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भारत सरकार
नागर विमानन विभाग
महानिदेशक नागर विमानन का कार्यालय
सफदरजंग एयरपोर्ट के सामने
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Sub: Controlled Rest

1.SCOPE

This document contains procedures for exercising Controlled Rest on the Flight Deck.

2.OVERVIEW

Controlled rest on the flight deck is an effective fatigue mitigation tool for flight crews. It is a way of managing unavoidable excessive tiredness in-flight is through the use of Controlled Rest on the flight deck. This is commonly referred to as "Cockpit Napping" and involves the use of short naps by one pilot, during low workload periods of the cruise, whilst seated at the controls of the aircraft. The remaining pilot assumes the roles of PF and PM simultaneously and monitors the aircraft and its systems.

Proper rest and correct rostering practices are essential; **Controlled Rest shall not be used as a scheduling tool.** It is not a substitute for proper pre-flight sleep or for normal crew augmentation, but intended as a response to unexpected fatigue experienced during operations. In summary, Controlled Rest is not a means of deferring duty or extending a flight duty period. Controlled Rest is not intended to reduce sleep debt, rather it is an option should tiredness overcome an otherwise well-rested and prepared crew. Controlled rest is one more element in a fatigue management program and another line of defense to manage fatigue risks. Controlled rest should be used with other onboard fatigue management countermeasures such as physical exercise, bright cockpit illumination at appropriate times, balanced eating, consuming fluids and intellectual activity.

Controlled rest is in line with industry best practice. Many regulatory bodies such as ICAO Doc 9966 on Fatigue Risk Management Systems, EU-OPS, FAA, UK CAA, Canadian CAA, Hong Kong CAA etc. currently endorse controlled rest, and the practice is a formal procedure in many airlines. The NASA research has stated that "Naps have a beneficial effect on performance and may be the most effective countermeasure against fatigue at work". It is said that **naps of only 25 minutes can improve performance for hours afterwards.**

3. PROCEDURE

The following procedures shall be observed for application of controlled rest on the flight deck :

- 1) Controlled rest should be used on a flight sector duration of 3 hours or more, provided the following restrictions are followed;
- 2) Controlled rest must be taken at the discretion of the Captain and by **only one flight crew** at a time in his operating seat
- 3) Controlled rest must be used during periods of low workload in **cruise** flight when weather conditions are benign and weather-related deviation is not required;
- 4) Controlled rest shall commence after completion of Top of Climb (TOC) scan and will terminate 30 minutes before planned Top of Descent;
- 5) Controlled rest shall not be longer than **40 minutes** with another 20 minutes for operational orientation before resuming flight deck duties; this 20 minutes may be part of 30 minutes prior to TOD as mentioned in 4) above;
- 6) Controlled rest shall not be used over the flight segments that require the use of escape routes, over flight plan segment that transit multiple ATC environments, while manual fuel transfer to fuel balancing is taking place or any other operational requirement;
- 7) If the Pilot-in-command requires, the rest may be terminated at any time. He should define criteria for when his rest should be interrupted;
- 8) Prior to undertaking controlled rest, a short period of time shall be allowed for rest **preparation** (approximately 5 minutes). This should include an operational briefing, completion of tasks in progress, and attention to any physiological needs of either crew member;
- 9) The resting pilot shall keep his seat belt and harness fastened and move the seat aft to such a position that unintentional interference with the control is minimised;
- 10) During controlled rest, the non-resting pilot must perform the duties of the PF and the PM, be able to exercise control of the aircraft at all times and maintain full situational awareness of his surroundings. The non-resting pilot cannot leave his seat for any reason, including physiological breaks;
- 11) During controlled rest, the non-resting pilot shall keep his seat belt and harness fastened and wear a headset with the cockpit speaker normal volume;
- 12) **Alert Management** : While undertaking controlled rest, establish procedures to maintain alertness of non-resting flight crew members. The Captain shall inform the CCIC of the intention of the flight crew member to take controlled rest, and of the time of the end of that rest. The CCIC must establish a frequent check on the Flight crew by means of the interphone system. Preferably, and in order not to disturb the resting crew member, the non-resting Flight crew member should call the Cabin crew approximately every 20 minutes (night) or 30 minutes (day). The CCIC shall call the non-resting Flight crew member or shall make a physical check if no communication has been established in the given time.
- 13) In the event of any abnormal condition, the non resting pilot shall wake the resting pilot;

- 14) Any system intervention which would normally require a cross check according to multi crew principles should be avoided until the resting crew member resumes his duties;
- 15) The autopilot and auto-thrust systems shall be operational;
- 16) LNAV / NAV is the preferred lateral mode during controlled rest. FMS / FMGS manipulations must be kept to a minimum;
- 17) Altitude changes are not permitted during controlled rest;
- 18) The resting pilot may use equipment such as eye shades, earplugs and neck support;
- 19) **Post Rest Period** : At the end of a controlled rest period, the non-resting crew member shall conduct a full operational briefing to the flight crew member that was resting which should include at least the following :
 - Route progress, ETAs, estimated and actual FOB figures;
 - Aircraft status;
 - En-route and terminal weather;
 - Operational occurrences during the rest period.

Note: *On longer sectors, subject to the restrictions above, flight crew may take more than one rest period.*