earlier, is not outstandingly longer than that of other airlines, and the rationality of the provision of the altered Work Rules prescribing the "flight time" limitation can be affirmed. Therefore it can be concluded that the rationality of the provision of the altered Work Rules prescribing the "duty time" limitation can be affirmed.

It follows that the alteration of the Work Rules involving the extension of maximum “duty time” to 15 hours for three-crew cockpit aircraft without relief crew is rational and is based on the significant necessity of such a degree that associated disadvantage shall be endured in terms of judicial judgment.

Chapter 29-34. Omitted

Chapter 35. Rationality of the Alteration of the Provisions concerning STANDBY in the Work Rules

1. In accordance with the Plaintiff's evidences No. 1 (pages 90, 91, 94), No. 220 (pages 45 through 46 inclusive) and No. 358 (pages 31, 33 through 38 inclusive), the Defendant's evidences No. 90, No. 114 (pages 14, 22, 35 through 37 inclusive), No. 120, No. 143; Testimony by witness Makoto Aoki (witness's protocol dated January 21, 1999, Items 88 through 89, 131, 183; witness's protocol dated March 4, 1999, Items 72 through 75 inclusive); the result of principal inquiry to Plaintiff Makoto Narita (principal's protocol dated December 18, 1997, Items 38 through 49 inclusive; principal's protocol dated March 4, 1998, Items 68 through 118 inclusive; the result of principal inquiry to Plaintiff Toshiro Hamada(principal's protocol dated March 25, 1999, Items 153 through 179 inclusive; principal's protocol dated May 13, 1999, Items 364 through 376), the following facts are affirmed:

(1) With respect to standby duty, former Work Agreement had the following provisions:

-1- International Flight

- a. Standby duty is assigned for specified flights.
- b. Period of standby duty shall be limited to maximum 12 hours within consecutive 24 hours. Standby duty commences 4 hours prior to scheduled departure time of the first flight for which standby duty is assigned and ends 4 hours after departure time of the last flight.
- c. Flight crew shall not perform next flight duty unless he takes 12 hours of rest after the end of standby duty.

-2- Domestic Flight

a. Standby Duty at Home

- (i) Period of standby duty at home is limited to maximum 18 hours.
- (ii) Flight crew shall not perform next flight duty unless he takes 6 hours of rest after the end of home standby duty.

b. Standby Duty at Airport

- (i) Standby duty at airport commences at the time when flight crew is required to report at the designated rest facility, and its period shall be limited to maximum 12 hours; provided, however, that the Company shall designate flight(s) for which he is required to take flight duty within 8 hours after the commencement of airport standby duty.

(ii) Flight crew shall not take next flight duty unless he takes 12 hours of rest after the end of company standby duty if standby duty in question shall not involve flight duty.

(iii) If he receives an assignment of actual flight duty during standby duty, he shall take flight duty even if such flight(s) is delayed.

(2) Although in the former Work Agreement, the standby period for international flights was 12 hours, the rule was that the utilization for actual flight of flight crew on standby duty should be based on designated flight(s) and the period of standby should commence 4 hours prior to scheduled departure time of the first flight for which standby duty was designated.. Therefore, it was possible for a flight crew on stand by duty to anticipate what (kind of) flight he would operate, and it was easy for him to prepare for such flight(s). The duration of home standby duty was 18 hours for domestic flights, and flights for which flight crew could be utilized were not specified. Under the former work agreement, the Defendant used to designate one specific flight and the Defendant began to designate two (2) specific flights in and after March 1985. The Defendant's understanding was that the Company could designate any flight scheduled between designated two (2) flights for which flight crew on standby had route qualification, but in actual practice, the utilization for actual flight was made from among flight crew on standby duty designated for that specific flight, and when the Defendant wanted to utilize a flight crew on standby duty for an actual flight scheduled to depart between the designated two flights, the Defendant explained that there were elements of request of work and asked for cooperation to take such flight duty. Also, the Defendant had a practice in which the Company designated two flights, the schedule and destination of which were the same as or similar to the subsequent flight duty that was assigned to a flight crew.

In the altered Work Rules the duration of standby period is 8 hours irrespective of international flights or domestic flights. It provides that the flight crew on standby duties are available for utilization for actual flights duties that commences between the time of start of standby duty until 24:00 local time of the same day. The Defendant discontinued the practice for international flights in which flights for which flight crew on standby will be utilized were restricted to those flights scheduled to depart between the departure times of two flight designated in advance. The Defendant also discontinued the practice in which the flight crews on standby duty with designated flights were utilized for actual flight

duties. This change was made in an attempt to reduce the number of necessary flight crews together with other alteration, and the reduction in necessary number of crew was achieved.

After the alteration of the Work Rules under this lawsuit, there was a case in which the Defendant instructed Plaintiff Toshiro Hamada at around 4:05 a.m. on October 10, 1998, who was on standby duty from 4:00 a.m. until 00:00 p.m., to take flight duty of a flight of which reporting time was around 5:00 a.m. Plaintiff Toshiro Hamada had no other choice but to report to airport without enough time to review information for the route of flight for which he was instructed to take flight duty. And since the predictability of flight utilization is lost, if the utilization of flight crew on standby becomes more frequent in the future, flight crews will find it increasingly difficult to adjust their physical condition for flight. In addition, for flight crew on home standby duty, while the single duration of standby duty at home has become substantially shorter and the burden is smaller, but on monthly basis, since the Company can schedule home standby duty up to the monthly limit of total hours including home standby duty and working hours for other work, it does not necessary follow that the burden of flight crew is alleviated on monthly basis if, in the future, the Defendant changes the current practice and increases the frequency of utilization of crew on standby duty for actual flights.

2. On the basis of above consideration, the duration of home standby duty has been substantially shortened by the alteration of the Work Rules, and the burden on the part of flight crews has been reduced. However, it does not necessary mean that the burden on flight crew is alleviated on monthly basis if, in the future, the Defendant changes the current practice and increase the frequency of utilization of flight crew on standby duty. With respect to international flights, the altered Work Rules provides that the flight crew on standby duties are available for utilization for actual flights duties that commences between the time of start of standby duty until 24:00 local time of the same day. The Defendant discontinued the practice for international flights in which flights for which flight crew on standby will be utilized were be restricted to those flights scheduled to depart between the departure times of two flight designated in advance. The Defendant also discontinued the practice in which the flight crews on standby duty with designated flights were primarily utilized for actual flight duties. Under these circumstances, the disadvantage for flight crew is substantial.

Standby duty forms an indispensable system which enables scheduled air carrier to perform its duty as a provider of public transportation service by enabling flight operations and by maintaining punctuality in such contingencies as bad weather, malfunction of aircraft and sudden illness of duty flight crew, and both labor and management have common understanding on this point. No evidence has been seen to prove that the utilization of crew on standby by the Defendant to date has been excessive or it has imposed particularly heavy burden on flight crew. However, after the alteration of Work Rules under this lawsuit, there was an actual instance in which the Defendant instructed Plaintiff Toshiro Hamada at around 4:05 a.m. on October 10, 1998, who was on standby duty from 4:00 a.m. until 00:00 p.m., to take flight duty of a flight of which reporting time was around 5:00 a.m. Plaintiff Toshiro Hamada had no other choice but to report to airport without enough time to review information with regard to the route of flight for which he was instructed to fly. Although no evidence has been seen to suggest that such situation is frequent now, the Defendant made the alteration of standby duty in an attempt to reduce the necessary number of flight crew together with other changes including the termination of designation of specific flights for standby duties, thus enabling more efficient and flexible operation and enhanced productivity of flight crew. In the light of the necessity from financial/business point of view as mentioned above, such necessity itself cannot be simply denied. However, considering the following facts that:

- The alteration of standby system was made in an attempt to reduce the necessary number of flight crew, and as a matter of fact, such reduction was achieved;
- The working standards concerning standby duty under the revised Work Rules, other than the provisions mentioned above, do not include any provisions to restrict flight(s) to be flown and the time for preparation is not provided;
- There was an actual instance, due to the alteration on above-mentioned point, in which flight crew had to report to airport without enough time to review information with regard to the route of flight.
- The Defendant currently utilizes flight crews on standby duty for assignment of actual flight not only in for the cases of contingencies, but also in such cases where, depending on available number of flight crew, the Defendant plans to operate extra flights upon requests from sales department or when the Defendant wants to change the type of aircraft to meet actual number of passengers based on

reservation status.

In an event in the future where the Defendant is further pressed to cut the number of flight crews, if the Defendant changes current practice and increases the frequency of utilizing flight crews on standby duties and if the utilization of standby crew, which is originally an exceptional measure, becomes a routine practice by being repeated, continued and further expanded, it is possible that scheduling of flight crew might deviate from its original nature and might become the one which imposes permanent difficulties on flight crew in that:

- Inconvenience will increase because of lost predictability.
- It will become difficult for flight crew to adjust/maintain physical condition for flight duties.

Since the alteration of the Work Rules was made for main purposes of increased efficiency and human productivity, such concern is further endorsed. The reason for this is that the Work Rules does not incorporate any reasonable restriction for standby duties, and it points to the fact that the rationality of the provisions of the Work Rules as working standards is questionable.

Therefore, the rationality of the above-mentioned provisions in the Work Rules under this lawsuit cannot be affirmed. Although the necessity of the change is understandable from financial/business point of view, the change of the above-mentioned provisions cannot be considered appropriate as measures for corporate restructuring. And since the rationality of provisions per se cannot be affirmed, without the need for the consideration of the fact that the flight crews are subject to disadvantages as compared to the past, the Court concludes that the changes of the Work Rules in these provisions are not rational changes based on significant necessity.

Since Plaintiff Takuya Takahashi and other 11 plaintiffs were flight crew trainee as of November 1, 1993 when the Work Rules under this lawsuit was revised and became flight crew later, it is reasonable to conclude that they were subject to the Work Rules under this lawsuit at the time when they became flight crew. Since the rationality of the above-mentioned provisions in the Work Rules cannot be affirmed, the claim on this point of Plaintiffs (limiting to those who have interest of confirmation), including Plaintiff Takuya Takahashi and other 11 plaintiffs, is reasonable.

3. Plaintiff's evidence No. 358 and the overall proceedings show that the scope of work for which

flight crew is utilized from home standby duty has been expanded: formerly the scope of work was limited to flight duties but after the alteration of the Work Rules, the scope was expanded to include flight simulator duty and works other than airport standby duty. Although it is true that the nature of work is different from the original nature of home standby duty, it cannot be acknowledged that utilization for flight simulator duty or work other than company standby duty is unjustifiable, and since disadvantage suffered by flight crew is not considered to be substantial for flight crew, such assignment cannot be considered as disadvantageous alteration. Therefore, claim by Plaintiffs (limiting to those who have interest of confirmation) on this point is not reasonable.

Chapter 36. Omitted

REASONS FOR THE COURT JUDGMENT - OFFICIAL SUMMARY
(In the official Summary issued by Tokyo District Court)

In this lawsuit, the plaintiffs whose professions are first officers and flight engineers seek the judgment of the court that the work rules changed by the defendant are not valid, that the working condition of the abrogated work agreement prevails, and that no obligation exists on the part of the plaintiffs to perform duties beyond the scope of the abrogated work agreement.

Reasons for the ruling:

For the sake of safe flight operations, while it is necessary to ensure that the performance of aircraft, aircraft maintenance and the flying skill of flight crew etc. meet required quality standards, it is also necessary to ensure that the performance of flight crew do not suffer any degradation/deficiency through the accumulation of fatigue. Therefore, the Civil Aeronautics Law regulates the flight time and the non-flight duty time for the flight crew by requiring the operators to formulate flight crew schedules based on the standards specified in each operator's Operation Manual for which approval by the Minister of the Ministry of Transport is required. However, the degree and process of flight crew fatigue can be greatly and diversely affected by a variety of separate and specific circumstances of different flights including flight schedule diagrams(timetables). Therefore scheduled air carrier operators must not assume that the safety of flight is ensured as long as they comply with the standards specified in their Operation Manuals approved by the Minister of the Ministry of Transport. It is necessary for scheduled air carrier operators to formulate practical and appropriate flight crew schedules with due consideration to separate and specific circumstances of different flights using the standards specified in their Operation Manuals as a framework of scheduling. Apart from the regulations by Civil Aeronautics Law, scheduled air carrier operators are responsible for the safety of passengers on the basis of passenger transportation contracts, and they are also responsible for the safety of flight crew on the basis of labor contracts. Therefore the aforementioned interpretation is rational/reasonable from this point of view as well.

If an operator establishes or changes a standard of working condition by creating or changing work rules, it enables the operator to issue a work order to the fullest extent within that standard, and it will relate directly to the safety of flight operations. Therefore the rationality/reasonableness of the establishment or change of work rule can be affirmed only when there is adequate rational/reasonable evidence/grounds to prove that in practicality the flight operations do not suffer any safety deficiency/problem if flight crew fly for the length of flight time specified in the proposed work rule taking into consideration the fatigue accumulated through duty or work performed by the flight crew prior to that flight.

In order to determine whether the rationality/reasonableness of the establishment or change of work rules can be affirmed or not, examination and judgment have to be made from scientific and professional/technical points of view to determine;

- whether the content of the work rule is rational/reasonable for the purpose of governing the specific work involved,
- and whether the work rule is not inferior to the work rules of other airlines (including foreign airlines),

- and whether the work rule is a rational/reasonable one without any particular defects/deficiencies/problems when it is reviewed in conjunction to the past experiences of actual flights and the actual instances of aircraft accidents in the past.

However, in recent years, while the airline industry has had to adopt 24-hour round-the-clock operation to meet social and economic demands, the improvement of aircraft performance has enabled prolonged hours of uninterrupted flight with a less number of minimum required flight crew in the flight deck. (Note: This refers to aircraft without flight engineers.) This has actually lead to a situation where the application of conventional standards can no longer meet the actual operations.

Then, in the cases where conventional standards are exceeded, it can be concluded that such operation is based on rational/reasonable grounds provided that;

- there is an adequate warrant/evidence from scientific and professional/technical points of view that the content of the work rule is rational/reasonable enough to govern the specific work involved,

and

- the employer (scheduled air carrier operator), after adequately evaluating the safety of operation in advance, takes effective and appropriate measures against risks/dangers,

and

- the employer (scheduled air carrier operator) decides the content in such a way that it is within a reasonable extent within which the safety of flight is not compromised in any way,

and

- after implementing the work rule, the employer (scheduled air carrier operator) establishes a feed-back system by which the operator gathers necessary information and make assessment of the safety and take appropriate corrective actions whenever there is any doubt/concern/problem, and such feed-back system is determined to be functioning effectively.

To affirm the rationality/reasonableness of the cases where conventional standards are exceeded, evaluation and judgment have to be made from the following points of view:

- To what extent the employer (scheduled air carrier operator), before establishing the work rule, took into consideration the separate and specific circumstances of different flights as described above, and upon what grounds the employer decided the content of the work rule.

- The actual situations of flight operations based on the implemented work rule.

- Whether a feed-back system is established and maintained in such a way that the actual situation of flight operations conducted based on the work rule is evaluated, post-flight appraisal of the safety of flight is performed, and appropriate corrective actions are taken whenever there is any doubt/concern/problem.

-Whether such feed-back system is determined to be functioning effectively.

As to a change of work rules where such a change is detrimental to the interests of employees, as the judicial precedents of Supreme Court rulings show, judgments have to be made as to whether adequate rationality exists, even with due consideration of the detriments to the interest of the employees, to affirm that a particular clause (in a work rule) has judicially binding norm in the relationship between the employer and the employee from standpoints of the necessity of the change and the rationality/reasonableness of the contents of the work rule after such change.

If the contents of the changed work rule is such that the hours of service of flight duty is so excessively

long as to be detrimental to the safety of flight, the rationality/reasonableness of the content of the work rule is denied/disaffirmed. Furthermore, since more than permissible amount of risks to the safety of life and body of flight crew exists, the degree of detriments to the interest of the employees is extraordinarily large. Therefore, no rationality/reasonableness exists to affirm the judicially binding norm in the implemented work rule even if such changes had been highly necessary, and it has to be concluded that the changed work rule has no legal binding power for the employees who are opposed to the changes of the work rules.

Therefore, no matter whether it is in the case of formulation of new work rules or in the case of changes of existing work rules, the rationality/reasonableness of the new rules or the changed rules has to be judged comprehensively from the aforementioned points of view.

The defendant changed the work rules of flight crewmembers (the work rules under this lawsuit), and implemented a flight time/duty time limitation where the maximum flight time is 11 hours and the maximum duty time is 15 hours depending on the time of day of reporting(company show-up). This flight time/duty time limitation, with respect to the two-pilot cockpit aircraft, is outstandingly long in duration as compared with those of other airlines (including foreign airlines), and it is not compatible with the prevailing standards.

Before the defendant changed the work rules, after receiving a official notice/decreed from the Chief of Technical Department of the Ministry of Transport, the defendant changed its Operations Manual to replicate the content of the official notice, and the defendant made the change of work rules pertaining to this lawsuit on the basis of the changed Operations Manual.

When the defendant decided the content of the work rule, the defendant did not consider separate and specific circumstances of different flights, and it relied solely on the Final Report by the Study Committee on which the aforementioned official notice was based.

(Note: The Study Committee is a committee (defunct) established in 1990 for the study of the crew complement for long range flight operations by JAPA- Japan Aircraft Pilot Association).

The Study Committee concluded that the amount of workload of the flight crews of two-crew cockpit aircraft without relief crew is equal to or lower than the amount of workload of the flight crew of three-crew cockpit aircraft without relief crew, and the Committee proposed a maximum scheduled flight time of 12 hours for two-crew aircraft on the basis of past experiences of extended range operations of three-crew aircraft. (Note: No crew augmentation/minimum crew/ one landing)

However, a long range flight across multiple time zones causes disruption of circadian rhythms (body clock) of flight crew, and it also causes sleep disorder (sleep deficit). With a prolonged uninterrupted flight operation, the level of the performance and alertness of flight crew decline as time progresses, and the problem of flight crew complacency (unique to long-range flights) arises. Therefore, having flight crew fly a long-range flight without any rest period induces a risk of serious errors by flight crews. The levels of performance and the alertness of flight crew start to decline after 8 to 9 hours of flight after take off. On new-generation two-crew cockpit aircraft with minimum crew, when some unusual/abnormal conditions occur, the amount of workload of captain or copilot is larger than that of three-crew cockpit aircraft with minimum crew. Therefore, if some unusual/abnormal conditions occur on two-crew cockpit aircraft with minimum crew after 8 to 9 hours of flight after take off, the level of safety of two-crew cockpit aircraft is inferior to that of three-crew cockpit aircraft.

Therefore, the past records/experiences of long-range flights of three-crew cockpit aircraft with minimum crew do not constitute any evidence/grounds for the safety of flight of two-crew cockpit aircraft with minimum crew. Thus the proposal made by the Study Committee is not based on any rational grounds, and the proposal is not rational/reasonable.

Thus the work rule pertaining to this lawsuit is not rational/reasonable from scientific, professional/technical points of view. It is disaffirmed that the defendant made adequate study of the level of safety in advance, and it is disaffirmed that the defendant decided the content in such a way that the safety of flight is not compromised.

A feed-back system is established and maintained in such a way that, after the implementation of the work rule, the operator gathers necessary information and make assessment of safety and take appropriate corrective actions whenever there is any doubt/concern/problem. However, the Court has concluded that the operator's feedback system is not functioning. Therefore, the Court does not affirm the rationality/reasonableness of the content of the pertaining provisions of the work rule.

Under this kind of circumstances, it is rational/reasonable to understand that the reasonable intentions of the two parties involved in labor contract are to retain/maintain the working conditions which existed before the implementation of the work rule pertaining to this lawsuit.

Therefore the Court affirms as are described in the main text 2-1.

(Note: refer to the excerpt of court ruling in the first section of this document)

With respect to other claims by the plaintiffs, as are stated in the main text of the ruling, those claims which are not legitimate for such reasons as the lack of benefit from the court ruling are rejected. For legitimate claims, the Courts studied them from the aforementioned standpoints. Among the claims made by the plaintiffs, the Court affirms the non-existence of the obligation in the areas of the flight time/duty time limitation for minimum crew with two scheduled landings, the company's principle of completion of flight, the number of consecutive days of domestic flights, and the standby duty to the extent stated in the main text of the ruling. The rest of the claims are dismissed for the lack of reasons.

----The end of the reasons for the judgment in the SUMMARY ----

(The English translation and notes by Japan Airlines Flight Crew Union. November 29, 1999)

Japan Airlines Flight/Duty time limitations - Comparison of the Imposed company Work Rules and the Abrogated Work (Labor) Agreements

Company Imposed Flight Time and Duty Time limitations

AFTER November 1, 1993 Based on the Work Rules unilaterally implemented by JAL

"Single Complement" i.e. Minimum Crew

| Number of landings | 1 landing | | 2 landings | | 3 landings | | 4 landings | |
|--------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|
| | Maximum Flight Time | Maximum Duty Time | Maximum Flight Time | Maximum Duty Time | Maximum Flight Time | Maximum Duty Time | Maximum Flight Time | Maximum Duty Time |
| 06:00 to 07:59 | 10:30 | 14:30 | 09:00 | 13:30 | 07:30 | 12:00 | 06:00 | 11:00 |
| 08:00 to 14:59 | 11:00 | 15:00 | 09:30 | 14:00 | 07:30 | 12:00 | 06:00 | 11:00 |
| 15:00 to 21:59 | 10:30 | 14:30 | 09:00 | 13:30 | 07:30 | 12:00 | 06:00 | 11:00 |
| 22:00 to 05:59 | 09:00 | 13:00 | 08:30 | 13:00 | 07:30 | 12:00 | 06:00 | 11:00 |

"Multiple Complement" i.e. Augmented Crew

(2 captains + 1 copilot. 2 flight engineers on 3 crew aircraft)

| | |
|---------------------|-------------------|
| Maximum Flight Time | Maximum Duty Time |
| 15:00 | 20:00 |

"Double Complement" i.e. Augmented Crew

(2 captains + 2 copilots. 2 flight engineers on 3 crew aircraft)

"Double complement" is abolished on company-imposed work rule.

| | |
|---------------------|-------------------|
| Maximum Flight Time | Maximum Duty Time |
| Not applicable | |

These limitations apply for monthly schedule planning purposes only, and newly implemented "Principle of completion of flight duty" clause governs once a flight departs from the boarding gate.

According to the newly implemented "Principle of completion of flight duty", as a principle, flight crew must complete a flight duty to the final destination once the airplane leaves the departure point. However, the pilot

in command must discontinue the flight if he considers that safety may be jeopardized by extended period of flight duty upon consideration of operational situations, crew fatigue etc. and with consultation with other crewmembers.

Flight time and Duty Time limitations BEFORE November 1, 1993

BASED ON THE WORK AGREEMENTS UNILATERALLY REVOKED BY JAL IN 1993

"Single complement" i.e. Minimum Crew

| Number of landings | 1 landing | | 2 landings | | 3 landings | | 4 landings | |
|--|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|
| Maximum Flight and Duty time period (regardless of reporting time) | Maximum Flight Time | Maximum Duty Time | Maximum Flight Time | Maximum Duty Time | Maximum Flight Time | Maximum Duty Time | Maximum Flight Time | Maximum Duty Time |
| | 09:00 | 13:00 | 08:30 | 13:00 | 07:30 | 12:00 | 06:00 | 10:00 |

"Multiple Complement" i.e. Augmented Crew

| | |
|---------------------|-------------------|
| Maximum Flight Time | Maximum Duty Time |
| 14:00 | 20:00 |

"Double Complement" i.e. Augmented Crew

(2 captains + 2 copilots. 2 flight engineers on 3 crew aircraft)

| | |
|---------------------|-------------------|
| Maximum Flight Time | Maximum Duty Time |
| 15:00 | 20:00 |

Definitions:

The "flight time" is between block-out and block-in.

The "duty time" is from company show-up to the completion of post flight duty.

"Single crew complement" is minimum crew complement without relief crew. (without crew augmentation).

"Multiple crew complement" includes relief crews (One additional captain. And one additional flight engineer in three-crew aircraft)

"Double crew complement" includes relief crews (One additional captain and One additional copilot. And one additional flight engineer in three-crew cockpit aircraft.)

CHRONOLOGY

| | |
|---------------|--|
| February 1990 | “With the advent of the introduction of B747-400 into the Pacific Route in August 1990, Japan Civil Aviation Bureau (JCAB) decided to enact standards for the flight time limitations and crew complement for long range operations of air transport services.” (quoted from JAPA report) Prior to that, there had been no specific national standard, and the Japanese air carriers had stipulated their own flight and duty time limitations in their operations manuals approved by JCAB. |
| May 1990 | JCAB requested Japan Aircraft Pilot Association (JAPA) to review this matter. (quoted from JAPA report) |
| May 1990 | JAPA established “Committee on the crew complement of long range flight operations”, and it started the study of flight time limitations within consecutive 24-hour period. |
| June 25, 1990 | The JAPA Committee submitted an interim report to JCAB in which it proposed 12 hours for three-crew aircraft and "tentatively" 8 hours for two-crew aircraft as flight time limitations based on US current standard. In the interim report, JAPA mentioned that 8-hour limitation is tentative and much too conservative a figure because the FAA rule had been made some forty years before when recent new-generation reduced workload two-crew aircraft capable of long range international flight had been non-existent. It also stated that JAPA would propose extension of two-crew flight time limitation after comparison and analysis of workload and fatigue between two-crew and three-crew aircraft. JAPA further mentioned that, in terms of flight time limitation for recently developed two-crew aircraft, it might not be appropriate to differentiate two-crew and three-crew aircraft, and that if the workload and crew fatigue of two-crew aircraft were found comparable, the flight time limitation could be extended to match that of three-crew aircraft. |
| June 26, 1990 | A day after the JAPA interim report was submitted to Japan Civil Aviation Bureau, JCAB issued a official notice stipulating flight time limitation of 12 hours for three-crew aircraft and 8 hours for two-crew aircraft as a national standard. |

| | |
|-------------------|---|
| August 1,1990 | Japan Airlines revised its Operations Manual and extended the flight time limitation for three-crew aircraft from former 10 hours to 12 hours "to match the national standard (quote)". This revision was accompanied by the note from the Director of Flight Operations mentioning that the new standard would not be applied for the time being. |
| Feb. - June 1992 | JAPA conducted crew-fatigue study on Pacific routes with participation of Japan Airlines and All Nippon Airways with augmented crew complement (with one exception of non-augmented crew flight). |
| Sept. 17, 1992 | Teiki Koukuu Kyokai (association of Japanese airline management) including Japan Airlines, All Nippon Airways and Japan Air System submitted to JCAB a petition calling for deregulation of safety regulations. The first item on the 32-item petition was "the extension of flight time limitation for two-crew aircraft to match that of three-crew aircraft". |
| December 17, 1992 | JAPA submitted to JCAB the final report of the study concluding that, -Workload and crew fatigue levels of two-crew and three crew aircraft are comparable judging from the results of workload analysis conducted in the certification processes of new-generation two-crew aircraft, the results of the field measurement/comparison of crew fatigue as well as current limitations in effect in other countries. -Therefore, it is not necessary to make two-crew flight time limitation more stringent than that of three-crew aircraft. -Therefore, it is appropriate that the flight time limitation and crew complement for new-generation two-crew aircraft engaged in international long-range operations should be the same as those being applied to three-crew aircraft. |
| December 21, 1992 | Four days after the JAPA final report was submitted to JCAB, The JCAB issued an amendment of official notice stipulating 12 hours as flight time limitation for two-crew aircraft. |
| Feb. 20, 1993 | Japan Airlines revised its Operations Manual to establish 12 hours as flight time limitation for two-crew aircraft which was 4 hours longer than the previous standard. |
| Feb. 26, 1993 | Japan Airlines presented to Japan Airlines Flight Crew Union a new work agreement proposal, extremely inferior to the former one, which would enable non-augmented flight up to 11 hour block time (two-hour extension for three-crew aircraft and four hour extension for two-crew aircraft over the agreement that existed then.) |
| July 22, 1993 | Japan Airlines notified Flight Crew Union that it would revoke the work agreement with the union (including flight/duty time limitations) that had been in effect for the preceding twenty years as of the end of October 1993. (Japanese regulation requires 90-day prior notice.) |
| November 1, 1993 | Following the revocation of the work agreement with Flight Crew Union, Japan Airlines unilaterally established new work rules identical with the proposed new agreement to which Flight Crew Union did not agree, and immediately implemented them in flight operations. Japan Airlines asserted that with no agreement in effect, the only applicable rule was the company work rules. |
| April 22, 1994 | Japan Airlines Flight Crew Union filed a civil lawsuit at Tokyo District Court calling for the Court's judgment that there were no obligations on the part of union members to comply with the work rules conditions unilaterally implemented by Japan Airlines. |
| November 25, 1999 | Tokyo District Court delivered court ruling. |
| December 7, 1999 | Japan Airlines appealed. |

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