



REPÚBLICA DE ANGOLA
MINISTÉRIO DOS TRANSPORTES
INSTITUTO NACIONAL DE INVESTIGAÇÃO E PREVENÇÃO DE ACIDENTES DE TRANSPORTES
INIPAT

INSTRUCTIVE N.º I005M/INIPAT/25

ON

GUIDELINES FOR READING AND ANALYZING VOYAGE DATA RECORDER RECORDS



INSTI005M/INIPAT/25



REPÚBLICA DE ANGOLA
MINISTÉRIO DOS TRANSPORTES

INST
I005M/INIPAT/25
15 APR. 2025

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FOREWORD

April 15, 2025

This Instruction is a technical document intended to regulate the guidelines for reading and analyzing voyage data recorder logs in force at the National Institute for Transport Accident Investigation and Prevention (INIPAT). This instruction was produced to assist and provide the information, policies, and procedures necessary for reading and analyzing voyage data recorder logs, both for technical personnel working at INIPAT and for the Angolan aviation industry.

All personnel assigned to perform tasks under this Instruction must comply with the policies and procedures contained therein, aiming to comply with the precepts of Angolan maritime legislation and the standards and practices of the International Maritime Organization's Accident Investigation Code on this subject. All other relevant working documents related to these specific tasks and responsibilities will also be considered.

If any technical guide conflicts with this instruction, the INIPAT Board of Directors must be notified in writing so that it can make appropriate decisions on the matter. INIPAT's goal is to produce technical documents that empower technical personnel involved in processing information related to the reading and analysis of voyage data recorder logs.

This instruction will be treated as a dynamic document subject to revision based on amendments to Angolan maritime legislation and updates to IMO standards and recommended practices on operational safety, with particular emphasis on the IMO Accident Investigation Code. The INIPAT Board of Directors is responsible for its regular updating.

Finally, it is important to emphasize that all recipients and users of this instruction are invited to submit ideas or proposals they consider relevant for adapting and updating this instruction.

Approved by:



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INTRODUCTION

There is a need to establish requirements for reading and analyzing voyage data recorders under the responsibility of the Angolan State;

Considering the need to comply with IMO standards and recommended practices contained in the Accident Investigation Code (MSC-255(84)), which require Contracting States to read and analyze voyage data recorders of ships or vessels involved in serious accidents and incidents under the responsibility of the Angolan State;

Considering that the Angolan Merchant Marine, Ports, and Related Activities Law establishes the mandatory compliance with the standards and recommendations of the International Maritime Organization (IMO), of which the Angolan State is a full member;

Under the provisions of the Merchant Marine, Ports, and Related Activities Law, the National Institute for Transport Accident Investigation and Prevention determines the following:

Article 1
(Purpose)

This instruction aims to establish the requirements of the Republic of Angola regarding the reading and analysis of voyage data recorders of civilian ships or vessels involved in accidents and incidents throughout the national territory and abroad with civilian ships or vessels registered in Angola.

Article 2
(Scope)

This instruction is mandatory for all persons acting on behalf of the National Institute for Transport Accident Investigation (INIPAT) in maritime accident and incident investigations conducted under the responsibility of the Republic of Angola.

Article 3
(Procedures)

To ensure compliance with the purposes of this Instruction, the following procedures must be observed:



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PART A: INITIAL RESPONSE

5.001 – DECISION ON THE LOCATION FOR READING AND ANALYZING TRAVEL DATA RECORDER RECORDS

- (a) In the event of a major incident, one of the issues to which the National Institute for Transport Accident Investigation and Prevention must respond immediately is the location for reading and analyzing travel data recorder records.
- (b) The National Institute for Transport Accident Investigation and Prevention must create the conditions for reading and analyzing travel data recorder records as soon as possible after an accident or serious incident, because immediate identification of problem areas allows for the issuance of operational safety recommendations that may be necessary to prevent similar occurrences.

5.003 – REQUEST FOR ASSISTANCE IN READING AND ANALYZING TRAVEL DATA RECORDER RECORDS

- (a) Angola, not having its own facilities for reading and analyzing travel data recorder records, must, whenever any accident or incident investigation requires this need, request assistance from other States.
- (b) The National Institute for Investigation and Prevention of Transport Accidents, when instituting and conducting an accident or incident investigation, must expeditiously make arrangements for reading travel data recorder records using a suitable reading facility.

PART B: CHOOSING THE FACILITY (LABORATORY) FOR READING AND ANALYSIS

5.005 – CHOOSING THE STATE FOR READING AND ANALYSIS

- (a) Angola, as the State conducting the investigation, may request assistance from any State that, in its opinion, can best serve the purposes of the investigation.
- (b) Standard manufacturer equipment and reading programs typically used by shipowners and ship/vessel maintenance organizations are not considered adequate to meet the complexity of an investigation.
- (c) In cases of damage to voyage data recorders, special techniques are required for recovery and analysis of the records.

5.007 – CAPABILITY OF READING FACILITIES

- (a) The reading facilities for voyage data recorders must be capable of:
 - (1) Disassembling and reading recorders, even those that have suffered substantial damage;
 - (2) Reproducing the recording/memory of the original module without the need to use a copy of the manufacturer's device or the recorder case that was involved in the accident or incident;



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- (3) Manual analysis of binary numbers from digital playback of voyage data recorders;
- (4) Digitally enhance and filter voice recordings using appropriate programs;
- (5) Graphically analyze the data, derive additional parameters not explicitly recorded, validate the data through cross-checks, and use other analytical methods to determine data accuracy and limitations.

PART C: PARTICIPATION OF STATES OF MANUFACTURE, DESIGN, AND SHIPOWNER

5.009 – PARTICIPATION OF THE STATE OF MANUFACTURE OR DESIGN

- (a) The State of Manufacture or Design has responsibility for the seaworthiness and expertise normally required for reading and analyzing voyage data recorder information;
- (b) The State of Manufacture or Design must have a representative present when reading and analyzing voyage data recorder records is performed in another State.

5.011 – SHIPOWNER'S STATE INVOLVEMENT

- (a) The Shipowner's State has legal responsibilities regarding maritime operations and can provide expertise on operational issues that may be specific to the shipowner.
- (b) The Shipowner's State should also have a representative present when the recorder logs are read and analyzed.

PART D: RECOMMENDED PROCEDURES

5.013 – VOICE AND GRAPHIC RECORDS OF THE SEA VOYAGE

- (a) Voice and graphic records should be read in the same facility (laboratory) because they contain additional data that can help validate each record and determine timing and synchronization.
- (b) Voyage data recorders should not be opened or operated, and the original records should not be copied (particularly not by high-speed devices) before reading due to the risk of damaging the records.

5.015 – RECORD READING FACILITY (LABORATORY)

- (a) The facility where the voyage data recorder logs are read for another State must be given the opportunity to comment on the Final Report to ensure that the analysis of the voyage data recorder log characteristics has been taken into account;
- (b) The facility where the voyage data recorder logs are read may request the expertise of the ship or vessel manufacturer and the operator to verify the data calibration and validate the recorded information.



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5.017 – THE STATE CONDUCTING THE INVESTIGATION

- (a) The State conducting the investigation may leave the original records or copies thereof with the facility that provided them for reading until the conclusion of the investigation, to facilitate, in a timely manner, the resolution of questions or clarifications, taking into account that the facility has adequate security procedures to safeguard and protect the records.

Article 4

(Final Provisions)

1. Cases not covered by this Instruction will be resolved by the Board of Directors of the National Institute for Transport Accident Investigation and Prevention (INIPAT).
2. This Instruction supersedes any INIPAT document on guidelines for reading and analyzing trip data recorder records and comes into effect immediately.

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