



ARMY POLYTECHNIC SCHOOL

DEPARTMENT OF LANGUAGES

APPLIED LINGUISTICS IN ENGLISH CAREER

TITLE:

**STUDY OF FLIGHT OPERATIONS AND AERONAUTICAL
INFORMATION SERVICE AREAS AT THE COTOPAXI
INTERNATIONAL AIRPORT TO DETERMINE THE
AERONAUTICAL TECHNICAL ENGLISH REQUIREMENTS
FROM OCTOBER- 2009 TO JANUARY-2010**

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QUITO – ECUADOR

CERTIFICATE

We, Dr. Maria Eugenia Arcos, Lic. Marcos Morales Director, and Co-Director are pleased to certify that the Research Project under the title “Study of Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport to determine the aeronautical technical English requirements from October- 2009 to January-2010”, developed by Maria Gabriela Rios Toro, who has finished her studies in Applied Linguistics Career at the distance modality in the Army Polytechnic School, after being studied and verified in all its chapters; the dissertation is authorized in front of the correspondent university authorities.

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My special thanks to all those people who have contributed with the development of this project.

To God for given me the skills and abilities needed to be Teacher. To my dear family for their support and encouragement. To my teachers who guided me through this process and to our colleagues and friends for their great contribution.

Special thanks to my Director Dr. Maria Eugenia Arcos M.Sc., and to my Co-director Lic. Marcos Morales, whose help made this thesis possible to be approved.

Thank you all from the bottom of my heart!

DEDICATION

To the Creator of all things, the source of all knowledge, and the owner of our lives. I dedicate this project to our God who has given us all the gifts that make me different from the rest of his creation.

I would also dedicate this research work to my mother who is the reason of my life, and the inspiration of my hardworking.

Maria Gabriela Ríos Toro.

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BRIEF SUMMARY OF THE WORK

The purpose of the present research whose theme is the “*Study of Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport to determine the aeronautical technical English requirements from October- 2009 to January- 2010*” will be an important support for all the aeronautical technicians that work in the International Cotopaxi Airport of Latacunga city for the correct, normal and efficient advices and training to the foreign flight crew’s for the planning of the flight operations.

The kind of support that the present study contains is concerned to all the technical documentation that the flight crews have to present and receive before the operations of takeoff and landing of the aircrafts like the filled of a Flight Plan Sheet, the manifest of the Weight and Balance Load sheet, the interpretation of metars, the interpretation of the PIB (Previews Informative Bulletin), and general information about the installations, services, supports that the International Cotopaxi Airport has.

Also the present study contains the necessary aeronautical technical information that all the technicians have to know for giving a good training to the pilots in any case.

It is very important to note that this airport is alternating of the Mariscal Sucre Airport of Quito city in their flight operations that are the reasons why the importance of having a help or support to give a satisfactory service for the social, economic develops of our city and the country.

So the final proposal will be the elaboration of a guide or informative which contents all the material necessary for supporting the flight operations and aeronautical information service technicians to improve the quality of work in the advising to the foreign flight crews.

INTRODUCTION

The present Research work which theme is the Study of Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport to determine the *aeronautical* technical English requirements from October- 2009 to January-2010 constitutes an important research project because we can determine the necessity of learning aeronautical technical English in the development of our work, giving a best advice to the flight crew which are our clients, thus the present research contents five parts:

The first part includes the Research problem with all its dimensions: the problem identification, the Problem setting, the Variables working out, the objectives general -specifics and the respective Justification why it is necessary to carry out the research of the real problem.

In the second part includes the Theoretical frame all concerns to Generalities related to International Cotopaxi Airport; Civil Aviation Direction; the International Cotopaxi Airport ; information of Flight Operations and Aeronautical Information Services areas; International Cotopaxi Airport History; information of the Aviation Cargo Companies.

The third part includes the Methodological design all concern to the Research that will be applied to develop the investigation process, it means its type and design, and how it will be obtained data collection, and so on.

In the fourth part mentions the conclusions and recommendations which were gotten at the end, as the result of whole research.

In the fifth part includes the proposal of the Research work, it constitutes the final work and will content the Proposal theme, Informative Data, Introduction, Mission, Vision, Justification, General Objective, the aeronautical technicians briefing through the dictation of a seminar and the elaboration of the Aeronautical Technical Guide which constitutes an important support to the aeronautical field for all the resource human and material that works in the International Cotopaxi Airport, being this study a guide written for doing our job in a best way.

At the last part of the present work mentions the source information where the bibliography, the glossary, annexes and appendix of this research was obtained.

PART I

RESEARCH PROBLEM

1 RESEARCH PROBLEM

1.1 PROBLEM IDENTIFICATION:

STUDY OF FLIGHT OPERATIONS AND AERONAUTICAL INFORMATION SERVICE AREAS AT THE COTOPAXI INTERNATIONAL AIRPORT TO DETERMINE THE AERONAUTICAL TECHNICAL ENGLISH REQUIREMENTS FROM OCTOBER- 2009 TO JANUARY-2010

The Cotopaxi Airport was founded on April 1st on 1929. It belonged to the Ecuador Army Forces, later, on November 09th on 1994 the Cotopaxi Airport became an International Airport with this important event was very necessary the use of a foreign language of all the personnel that worked in the airport because, Almost the 90% percent the employees didn't know the English language. Since that date the International Cotopaxi Airport passed to the management of the Ecuadorian State being Dr. Alberto Dahik who was Republic President.

Since February 2000, an International Load Company Cargolux started to operate in the airport, It was when the problem appeared and It emerged the necessity of giving and receiving aeronautical technical information in English Language because the flight crews came from foreign European countries (Luxembourg) ; since January of 2008 began to operate Cargo B

an International Load Company from Brussels country, with, the 90 % percent of the foreign flight crew's advising become in English Language.

The cause, is that the Aeronautical Technicians of Flight Operations and Aeronautical Information Service areas don't rely with Aeronautical Technical English requirements which serve to support and to give any kind of information to the crews for providing an efficient, safe and normal navigation service, which will improve the Aeronautical Technical English language knowledge and aeronautical phraseology used during the foreign flight crew's advising.

Actually, the aeronautical technicians do not give the complete and appropriate aeronautical technical information and if there is not any solution to the problem with the raise of the aviation operations, the risk of air accidents could increase affecting the normal and effective development of the aviation operations; which constitutes the opposite of the major objective that follows the International Civil Aviation Organization (ICAO) (OACI), for these reasons, it is very fundamental the study of those technical areas to determine their Aeronautical Technical English requirements during these months.

1.2 PROBLEM SETTING:

CAUSES	EFFECTS
Flight Operations area doesn't know the Aeronautical Technical English requirements.	Bad quality of service to the foreign crews.
Aeronautical Information Service area doesn't know the Aeronautical Technical English requirements.	To proportionate aeronautical information with mistakes and fails.
Actually those areas do not give the	Don't improve the quality of service

complete and appropriate Aeronautical Technical English Information.	to the foreign flight crew's giving aeronautical information with mistakes and fails in the English language.
--	---

1.2.1 MAIN PROBLEM:

The problem setting in this research project is that actually the Flight Operations and Aeronautical Information Service areas don't know the Aeronautical Technical English requirements to give the aeronautical information in the English language to the foreign flight crews, being the main cause the lack of the efficient, safe and appropriate aeronautical information service in the Cotopaxi International Airport.

1.2.2 SUB PROBLEMS:

1. - The lack of knowledge of how is structured the organization and functioning of the Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport.

2. - To give a bad quality of service to the foreign crews due to Flight Operations and Aeronautical Information Service areas don't know the Aeronautical Technical English requirements while the inward technical documentation is being received. (Weight and Balance Load Sheet) (W&B) and (Flight Plan) (FPL) respectively.

3. - To proportionate aeronautical information with errors to the foreign crews due to Aeronautical Information Service area does not improve the

quality of service while the outward documentations is being delivered. Previews Information Bulletin) (PIB) and the (Meteorological Reports) (METAR).

1.3 VARIABLES WORKING OUT.

PROBLEM: To give bad quality of service to the foreign crews proportionate aeronautical information with mistakes.

<i>VARIABLES</i>	<i>DIMENSIONS</i>	<i>SUBDIMENSIONS</i>
- The Flight Operations and Aeronautical Information Service areas (Independent)	-Flight Operations area.	-Organization.
		-Functions.
	-Aeronautical Information Service area.	-Organization.
		-Functions.
- To determine the Aeronautical Technical English requirements. (Dependent)	- Basic Aeronautical English.	-Abbreviations.
		-Definitions.
	-International Cotopaxi Airport General Data.	-Geography's aerodrome data.
		-Installations and Services.
	-Aeronautical Technical English.	-Navigation Radio Aids.
		-Lighting System Runway.
- To study The Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport to determine the Aeronautical Technical English requirements from October- 2009 to January-2010" (x,y).	-Inward Technical documentation requirements i.	-Flight Plan (FPL)
		-Weight and Balance load sheet (W&B)
	-Outward Technical documentation requirements.	-Previews Information Bulletin (PIB)
		-Meteorological Reports (METAR)

1.4 OBJECTIVES:

1.4.1 GENERAL OBJECTIVE

To study the Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport to determine the Aeronautical Technical English requirements from October- 2009 to January-2010.

1.4.2 SPECIFIC OBJECTIVES

- To study the organization and functioning of the Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport.

- To study Inward Technical documentation requirements in Flight Operations Aeronautical Information Service areas, that the personnel have to receive to the foreign flight crews which have to present previews to flight. (Weight and Balance Load Sheet) (W&B) and (Flight Plan) (FPL) respectively.

- To study Outward Technical documentation requirements in Aeronautical Information Service area, concerning to the technical documentation that the aeronautical personnel have to proportionate to the foreign flight crews to receive previews to flight. (Previews Information Bulletin) (PIB) and the (Meteorological Reports) (METAR).

1.5 JUSTIFICATION

Due to the Cotopaxi International Airport is of international service and the aeronautical technical English knowledge level of the personnel that work is limited in the technical area for the normal, safety advising for foreign flight crew's. It is very important and necessary to have a real support to answer all the doubts about technical aeronautical information by the study of Flight Operations and Aeronautical Information Service areas following with the quality standards that give us the *International Civil Aviation Organization around the world* in support with the *Aviation Civil Directorate of Ecuador country*.

The benefits of the present research project will be significant for aeronautical technical areas, the Aeronautical technicians that work in the *Cotopaxi International Airport* will have an important support to give all the Aeronautical Technical Information such us: the previews information bulletin (PIB), metar meteorological reports, general situations and so on.

The beneficiaries are all the aeronautical personnel such us: the aeronautical technicians of operations that work in the airport, the foreign flight crews like the pilots, co- pilots, flight engineers, flight attendants, etc. and with this the passengers that constituents the most important part of our job to satisfaction their necessities.

That is why the "Study of Flight Operations and Aeronautical Information Service areas at the International Cotopaxi Airport to determine the aeronautical technical English requirements from October -2009 to January -2010" will contribute an important support for the normal, safety and efficient of all the aeronautical operations that develop in the central zone of the country.

As an Army Polytechnic School student the raise academic level will help me study, the present research project for converting in a real situation finding all the resources available because this project will contribute to the Latacunga city for its economic, social and cultural growing.

PART II

THEORETICAL FRAME

2. THEORETICAL FRAME

2.1 INTERNATIONAL COTOPAXI AIRPORT

The study of Flight Operations and Aeronautical Information Service areas at the International Cotopaxi Airport, to determine the Aeronautical Technical English requirements implicate at first, the basic knowledge of aeronautical topics which will be shown as follows:

2.1.1 PREVIOUS

The aim of the ICAO “**International Civil Aviation Organization**” shall be to safeguard international civil aviation flight operations following with the security rules and standards around the world, and in Ecuador the DAC “**Civil Aviation Direction**” is in charge of it,

The International Cotopaxi Airport belongs to the Civil Aviation Direction administration and its function is the development of the flight operations to the aircrafts from and to other aerodromes and airports of the country and world always keeping the normal, safe and efficient development flight operations.

2.2 GENERALITIES

2.2.1 INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)

Nowadays, the air transportation constitutes the most important resource of transportation between nations all over the world with an increasing process of complex technology.

On the other hand, the differences between nations and the real necessity of joint rules, regulations, and systems and to improve the aeronautic area made it possible the creation of an organization of the civil aviation at international level.

For that reason, the delegates of 52 nations joined in Chicago in November 1944 and examined the real problems of the civil aviation and they founded the International Civil Aviation Organization, known as OACI, redacted through the Chicago Agreement.

This Agreement contains virtually all the civil aviation aspects, since the privilege of obligations of the contracting nations or states, the rules and recommended international methods for the air navigation regulation.

ESTABLISHMENT:

- Specialized Organism of the United Nations
- Results of the Chicago Agreement
- Headquarters: Montreal (Canada)
- Regional Office: Paris, Bangkok, El Cairo, Dakar, Lima, Mexico and Nairobi.
- 189 Contracting States.

ORGANIZATION: The ICAO constitutes an international organism which Organic structure is composed by:

AN ASSEMBLY:

- Supreme Organism of the OACI
- All Representative Members (189)

- It joins every three years
- Adopt Resolutions.

A COUNCIL:

- Executive Organism of the OACI
- Permanent organism, responsible
- 33 Contracting States chosen by the Assembly
- Adopt Rules and International recommended methods.

GENERAL SECRETARY:

- Gives technical and administrative support to the OACI
- Takes place in Montreal (Canada)

MAIN OBJECTIVES: The aims and objectives of the organization are to develop the principles and techniques of the international air navigation and establish the development of the international air transport for:

- a).- To accomplish the safe and ordered development of the international civil aviation all over the world.
- b).- To make a safe, regular, efficient and economic air transport.
- c). - To foment the techniques of the design and management of the aircrafts to pacific aims.
- d). - To stimulate the development of the airways, airports, installations and services for the air navigation for the international civil aviation.

e).- To satisfy all the necessities of the cities of the world related to safe, regular, efficient and economic air transport.

f). - To avoid the economic outlay produced by the excessive competition.

g). - To secure the respect of the contracting States rights and every State has the same opportunity of exploiting the international air transport enterprises.

h). - To avoid the discrimination between contracting states.

i). - To promote the international air navigation flight safety.

j). To promote the development of the international aeronautical civil in all its aspects. It means to secure the international cooperation a highest possible of uniformity in regulations and standards, procedures and organization regarding the civil aviation matters. At the same time the International Services Transit Agreement and the International Air Transport Agreement were signed.

a) The ICAO makes it possible the use and the development of the international Air Transport in a safe, ordinate and efficient way.

b) Like other organism the ICAO maintains meetings through the Assembly which are annually in Montreal – Canada.

c) Every contracting state will have the same rights.

d) Ecuador is a contracting member of the ICAO Organization since 1947.

e) The ICAO organization will dictate its rules, policies, and agreements through the meetings of the Assembly with their respective votes.

- f) The ICAO organization publishes aeronautical technical information through rules, methods, procedures, technical manuals, air navigation plans, exclusive of technical character in all its aspects.
- g) The ICAO organization also maintains its meeting through an council made of by twenty one contracting states
- h) The ICAO has eighteen annexes to support the air navigation through international norms and internationals recommended methods.
- i) The Operational security and the Operational safety international air navigation is one of the most important ICAO's aim.
- j) The operational security warranties are the protection of the passengers, the flight crew, the ground personnel and the people in general.

2.2.2 CIVIL AVIATION DIRECTION (DAC)

The Civil Aviation Direction constitutes a national organism and its objective is to regular, establish, and control all the security aeronautical rules in the aerodromes of the Ecuador country.

The DAC constitutes contracting state member of the ICAO.

The DAC constitutes a regulator entity which execute the State functions as control entity the politic aeronautical of the country.

The DAC Headquarter will can “develop, apply, and correct directions, bulletins and orders compatibles with the rulers that regular the Civil Aviation.”

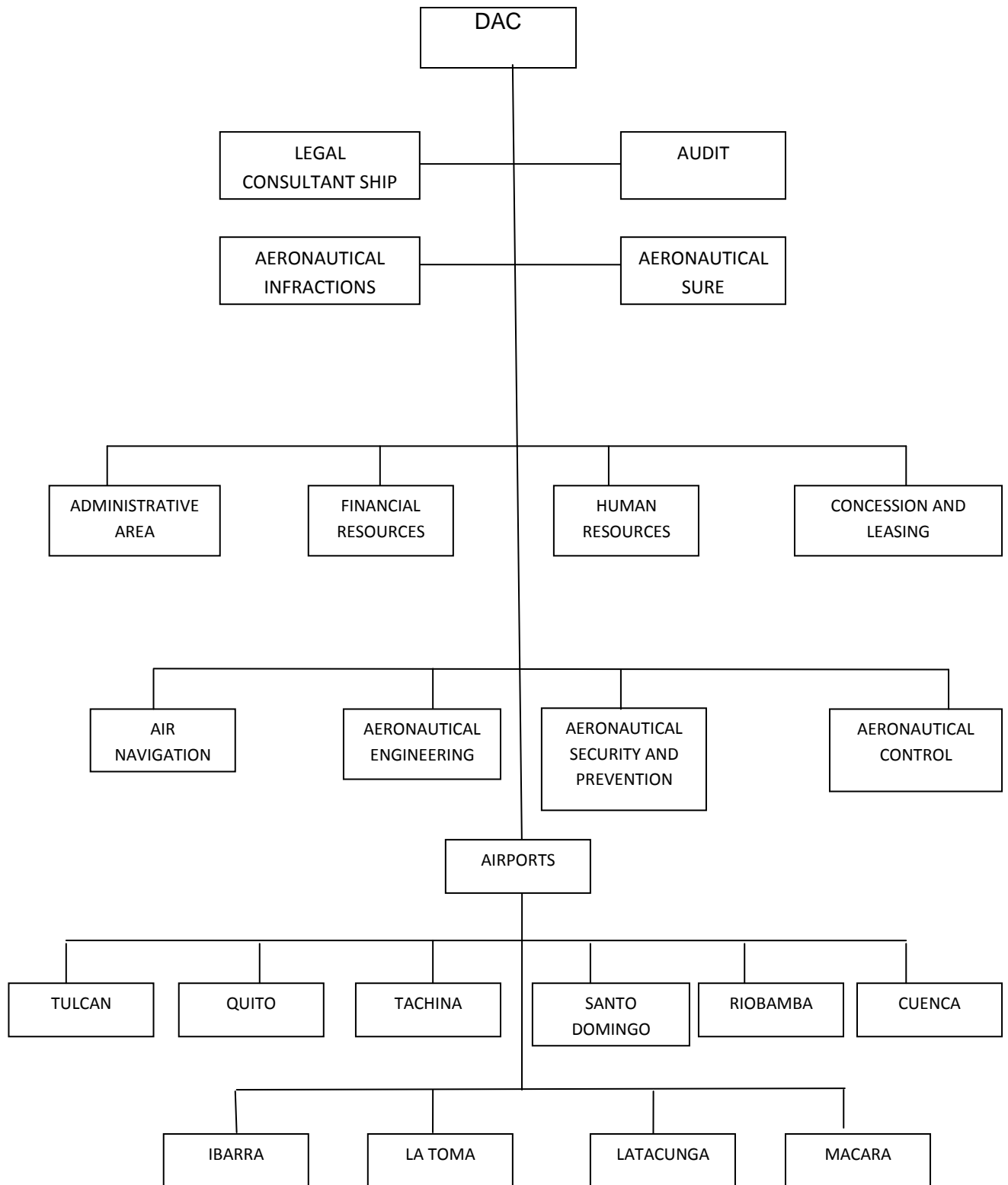
The headquarter is situated in Quito, Ecuador. Nominated Regional I. In this regional the Dac is charged of the administration of ten airports included The Mariscal Sucre Airport and the International Cotopaxi Airport both are internationals airports.

The sub headquarter is situated in Guayaquil, Ecuador. Nominated Regional II. In this regional there are twenty airports.

The DAC adopt the internationals norms and recommended methods which ICAO indicate through its normative included in the annexes and the most useful annexes are the number 6 which corresponds to “Operations Aircrafts”, annex 14 “Aerodromes” and annex 15 “Aeronautical Information Services”.

Other technical documentation which support the DAC work constitutes the RDAC volumes, those are the DAC Regulations effectives in Ecuador country with the rules, articles, legal foundation to guide the aeronautical field. There are five volumes and they are continually upgrading according to the last changes in the aeronautical field.

GENERAL CIVIL AVIATION DIRECTION STRUCTURAL FLOWCHART



2.2.3 INTERNATIONAL COTOPAXI AIRPORT

The Cotopaxi International Airport is administrated by the General Civil Aviation Direction represented by the Airport Headquarter.

The Airport Headquarter takes charge the administration, human resource, physical and economics airport purposes.

In Airport Headquarter replacement functions is the Airport Supervisor.

The Airport Headquarter administration has three areas:

- Technical Operative area
- Administrative area
- General services

TECHNICAL OPERATIVE AREAS:

Those are conformed by the next sections: Flight Operations, Air Traffic Control, Meteorology, Aeronautical Information Service, Communications, Electronic, Electricity, Fire Extinguisher area, Ecuafuel and Security areas.

Flight Operations: It takes charge control and execution of the Aeronautical Technical Regulations of the Ecuador Civil Aviation; the reception and revision of the weight and balance load sheet of the aircrafts, the administration of the physical space in the ramp and keeps the coordination with the other dependences.

Air Traffic Control: It takes charge control the air traffic, to avoid collisions between aircrafts, to give technical instructions to the pilots, to train and to proportionate useful information for the safety and efficient of the flights.

Meteorology: This dependence takes charge in observations and predictions of weather diffuse the meteorological conditions of the stations, to revise and to give the maintenance of the instruments.

Aeronautical Information Service: This dependence takes charge giving the respective training to the flight crew; to give the information through the delivery of PIB (Preview Information Bulletin) which consists in Metars of the different stations. Also this Area delivers a very important document to the flight crew which is the Flight Plan Sheet.

Communications: It is in charge of maintaining an effective technical information interchange in operational and administrative way, in rules applications and the necessary proceedings to the correct development of the Aeronautical Telecommunications Fix Service.

Electronic: This dependence is in charge of checking, calibrating and maintaining the navigation radio aids, also recording tapes, computers, satellites system, telephone central and others important equipment to the normal and efficient airport operation.

Electricity: It deals with preventive and corrective maintaining of the installations regulated and established by the ICAO (International Civil Aviation Organization) for the helping resources radio aids help for the navigation.

Fire Extinguisher Service: It deals with the human and material resource rescue, the extinguishing of fire in case on any incident or accident aircraft, also the physical check of the runway, the maintained the movement area free of F.O.D (Foreign Object Damaged), the revision and maintaining of the auto bombs.

Ecuafuel: It deals with the reception and dispatch of the fuel to the aircrafts, tanks mediations, the diary quality of the fuel, preventive maintained of the plant and equipment.

Security Area: This dependence deals with the access control of people and vehicles to the restriction and forbidden airport areas.

ADMINISTRATION AREAS:

It is conformed by the next sections: Secretary, Accounting and Transportation.

Secretary: It deals with the reception, registration, to process and to dispatch all the documentation that enter to airport headquarter.

Accounting: It deals with the registration, control, and handling of all the counts, the economy, the financial of the material and the services that the airport uses.

Transportation: It deals with the personnel journeys; it collaborates with the technical works inside and outside and also with the acquisitions of the materials.

GENERAL SERVICES:

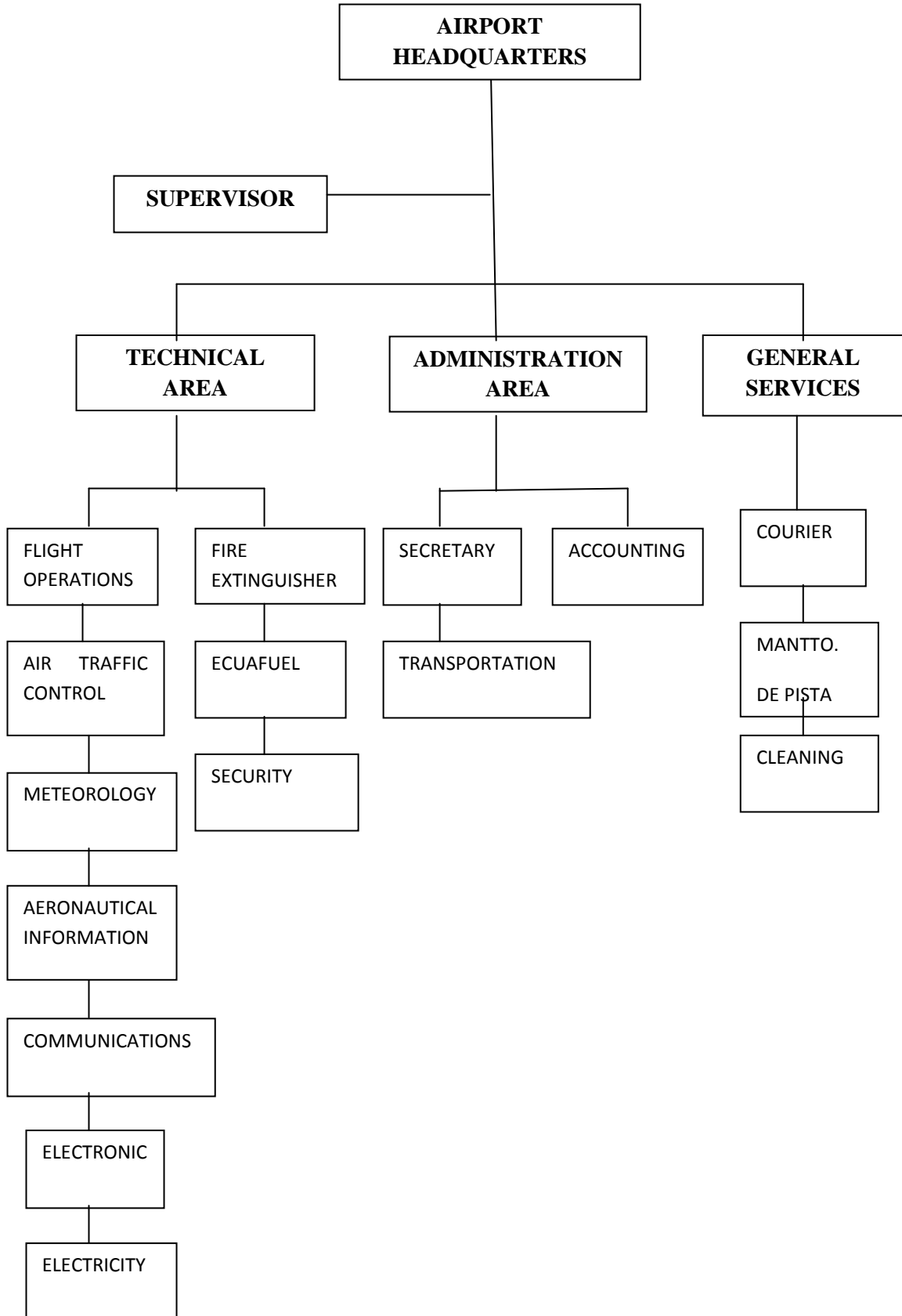
It is formed by the next sections: Courier, Maintenance and Cleaning.

Courier: It deals with the delivery of the documentation to the different dependences in the airport, paid of basic services, delivery of materials and so on.

Maintenance: It deals with green areas maintained, replacement in pavement of the runway and the arrangement of the perimeter fence.

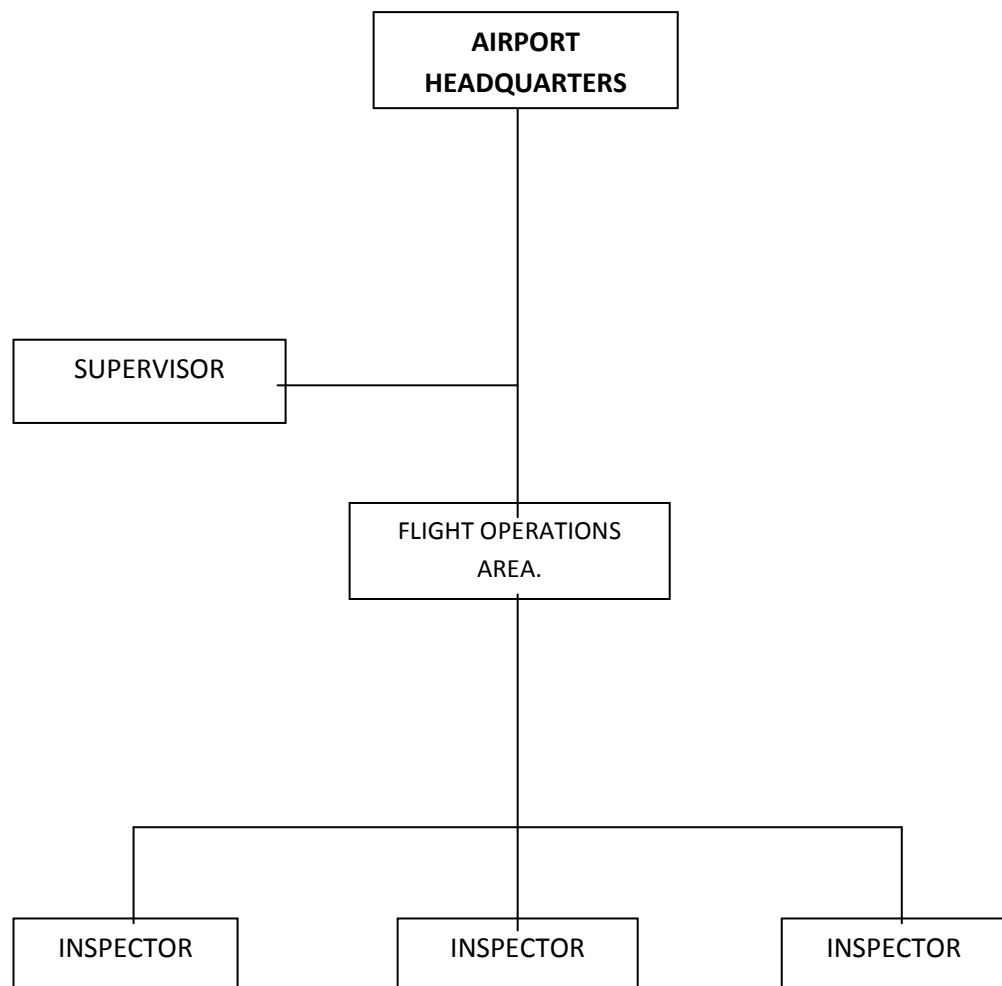
Cleaning Area: It deals with the general airport installations cleaning.

INTERNATIONAL COTOPAXI AIRPORT STRUCTURAL FLOWCHART



2.3 FLIGHT OPERATIONS AREA

2.3.1 STRUCTURAL FLOWCHART



2.3.2 DESCRIPTION:

The International Cotopaxi Airport Flight Operations Area is taken charge by the Airport Headquarters and it is conformed by three Flight Operations Inspectors who work in alternating roles during the hours of operation of the airport, which are nineteen hours per role.

In the International Cotopaxi Airport there is a technical area that corresponds to the **Flight Operations Area** which is taken charge to control the execution of the Technical Civil Regulations of the Ecuador country, receipt, approve and checking the Weight and balance Load sheet of the aircrafts that the foreign crews, the pilots have to delivery before the outward or take of the aircrafts, moreover to charge rates and rights airports.

This technical area is very important because it is taken charge of the physical distribution of the ramp for parking the aircrafts. In this office there are three technicians working in rotaries schedules.

Mission:

The flight Operations Area will watch over and will control the execution of rules, regulations and dispositions of the Technical Civil Aviation Regulations (RDAC) of the Ecuador country established in the development of the airs operations through the Flight Operations Inspectors, who are taken charge in reception, analysis and adjudications of the technical information with integrity, partiality, common sense, criteria and agility, with the capacity to execute authority in a firm way and decided when the situation demands, moreover the capacity of organization, collaboration and research works development.

The main important aim is to guarantee the safety and security of flight operations in the Cotopaxi International Airport controlling the movement

area for assigning the correct and appropriate parking of the aircrafts following the respective rules of security.

Technical Functions:

The following technical functions are the responsibility of Flight Operations Area:

-The charge of rates and airports rights.

The rights by the use of the terminal and auxiliary services of the airport, this charge is given by passenger during the use of the terminal installations and all the services that the airport gives to the users, actually the rates are the following:

National Passengers: \$3, 00 including the security tax.

International Passengers: \$7, 00 including the security tax.

It is important to note that those taxes are charged only when the passengers are going out of the country.

-The reception and revision of technical documentation.

All the flight crew members have the responsibility and obligation of presenting to the Flight Operations Area the following documentation:

- a).- Weight and Balance Load sheet
- b). - Passengers List
- c). - General Declaration (Inward/Outward)
- d). - Load Manifest (only load flight)
- e). - DTA-E-002 formularies

When there exists national flights there will be necessary only the two first requirements.

- Permission Control, Itineraries and Safes.

The flight operations area takes charge the control, execute, validity and renovation of all the operation permissions and the companies safes which operates in this airport like: Cargolux Airline, Cargo B Airline, Avindac, WFD (World Flight Dispatch), DIAF and other occasionally.

-Vehicular Operative Credential and Conduction Qualification Control.

It is obligatory the use of the Vehicular Operative Credential (VOC) to all the vehicles which enter to the ramp, taxi way or runway which are consider restricted areas.

The conduction qualification in ramp will be proportionate to all Civil Aviation personnel and companies personnel qualified and authorized to operate, drive vehicles inside the ramp.

-Physical Space administration in the ramp.

The flight operations area personnel will coordinate with Aeronautical Information Service Control Tower areas to know the air traffics and the aircraft types which will operate to administrate the space use, to avoid collisions and to permit the fluid movements of the flight operations.

- Physical Runway, Ramp, Taxi way and Illumination Check

The charged Operation Inspector in coordinate with Fire Extinguished personnel will make the runway check in a daily way, checking the actual state of the runway, ramp, taxi way, perimetral fence and Illumination System.

After that the check it is very important to notification to the Control Tower, Aeronautical Information Service areas for the respective corrections and safeguarding the air operations.

-Diary Operations Registration.

In the operations area the personnel have a formulary calls DTA-E-001 to registries all the flights carried out by the different air companies, moreover to enter this information to the Statistic System.

-Emergency plan activities.

In case of emergency the Flight Operations Area will take charge like FIXED COE since the OPS/AIS office which will complete all the established functions and activities existents at the Cotopaxi Airport Emergency Plan.

In absences of airport headquarters and/or supervision, the Flight Operations Inspector in role will take charge the airport headquarters functions like MOVIL COE until the boss comes.

-Military Operations.

There exist military personnel for attending the flight operations with the aircrafts of the air force, the army and the navy institutions but in case of absence the flight operations inspectors will assume them because the rules and technical requirements are the same except in the taxes because they are exonerated.

2.3.3 FLIGHT OPERATIONS PERSONNEL

At the Flight Operations Area works three Inspectors which functions are the following:

Functions

The Flight Operations Inspectors complete the following functions:

1. To control the execution of all the dispositions and rules given by the Civil Aviation Direction for guarantee the safety of the air operations.
2. To control that the aeronautical personnel and the aircrafts that operate in the country complete the established technical requirements.
3. To inspectate the movement area, to check the established rules for the normal development of the air operations.
4. To bill through FR3 formularies, the occasional aircrafts operation, the landing rights, lighting, parking, and flight protection previous the verification of the authorization given by the Civil Aviation Direction.
5. To notification in an immediately form to the authorities when an aircraft presents maintenance problems in any phase during the planned flight.
6. To inform to the competent authorities when there exists an air accident or incident and to collect all the technical documentations if the flight is inside the jurisdiction.
7. In emergency situations and in Airport Headquarters absence and/or supervisor the Flight Operation Inspector will assume the responsibilities.
8. To maintain permanent listened by radio during their role and to make the respective coordination with the other dependences.
9. To give, to proportionate the aeronautical technical information to the flight crew members.
10. Any other dispositions given by the Aeronautical Authorities.

Schedule Work

At the Flight Operations at International Cotopaxi Airport the schedule work is made by alternating roles between the three inspectors following the established sequence like the shows following example:

FLIGHT OPERATIONS SCHEDULE WORK -JANUARY 2010

DAY	DATE	ROLE: 05:30am-08:00am	ROLE: 08:00am-01:00am
SUN	01	GR	AM
MON	02	AM	DC
TUE	03	DC	GR
WED	04	GR	AM
THR	05	AM	DC
FRI	06	DC	GR
SAT	07	GR	AM

Demonstration:

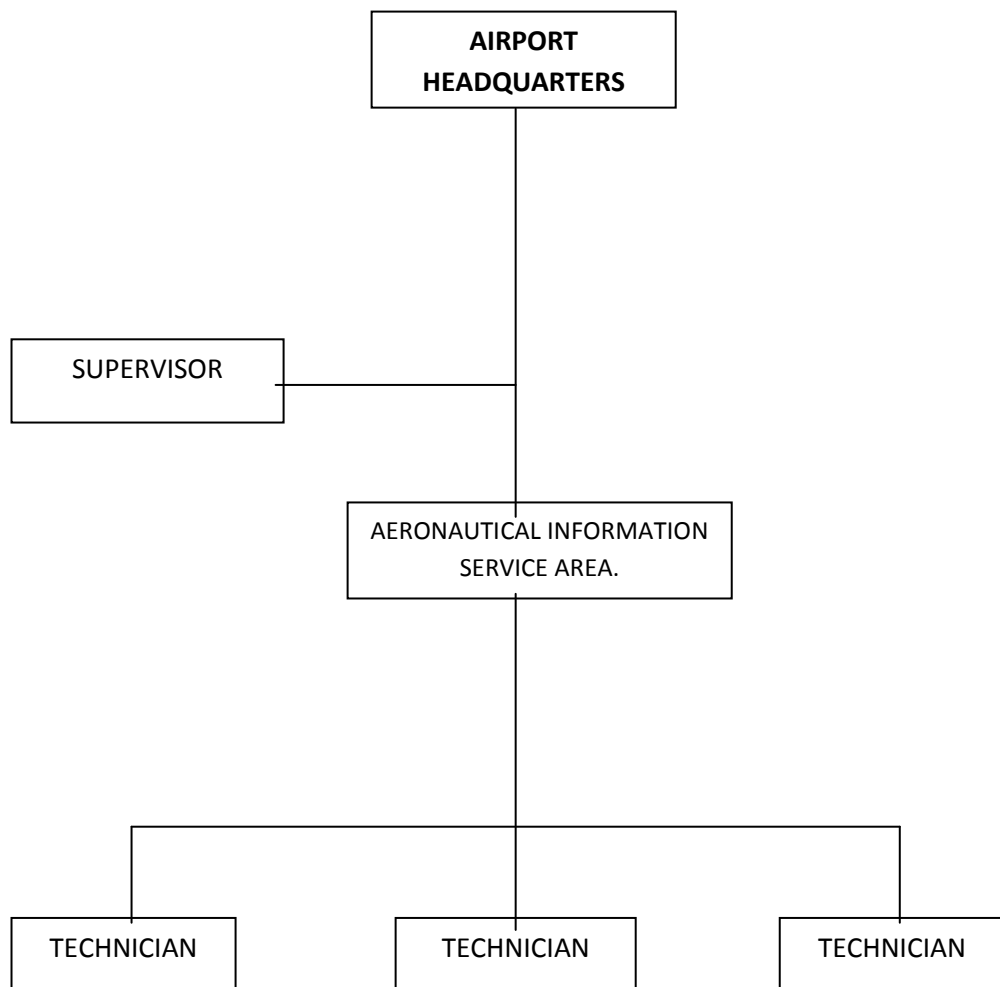
DC: David Cunalata

AM: Alba Martínez

GR: Gabriela Ríos

2.4 AERONAUTICAL INFORMATION SERVICE AREA

2.4.1 STRUCTURAL FLOWCHART



2.4.2 DESCRIPTION:

The other technical area is the **Aeronautical Information Service Area** which is taken charge to proportionate all kind of aeronautical information to the foreign crews such us: the PIB previews information bulletin, meteorological reports of the airport. Also it is taken charge to receive, approve the FPL given by the pilots after the departure of the aircrafts, and then they are the responsible to transmit this technical document to the Control Tower through the necessaries ways.

This dependence takes charge giving the respective training to the flight crew; to give the information through the delivery of PIB (Preview Information Bulletin) which consists in Metars of the different stations. Also this Area has to delivery very important documents to the flight crew which is the Flight Plan Sheet.

The Responsibilities and Functions:

The Aeronautical Information Service Area will gather, will compile, will, edit, will publish Ecuador territorial aeronautical information as well as in the areas in the state which are responsible of the air traffic out of its territory.

The information will be delivery through integrated documentation of aeronautical information.

The Aeronautical Information Service Area will be the responsible area in delivery the necessary information to the development of the air operation in a safe, regular and efficient way to the Flight Operations personnel, even the Flight Crew (Pilot, Copilot) and the Air Traffic Service dependences responsible of flight information service.

A very important manual that facilitates the Aeronautical Information Service work, It constituents the Aeronautical Information Publication (AIP) which main important aim is to satisfied the international necessities of

aeronautical information interchange essential to the air navigation. This manual has Approach Charts, Air Charts, Topographic Charts, and Airdrome Planes, and so on all very necessary to the realizations of the correct and safe job.

2.4.3 AERONAUTICAL INFORMATION SERVICE PERSONNEL

At the Aeronautical Information Service Area works three technicians which functions are the following:

Functions

They have to proportionate the aeronautical information before and after of the flights:

-INFORMATION BEFORE THE FLIGHT:

In every aerodrome used normally to the international air operations, the aeronautic information important to the security, safety, and regularity and efficient to the air navigation will be proportionate the flight operations personnel, to the crew members and to all the organisms charged to give information before the flight.

The information proportionate will be the following:

- All the pertinent elements of the integrated documentation of aeronautic information.
- Maps, pertinent charts.
- Additional actual information of the inward and outward aerodrome
- Construction works, maintenance, etc
- Novelties of runway, taxi way, apron, etc.

- Presence of water, ice in the runway, taxi way, etc. which represents an obstacle to the flight operations safety.
- The aircrafts parked or/and objects in the taxi way or nearest.
- The presence of other dangerous like birds over the station.
- Any irregularity of the illumination system, including approach lights, threshold lights, runway lights, of taxi way, the obstacles, zones out of service.
- The radio aids for the navigation, mishaps, the irregular work or any rare variations of the ILS (Instrumental Landing System), DME (Distance Measured Equipment), NDB (No directional Beacon), and VOR (VHF Omni directional Range).
- Other important information that will be delivery to the flight crew are the NOTAMS (Notice to the Air Men) effectives, moreover all the urgent information through the PIB (Preview Information Bulletin) in clear language.

-INFORMATION AFTER THE FLIGHT:

In this part the States take charge that in the aerodromes receives the necessary and correct aeronautical information of any situation and also they take charge that the flight crew members, flight operations personnel receive this documentation, training in a safe way.

Schedule Work

At the Aeronautical Information Service at International Cotopaxi Airport the schedule work is made by alternating roles between the three technical following the established sequence like the shows following example:

AERONAUTICAL INFORMATION SERVICE SCHEDULE WORK -
JANUARY 2010

DAY	DATE	ROLE: 05:30am-08:00am	ROLE: 08:00am-01:00am
SUN	01	AQ	PT
MON	02	PT	EP
TUE	03	EP	AQ
WED	04	AQ	PT
THR	05	PT	EP
FRI	06	EP	AQ
SAT	07	AQ	PT

Demonstration:

AQ: Alberto Quishpe

PT: Paulina Tobar

EP: Eduardo Pasochoa

2.5 INTERNATIONAL COTOPAXI AIRPORT HISTORY

The Cotopaxi Airport history is filled through important relevant events to the social and economic development for the province and the country even since construction.

At the beginning the lands of the Latacunga airport were community fields, a herdsman around 1200 meters of long by 300 meters of wide known like El Ejido, located in the north of the city, which later constituted the aviation camp.

Previously, the Latacunga Municipality, signed a document that donated the lands for the airport construction.

At the beginning of 1920, the government of Dr. José Luis Tamayo dictated the first dispositions about Aviation that was when the two first wood and cloth airplanes landed in El Ejido field being the attraction and curiosity of the inhabitants of the zone.

On April 1st 1929, the first stone was collocated in the air terminal; it was the productive beginning for the airport's development.

On May 10th 1929 the Aviation Camp construction was authorized, It was assigned the amount of \$159.000, 00.

On November 15th , 1929, \$3.000, 00 was assigned for the construction of a hangar, being born this way the Airport and Air Base Cotopaxi.

On January 15th 1930, the Aviation Military School was transferred to the new Airport and the Air Base Cotopaxi, with the purpose of any kind of support with the movement in Quito. An aeronautic course was opened in Latacunga and helped with this project the pilots Captains Cosme Renella and Luis A. Mantilla with the aircrafts TRAVEL AIR R-1 and R-2.

On August 20th, 1930 the Captains Mantilla and Renella carried out a flight without a landing in the route Latacunga- Tulcan- Latacunga, transporting 199 letters in a bag, which was throwing in parachuting to the Central square of Tulcan city.

On January 01st, 1932 the first "Latacunga Air Military Mail was created ", with the Ecuador aircraft, model Rgan with Uriglat engine. Lately the Air Mail Latacunga- Quito- Latacunga was created.

Two aircrafts Curtis Osprey arrived from Guayaquil on August 1932, They were armed and sent to Latacunga for the pilot's training. In the Four days of civil War, the Latacunga Base converts in the operations central of the two aircrafts which played an important and decisive roll.

A strange fire razes the Air Base of Latacunga installations; since that date the operations aircrafts moved to Quito city, it happened on January 29th.

Being the Republic President the Dr. Otto Arosemena Gomez , He signed a Ordinance to the financing of the second stage of Latacunga Airport construction on May 30th of 1968.

It bought the bordering lands to the Air Base Cotopaxi for the amplification of the airport on September 14th of 1968.

It is inaugurated the Latacunga Airport Terminal by the government of the Dr. José Maria Velasco Ibarra the Republic President. It was on April of 1970.

It is completed the construction of Cotopaxi Air Base finished the last stage of the runway, the administrative and living buildings on February 22nd of 1972.

Finished the planned adaptations, the Cotopaxi Airport opens its doors to the world like a Load International and Passengers Altering of Mariscal Sucre of Quito city equipped with all the international aereo navigation

helps demanded. It was inaugurated with the assistance of local, nationals' authorities between them the Dr. Alberto Dahik the Republic President on November 09th of 1994.

It is necessary to say that the Cotopaxi Airport History is an important national aviation part. it was always considered like a promise to increase the flight operations in all their modalities. And the implementations never took place but it is very important to know that the technical, meteorological and conditions are the best nowadays even when the International Cotopaxi Airport operates instead Mariscal Sucre Airport of Quito city; being the Aeronautical Authorities impulse for its progress and development future.

2.6 AVIATION CARGO COMPANIES

Nowadays two important aviation cargo operate in the International Cotopaxi Airport which are Cargolux and Cargo B. Airlines.

2.6.1 CARGOLUX AIRLINES



Cargolux is one of the leading cargo airlines worldwide, operating scheduled and charter services on a network covering all continents. The company operates in the International Cotopaxi Airport since 2000 year with a fleet of 16 B747-400 freighter aircrafts and 20 trucking contractors to move valuable and time sensitive communities on our worldwide network, covering over 90 destinations.

The company offers most 40 years of experience and measured in tones-kilometers flown, today ranks in 9th position worldwide.

In Europe Cargolux is the largest all cargo airlines. Cargolux Airlines is an integrated transportation company, operating exclusively for freight forwards.

Cargolux is proud of its unit market position in Europe. The company flight operations department in Luxembourg offers both flight crew training for commercial pilots and flight dispatch services to airlines which basically are:

- Flight planning
- Weather information /NOTAMs
- Crew briefing
- Consulting

At Cargolux values cargo and every effort is focused on the delivery of high quality services. Being a dedicated cargo airline, they are able to offer tailor made services to their customers worldwide. The company provides them with flexibility, reliability and above all with expertise.

The company delivers the cargo where and when required moreover the company offers full charter and sub-charter services worldwide as well as subleasing services. They use their own state of the art B747-400 fleet or leased in equipment fly their shipment. They always ensure the presence of experienced and professional staff to take care of the cargo.

In many parts of the world Cargolux complements its flights with road feeder services.

The company carries: General cargo, perishables, temperature sensitive goods, live animals, off size and heavy, shock and tilt sensitive cargo, dangerous goods, IATA e-freight, cargo 2000, embargoed goods.

In the Cotopaxi International Airport the principal goods are the tropical flowers which came from the central part of the country mainly.

The frequencies are the days Tuesday, Friday and Sunday with the following itineraries:

TUESDAY: With the following itinerary.

Luxemburg- Panama- Chile- Latacunga- Bogotá- Luxemburg.

FRIDAY: With the following itinerary.

Luxemburg- Viracopos- Curitiba- Latacunga –Bogotá- Luxemburg.

SUNDAY: With the following itinerary.

Luxemburg – Viracopos- Latacunga – Bogotá- Luxemburg.

2.6.2 CARGO B. AIRLINES



Cargo B Airlines is an airline based in Brussels, Belgium some destinations all over the world are: Africa (Egypt, Kenya) Europe (Belgium) South America (Argentina, Barbados, Brazil, Colombia, Ecuador).

The Mission:

The intention of Cargo B Airlines is to be the first Brussels cargo airline in every aspect. The company believes that Brussels geographically and politically, offers a unique opportunity to take part of the growth in the air transportation business.

The company started to operate in the Cotopaxi International Airport since January of 2008.

At first the air company obtained 52 charter flights but then it obtained a No regular Cargo and Mail Authorization which permits to fly without any itinerary actually.

The Cargo B Airlines fleet operates the following aircraft 2 Boeing 747-200F which identifications are OO- CBA / OO-CBB and 1 Boeing 747-400F OO-CBC.

The aircraft is dry leased from Nippon cargo airlines. The 747-200F will be used for back up and charter work.

The routes and air rights are the following: Brussels- Dakar and/or Barbados and/or Ciudad de Mexico and/or Viracopos and/or Manaus and/or Rio de Janeiro and/or Sao Paulo and/or Buenos Aires and/or Ciudad del Este and/or Lima and/or Bogotá and/or Latacunga and vice-versa.

The mainly goods that the Cargo B transport are mixed perishables including flowers but sometimes it carries living horses, trucks, cars parts and machinery .

Cargo B will use the aircrafts initially on the three weekly flights to Latin America, serving Sao Paulo, Latacunga and Bogotá. The increased capacity and fuel efficiency will allow them to improve and upgrade the company service and profitability. The B747-200 aircraft currently in the fleet will continue to offer extended charter capacity wit the option to provide extra flights when appropriate. The Cargo B team can look forward to the real possibility of entering new markets and routes within the foreseeable future and they will continue the efforts to add a second B747-400.

The company slogan is "*Serving the global Market*".

PART III

METHODOLOGICAL DESIGN

3. METHODOLOGICAL DESIGN

3.1 RESEARCH TYPE AND DESIGN

The present research work corresponds to EXPLORATIVE type method, by the development of a new guide which will permit to all the users have a good support in the elaboration of their work which is give an efficient training to the flight crew in the elaboration and presentation of aeronautical material.

The research design corresponds to a NON- EXPERIMENTAL and DOCUMENTAL one, since there is not the manipulation of variables, on the contrary what is made is to analyze the available information in order to organize and show it in a coherent way so that it can serve as support to the proposed of the research project.

The research was developed in three phases:

- Establishment of the problem of the studied phenomenon and justification of the reasons that require its development.
- Study of the material, bibliography related with the research and the elaboration of the theoretical frame.
- Proposal which is the elaboration of a guide of flight operations and aeronautical information service areas to satisfy the aeronautical technical English requirements of the foreign flight crews training.

3.2 METHODOLOGY OF THE RESEARCH

METHOD	TECHNIQUE	INSTRUMENTS
-INDUCTIVE- DEDUCTIVE -ANALYTIC- SYNTHETIC -DIALECTIC -SCIENTIFIC	REGISTRY	-NOTEBOOK -AERONAUTICAL INFORMATION -AERONAUTICAL DOCUMENTATION

3.3 PRE-OPERATIVE PHASE OF THE RESEARCH

VALIDITY

In the development of this research, instruments to collect information are not used; the validity is made by means of the study that can help to arrive to the essence of the study object.

As they are the variables that come from of the study of Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport to determine the aeronautical technical English requirements from October- 2009 to january-2010.

Its validity is also supported in the seriousness and depth with which these researches and aeronautical technicians treat the variables studied in the research.

Therefore, the research is valid for the purpose of the elaboration of a guide of Flight Operations and Aeronautical Information Service areas to satisfy the aeronautical technical English requirements of the foreign flight crews training.

The validity of the content of this research is based on the variables and their categories that cover all the relevant aspects related with the research object.

Lastly, the validity of construction of the theoretical frame settles down and specifies the relationship between the concepts and categories of the research.

The theoretical frame that supports to the variables is developed in such a way that can demonstrate that the study of Flight Operations and Aeronautical Information Service areas at the Cotopaxi International Airport to determine the aeronautical technical English requirements will help us to give a best service to the flight crew members in the development of our job.

RELIABILITY

The reliability of the obtained data is supported in the same reasoning of the validity, that is to say, the responsibility and the scientific approach with which previous researches have been carried out.

The research instruments used by the previous researches produce approximate results to the present research in the different indicators of the study variables.

The investigation is support in relevant and properly proven information; the same one that is analyzed from two points of view: that of the author of the work and the researcher's appreciation and personal interpretation one, at the same time, conclusions are obtained and possible strategies are projected to the use of the acquired information that will serve as proposal of change in the investigated Institution.

3.4 DATA SYSTEMATIZATION

The extensive, dispersed, fragmentary character, and sometimes contradictory of the data demands the application of contrast processes to analyze the discrepancies and the coincidences of the explanations. In aeronautical topics as the presented one, it is normal to have multiple visions and interpretations of the reality. The investigation tries to integrate them in a coherent and uniform form.

3.5 PROCESSING AND ANALYSIS OF THE INFORMATION

In the systematization of the information and analysis of data, like in all process, it is considered important the practice of values and the investigator's commitment to value the information, organize it, and extract conclusions and recommendations that make possible processes towards improving the indicators of the variables that have problems in the training to the flight crews.

The systematization of the information allows the rigorous analysis of the obtained data, the same ones that will allow arriving to conclusions of explanatory type when contrasting them with the qualities information.

The used process was the following one:

- Compilation of bibliographical material on the Aeronautical information field
- Organization of the theoretical frame.
- Writing of conclusions and recommendations.
- Establishment of the proposal of the final work.

For the socialization and diffusion of the results of the research a copy of that is given to the department of Languages of the ESPE.

PART IV

CONCLUSIONS AND RECOMMENDATIONS

4. CONCLUSIONS AND RECOMMENDATIONS.

4.1 CONCLUSIONS

Through the bibliographic analysis made, is included the interpretation of the problematic investigator about the treated themes and it has been an explorative type research, as it was announced in the last part, the following conclusions are exposed.

GENERAL OBJECTIVE:

4.1.1 IN REFERENCE TO SPECIFIC OBJECTIVE NO. 1

TO STUDY THE ORGANIZATION AND FUNCTIONING OF THE FLIGHT OPERATIONS AND AERONAUTICAL INFORMATION SERVICE AREAS AT THE COTOPAXI INTERNATIONAL AIRPORT.

- At the International Cotopaxi Airport the knowledge of aeronautical technical English always was limited, that is way the importance of having any support that help technicians in the training of the flight crews.
- The International Cotopaxi Airport constituents an important source of connecting the world, so the knowledge of English language is

basic and nowadays is very necessary to satisfies the demands of world´s today.

- For the development of the research work it was necessary the use of filed information all related with aeronautical technical information, documentation, manuals and in some cases the use of the internet.
- The terminology used in the research work is of aeronautical technical character adapted and in some cases the same as the recommended International rules.
- To determine the Aeronautical Technical English requirements concerns to the Basic Aeronautical English like the abbreviations and definitions usually used the Geography's aerodrome data, installations and services of the Cotopaxi International Airport.
- The flight crews will be beneficiaries of the present work through this guide that will be an important tool in the training and advising at the moment of the presentation of the Flight Plan, the Metars, the Weight and Balance Load Sheet, PIB, and other important information which requires the flight crew.
- Through this study we will obtain that the aeronautical operations will develop with regularity, safety and efficient at the International Cotopaxi Airport.

4.1.2 IN REFERENCE TO SPECIFIC OBJECTIVE NO. 2

TO STUDY INWARD TECHNICAL DOCUMENTATION REQUIREMENTS IN FLIGHT OPERATIONS AND AERONAUTICAL INFORMATION SERVICE AREAS, THAT THE PERSONNEL HAVE TO RECEIVE TO THE FOREIGN FLIGHT CREWS WHICH HAVE TO PRESENT PREVIEWS TO FLIGHT. (WEIGHT AND BALANCE LOAD SHEET) (W&B) AND (FLIGHT PLAN) (FPL) RESPECTIVELY.

- The elaborated guide of Flight Operations and Aeronautical Information Services areas is projected with the real necessity of aeronautical technical English used.
- The concepts, the phraseology, the headquarters and the terminologies were adapted to the reality of the International Cotopaxi Airport according with its procedures and internal regulation.
- The final work will contributed with knowledge concerns aeronautical technical English refers to the Weight and Balance Load sheet and the Flight Plan documents, all referent with its contents, filled.
- According with the study of the respective inward technical documentation the technical personnel of both areas will dominate the requirements that we need to know in the elaboration of our diary job.

4.1.3 IN REFERENCE TO SPECIFIC OBJECTIVE NO. 3

TO STUDY OUTWARD TECHNICAL DOCUMENTATION REQUIREMENTS IN AERONAUTICAL INFORMATION SERVICE AREA, CONCERNING TO THE TECHNICAL DOCUMENTATION THAT THE AERONAUTICAL PERSONNEL HAVE TO PROPORTIONATE TO THE FOREIGN FLIGHT CREWS TO RECEIVE PREVIEWS TO FLIGHT. (PREVIEWS INFORMATION BULLETIN) (PIB) AND THE (METEOROLOGICAL REPORTS) (METAR).

- The elaborated guide of Aeronautical Information Services areas is projected with the real necessity of aeronautical technical English use.
- The concepts, the phraseology, the headquarters and the terminologies were adapted to the reality of the International Cotopaxi Airport according with its procedures and internal regulation.
- The final work will contributed with knowledge concerns aeronautical technical English refers to the PIB, the METAR documents, all referent with its contents, filled.
- According with the study of the respective outward technical documentation the technical personnel of both areas will dominate the requirements that we need to know in the elaboration of our diary job.

4.2 RECOMMENDATIONS.

4.2.1 IN REFERENCE TO SPECIFIC OBJECTIVE NO. 1

TO STUDY THE ORGANIZATION AND FUNCTIONING OF THE FLIGHT OPERATIONS AND AERONAUTICAL INFORMATION SERVICE AREAS AT THE COTOPAXI INTERNATIONAL AIRPORT.

- The utility of this guide resides in the truthfulness of the information that contents, that is why necessary the permanent upgrading through of revisions and continues checks according with the structure, functions, rules, normative, regulations, and dispositions dictated by the Aeronautic authority.
- To motive to all the technicians of the Flight Operations and Aeronautical Information Service areas the permanent capacitating in the aeronautical technical English language and improve the quality of service.
- To motivated to all the technical areas such as: Control Tower, Meteorology, and Communications of the airport the elaboration of a guide or manual of aeronautical technical requirements in the English language for having a support in the acting of their activities.

4.2.2 IN REFERENCE TO SPECIFIC OBJECTIVE NO. 2

TO STUDY INWARD TECHNICAL DOCUMENTATION REQUIREMENTS IN FLIGHT OPERATIONS AND AERONAUTICAL INFORMATION SERVICE AREAS, THAT THE PERSONNEL HAVE TO RECEIVE TO THE FOREIGN FLIGHT CREWS WHICH HAVE TO PRESENT PREVIEWS TO FLIGHT. (WEIGHT AND BALANCE LOAD SHEET) (W&B) AND (FLIGHT PLAN) (FPL) RESPECTIVELY.

- To consolidate the leadership and competence of the Flight Operations and Aeronautical Information Service areas in the assessment and advising to the flight crew, giving a best service.
- Always to maintain a permanent upgrading in the terminology, phraseology, pronunciation and concepts used in the inward technical documentation requirements.
- It is recommended to have a date of base concerning to the general information of types of aircrafts, identification, OACI airports, airways, aviation companies designators, OACI designators, etc. to obtain a fast filled of the Flight Plan and Weight and Balance Load sheet documentation.

4.2.3 IN REFERENCE TO SPECIFIC OBJECTIVE NO. 3

TO STUDY OUTWARD TECHNICAL DOCUMENTATION REQUIREMENTS IN AERONAUTICAL INFORMATION SERVICE AREA, CONCERNING TO THE TECHNICAL DOCUMENTATION THAT THE AERONAUTICAL PERSONNEL HAVE TO PROPORTIONATE TO THE FOREIGN FLIGHT CREWS TO RECEIVE PREVIEWS TO FLIGHT. (PREVIEWS INFORMATION BULLETIN) (PIB) AND THE (METEOROLOGICAL REPORTS) (METAR).

- To create an appropriate and polite quality of service giving facilities and make agile the delivery of the information concerns to the PIB and METARs to the flight crew in the minor time possible and optimizing the the time in flight operations avoiding delays in the flights.
- The aeronautical technical English contents in the PIB and METARs will be clear and concise at the moment of its interpretation by the flight crew or any user that requires that information.
- To develop a conscious process of assessment to the flight crews with any error of grammatical, detecting the weaknesses to propose solutions and locate the strengthens and improve the service at the International Cotopaxi Airport.

PART V

PROPOSAL

5. PROPOSAL

5.1 PROPOSAL THEME

A GUIDE OF FLIGHT OPERATIONS AND AERONAUTICAL INFORMATION SERVICE AREAS TO SATISFY THE AERONAUTICAL TECHNICAL ENGLISH REQUIREMENTS OF THE FOREIGN FLIGHT CREWS TRAINING.

5.2 INFORMATIVE DATA

INSTITUTION: International Cotopaxi Airport

LOCATION: Av.Amazonas LA FAE site

AERODROME NAME: LATACUNGA/Cotopaxi.Intl.

OACI TECHNICAL INDICATOR: SELT

SCHEDULES:

ADMINISTRATIVE SCHEDULE: MON / FRI de 1300 – 2130 UTC.

TECHNICAL SCHEDULE: 1045 – 0500 UTC.

TELEPHONE NUMBERS:

ADMINISTRATIVE AREA: 593 3-2- 811-800

TECHNICAL AREA: 593-3- 2-811680

5.3 INTRODUCTION

The present proposal contains eight subparts. In the subpart one it mentions the proposal theme.

In the second subpart its detailed all concern to informative data of the airport like the name of the institution, the location, the aerodrome name and the OACI technical indicator.

In the third subpart there is the introduction; In the fourth subpart there is the mission that maintains the International Cotopaxi Airport in the aeronautical field; In the fifth subpart is the vision which maintains the airport.

In the sixth subpart there is the justification which responds the question why? the STUDY OF FLIGHT OPERATIONS AND AERONAUTICAL INFORMATION SERVICE AREAS AT THE COTOPAXI INTERNATIONAL AIRPORT TO DETERMINE THE AERONAUTICAL TECHNICAL ENGLISH REQUIREMENTS FROM OCTOBER- 2009 TO JANUARY-2010.

In the seventh subpart there is a general objective of the present proposal which correspond the elaboration of the Aeronautical Technical Guide which will serve to support to al the technicians of the Cotopaxi International Airport.

The training to the aeronautical technicians will be through a week seminar 3 hours daily (09:00 – 12:00) aimed to the learning of the aeronautical technical English requirements of the Flight Operations and Aeronautical Information Service areas in the advising of the flight crews.

5.4 MISSION

To control correctly the air transport in the airport, guaranteeing an efficient, regular, feasible set or environment to all the users in this case the passengers of the International Cotopaxi Airport.

5.5 VISION

To maintain an excellent and continuous aeronautical activity in the Region, fulfilled satisfactory the International Civil Aviation Organization standards, in society benefit's through the optimums use of the available resources, strengthening the technological development and upgrading us the advance in the aeronautical field.

5.6 JUSTIFICATION

The development of the present Study of Flight Operations and Aeronautical Information Service areas at the International Cotopaxi Airport to determine the aeronautical technical English requirements contribute an important support for the normal, safety and efficient of all the aeronautical operations that develop in the central zone of the country.

The benefits of the present proposal will be significant because with the study of those aeronautical technical areas, the Aeronautical technicians that work in the *Cotopaxi International Airport* will have an important support to give all the Aeronautical Technical Information

The beneficiaries are all the aeronautical personnel such us: the aeronautical technicians of operations that work in the airport, the foreign

flight crews like the pilots, co- pilots, flight engineers, flight attendants, etc. and with this the passengers that constitutes the most important part of our job to satisfaction their necessities.

5.7 GENERAL OBJECTIVE.

The main objective of doing this study is to determine through to elaborate a guide of flight operations and aeronautical information service areas to satisfy the aeronautical technical English requirements of the foreign flight crews training.

Specific Technical Informative all the aeronautical technical English requirements which is necessary to manage in the Flight Operations and Aeronautical Information Service areas at the International Cotopaxi Airport for giving an excellent, safe and convincing briefing to the international flight crews whose constituents the major client of our institution.

5.8 AERONAUTICAL TECHNICIANS' BRIEFING.

As final part of this proposal correspond to the briefing of the present Aeronautical Technical Guide to the five technicians whose work at the Cotopaxi International Airport.

One idea to help technicians to update their knowledge about the aeronautical technical English requirements aimed to improve the quality of the service is through the imparting a seminar for a week three hours daily to refresh their knowledge about the aeronautical information and

aeronautical documentation used in the airport and its contents in the elaborated guide.

This seminar would help to users to apply correct and appropriate the aeronautical English words which it could help technicians to feel inside them that they are doing a good job.

The problem of the lack of aeronautical technical knowledge at the Cotopaxi International Airport should be overcome with the help of aeronautical authorities to supply financial resources to make this briefing possible.

The capacitating is not an expense but an investment. That means, whatever could be spent on workers' education it will contribute in our country society as an International airport in the future.

5.9 DEVELOPMENT OF THE SEMINAR

AERONAUTICAL TECHNICAL ENGLISH REQUIREMENTS

Day 1

- 1.1 Goals/Objectives of the Seminar
- 1.2 Technical Data of the Cotopaxi International Airport
- 1.3 Concepts
- 1.4 Aeronautical English Requirements
- 1.5 Results

Day 2

- 2.1 Technical Documentation
- 2.2 Concepts
- 2.3 Principles
- 2.4 Aeronautical English Requirements
- 2.5 Results

Day 3

- 3.1 Inward Technical Documentation
- 3.2 Concepts
- 3.3 Flight Plan and Weight and Balance Load sheets.
- 3.4 Aeronautical English Requirements

3.5 Results

Day 4

4.1 Outward Technical Documentation

4.2 Concepts

4.3 Previews Information Bulletin and Meteorological Reports.

4.4 Aeronautical English Requirements

4.5 Results

Day 5

5.1 General Information

5.2 Concepts

5.3 Principles

5.4 Aeronautical English Requirements

5.5 Results

**5.10 THE ELABORATION OF THE AERONAUTICAL
TECHNICAL GUIDE:**

AERONAUTICAL TECHNICAL GUIDE

SPECIFIC TECHNICAL INFORMATIVE

5.1 TECHNICAL DATA

LOCATION INDICATOR AND AERODROME NAME

SELT- LATACUNGA/Cotopaxi Intl.

CHARACTERISTICS

TBL.1 GEOGRAPHY AND ADMINISTRATIVE DATA

ARP Coordinates and AD Location.	005425S 0783657W 004° / 1847.68 M FM THR 36
Direction and Distance from (city)	Inside Urban Perimeter
Elevation / reference temperature	2805.7 M (9204.9 FT) / 22.4°C (DEC)
MAG VAR / Annual Change	1,35°W (2005) / 0.11°W
Administration	General Civil Aviation Direction.
	International "Cotopaxi" Airport
	Stall :0501390 - Latacunga
	Telephone :593 3 2 811800
	Telefax :593 3 2 811710
	AFS :SELTYDYX
	Commercial :Jeaeropuerto Latacunga
Transit Type allowed (IFR/VFR)	IFR / VFR

TBL..2. HOURS OF OPERATION

AD Administration	MON / FRI de 1300 – 2130 UTC
Customs and Immigration	1045 – 0500 UTC
Sanity dependencies	1045 – 0500 UTC
Oficina de notificación AIS	1045 – 0500 UTC
Notification Office ATS (ARO)	1045 – 0500 UTC
Notification Office MET	1045 – 0500 UTC
ATS	1045 – 0500 UTC
Supply of fuel	1045 – 0500 UTC
Scale Services	1045 – 0500 UTC
Security	1045 – 0500 UTC
Unfreezing	NIL
Observations	Operation Schedule has extended till 0600 UTC, to 3 stage aircraft equipped.

TBL..3 INSTALLATIONS AND SCALE SERVICES.

Installations and Load Manipulation	AVINDAC with necessary equipment for load embark and disembark.
Fuel Types / lubricant	JET A-1
Installations / supply capacity	1 tanker
Unfreezing Installations	NIL
Visitants aircraft hangar space	NIL
Installations to repair visitants' aircraft.	Repair Station DIAF

TBL..4 INSTALLATIONS AND PASSANGERS SERVICES

Hotels	In the city
Restaurants	In the city
Transport	Busses to and from the city in HJ schedule, taxis in H24 schedule.
Installations and medical Services	Treatment of first aids, two ambulances, clinical and hospitals in the city.
Bank and Mails offices.	Automatic cashier H24, mails 1300 / 2100 UTC
Tourism Office.	In the city.

TBL.5 SEARCH SERVICE AND FIRE EXTINTION

AD Category for firing extinction.	CAT 7
Salvage Equipment	2 OSHKOSH T-1500 3000 natural water gallons, 400 AFFF gallons and 1000 P.Q.S (dry chemical powder) pounds. 1 OSHKOSH P-19 (damaged) 1000 natural water gallons, 135 AFFF gallons and 500 P.Q.S (dry chemical powder) pounds. 1 FORD DOUBLE AGENT 100 AFFF gallons blended and 500 P.Q.S (dry chemical powder) pounds.
Capacity for removing disabled aircrafts.	It is not available; there exists an agreement between Airport Direction and Locals Companies.

TBL..6 RAMP DATA, TAXIWAY, AND CHECKING POINTS.

Surface and Resistance Ramp	Surface :Pavement Resistance :PCN 56/F/C/X/T
Width, Surface and resistance Taxiway.	Width :23 M Surface :Pavement Resistance :72/F/C/X/U
Location and Elevation of ACL	Location :NIL Elevation :NIL
Checking Points VOR / ILS	VOR : NIL ILS : NIL

TBL.7 GUIDES AND CONTROL SYSTEM OF MOVEMENT IN THE SURFACE AND SIGNALS.

Use of signals ID in the aircrafts pits. Guide lines TWY and visual guide of parking and positions of the aircrafts.	Guide marks in TWY, in all the intersections with TWY and RWY in all expects stop positions.
Signals and LGT of RWY and TWY.	RWY: Appointment, TDZ, CL, signals THR, embroider, runway extreme, signals and illuminated. TWY: CL and points expect in all the intersections TWY / RWY signals and illuminated.
Sweep of stop	NIL

TBL..8 AERODROME OBSTACLES

In the Approach Areas /TKOF		
RWY / affected area	Obstacle Type Elevation Signals / LGT	Coordinated
a	B	c
1 18 APCH 36 TKOF	Hill 2961 M / 9714.45 FT	005049S 0783615W
2 18 APCH 36 TKOF	Hill 2985 M / 9793.2 FT	005201S 0783607W

TBL.9 METEOROLOGICAL INFORMATION PROPORIONATE

MET office associate	LATACUNGA
Hours of Operation	1045 – 0500 UTC
MET office out of schedule	NIL
Responsible office in TAF preparation	QUITO
Periods of validity	24 HR
Landing prognostic type	NIL
Emission interval	
Briefing / Consults	Personal
Flight Documentation	Files
Used Languages (s)	English and Spanish
Charts and available information for briefing and consults.	SPECI, METAR, TAF ARFOR, SIGMET.
Supplementary equipment available for proportionate information	Telephone: 593 3 2811650

TBL.10 RUNWAY PHYSICAL CHARACTERISTICS.

NR RWY	BRG GEO AND MAG	RW dimensions (M)		Resistance(PCN) And surface of RWY y SWY	Coordinated THR	Elevation THR and maximum elevation of TDZ of RWY APP precision
1	2	3		4	5	6
18	184° GEO 186° MAG	3693 x 45		72/F/C/X/U Pavement	005325S 0783652W	2805.7 M 9204.9 FT
36	004° GEO 006° MAG	3693 x 45		72/F/C/X/U Pavement	005525S 0783701W	2778.3 M 9115.04 FT
RWY-SWY Slope	Dimensions SWY (M)	Dimensions CWY (M)	Dimensions de Fringe (M)	OFZ	Observations	
7	8	9	10	11	12	
- 0.73%	95 x 45	180 x 150	3813 x 150	NIL	RESA 90 x 90	
+ 0.73%	60 x 45	180 x 150	3813 x 150	NIL	RESA 90 x 90	

TBL.11 DECLARATE DISTANCES

Indicator RWY	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Observations
18	3693	3873	3788	3261	DTHR 432 M
36	3693	3873	3753	3693	NIL

TBL.12 APPROACH AND RUNWAY LIGHTS.

Indicator RWY	Type LGT APCH LEN INTST	Color LGT THR WBAR	VASIS (MEHT) PAPI	LEN LGT TDZ	Length, Color, INTST LGT RWY
1	2	3	4	5	6
18	SALS 420 M	Green	PAPI Left 3.2°	NIL	NIL
36	NIL	Green	NIL	NIL	NIL
Indicator RWY	Length, color, INTST LGT RWY	Color WBAR LGT extreme RWY	LEN (M) Color LGT SWY	Observations	
	7	8	9	10	
18	3261 M 50 M White	Red	NIL	located in en DTHR located to 409 M of THR 18	
36	3261 M 50 M White	Red	NIL	NIL	

TBL.13 OTHER LIGHTS, SECONDARY SOURCE OF ENERGY

Location, characteristics and hours of operation ABN / IBN	ABN ALTN G / W; identification AD 1045 – 0600 UTC
Location LDI y LGT Anemometer LDI y LGT	LDI :NIL Anemometer :NIL
Boarding and center line lights of TWY	Boarding :LGTD Center line :NIL
Auxiliary Source energy Commutation time	LGT with auxiliary plant of EMERG automatic Maximum time of connection 9 SEC

TBL.14 HELICOPTERS LANDING AREA

Coordinated TLOF o THR de FATO	No established, APN it is used
Elevation de TLOF y/o FATO M / FT	NIL
Dimensions, surface, resistance, Signals of the areas TLOF y FATO	Pavement
BRG geographic y MAG de FATO	NIL
Declaration distance available	NIL
Lights APP and FATO	NIL

TBL.15 ATS AIR SPACE

Designation and lateral limits	LATACUNGA CTR RDO de 10 NM with centre in VOR/DME LTV COORD 005527S 0783703W LATACUNGA ATZ
Verticals Limits	CTR: GND a 17000 FT AMSL ATZ: GND a 11000 FT AMSL
Air space classification	CTR: E ATZ: G
Distinguishing calls of the ATS dependence Language(s)	CTR: Latacunga approach ATZ: Latacunga tower Spanish and English
Transition Height	15000 FT MSL
Observations	FREQ 118.5 MHZ uses APP and TWR

TBL.16 ATS INSTALLATION OF COMUNICATIONS

Appointment of the service	Distinguishing Calling	Frequency	Hours of Operation	Observations
APP	Latacunga approach	118.5 MHZ	1045-0500 UTC	NIL
TWR	Latacunga tower	118.5 MHZ	1045-0500 UTC	NIL
	Latacunga surface	121.9 MHZ	1045-0500 UTC	Control de surface

TBL.17 RADIOAIDS FOR NAVIGATIONS AND THE LANDING

Radio aids type	ID	Frequency	Hours of Operations	Coordinated of place Transmission antenna	ELEV de la antena DME	Observations
VOR/ DME	LTV	117.1MHZ CH118X	H24	005527S 0783703W	2780.8M 9123.25FT	226.5°MAG/ 87 M FM THR 36
LLZ 18 ILS CAT I	ILA	108.7MHZ	H24	005528S 0783701W		
GP 18		330.5MHZ CH24X	H24	005351S 0783657W		angle 3.2°

TECHNICAL DOCUMENTATION

The technical documentation that those areas give and receive corresponds:

OUTWARD TECHNICAL DOCUMENTATION

PREVIEWS INFORMATION BULLETIN (PIB)

This bulletin contents aeronautical information that the aeronautical Information Area gives to the flight crews previews the outwards or departures of the aircrafts this kind of information is given through the presentation on **Notam** (Notice to Air Men) Report which means (Notice to Air Men) this report advice to the crew about the risk situation like: services, procedures or any aeronautical dangerous in the International Cotopaxi Airport or the route flown by the aircrafts.

Other important information that will be delivery to the flight crew are the NOTAMS (Notice to the Air Men) effectives, moreover all the urgent information through the PIB (Preview Information Bulletin) in clear language.

METEOROLOGICAL REPORTS (MR)

This kind of report refers to the meteorological weather of the aerodromes in time the Aeronautical Information Service Area gives to the flight crews previews the departures of the aircrafts, the meteorological conditions should be the optimists and the factors will be: the temperature, the time always in UTC (Universal Time Coordinate), the date, the meteorological phenomena's like: rain, fog, etc., the distribution of the clouds, the direction and speed of the wind through knots, the ceiling, etc.

This information is real and safe aeronautical technical report of each airport of any place of any time of the country and the world.

INWARD TECHNICAL DOCUMENTATION

THE WEIGHT AND BALANCE LOAD SHEET (W&B)

It constitutes a sheet that the foreign flight crews delivery to the Flight Operation Area and the technicians are taken charge to control, to supervise and to authorizer preview the departures of the aircrafts.

This load sheet contents all the allowed weights information of the aircrafts for having a good flight following the correct loading procedures with the safe and security standards finding the aircraft center of gravity that will never exceed the established center of gravity limits and the aircraft performance.

That is why the importance to know some terms that are used in the filled of this load sheet:

Definition of Terms:

To avoid the confusion arising from varying interpretations of terms, specific definitions have been established:

Actual zero fuel weight, Center of gravity, Manufacturer's empty weight, Maximum landing weight, Maximum takeoff weight, Maximum taxi weight, Maximum zero fuel weight, Operational empty weight, operational items, Standard items.

MAXIMUM STRUCTURAL AIRCRAFT WEIGHTS

When an aircraft goes out of the manufacturing is heavy, to determine some fixed weights, for any major reparation or inclusive when the aircrafts is painted the fixed weight changes.

-MAXIMUM STRUCTURAL LANDING WEIGHT: It constitutes the maximum weight that an aircraft can resist, especially the train landing, at landing moment which is given by the fabricant and it is fixed for each aircraft.

-MAXIMUM STRUCTURAL TAKE OFF WEIGHT: It constitutes the maximum weight that an aircraft can resist at take off moment in ideal conditions of a type atmosphere, this weight is given by the fabricant and it is fixed for each aircraft.

AN IMPORTANT NOTE: An aircraft cannot attempt take off with major weights of the weights given by the fabricant, that is why at the moment of the weight and balance load sheet presentation it is necessary to compare them with the structural weights.

OTHER AIRCRAFT WEIGHTS

When an aircraft carries out its first flight in new routes, it is important to do an operational flight plan, which it consists in the calculate of times, fuel, checking points, etc. based in the performance of the aircraft, that is why the importance of basic knowledge of the weight and balance load sheet.

-MAXIMUM ZERO FUEL WEIGHT (MZFW): It constitutes the maximum weight that can resist an aircraft without fuel and with all the pay load, before of any structural damage, especially between the wings and the fuselage which is given by the fabricant and its fixed for each aircraft.

-MAXIMUM RAMP WEIGHT (MRW): It constitutes the maximum weight that a structural aircraft can resist before of any damage at the moment of

being in the ramp, it is the major weight that an aircraft has and it is fixed for each aircraft and it is given by the fabricant.

-MAXIMUM LANDING WEIGHT (MLW): It constitutes the maximum weight that an aircraft can resist, especially the train landing, at landing moment which is given by the fabricant and it is fixed for each aircraft. It is calculated depending of the used runway, temperature, slope, atmosphere pressure, length, etc.

FLIGHT PLAN (FPL)

The Flight plan constitutes an aeronautical technical sheet that the Aeronautical Information Service area provides to the foreign flight crews. It contains specific information respects to projected flight the information is the following:

Flight Plan Presentation:

It is obligatory for the flight crew members the personal presentation of the Flight Plan sheet, it could be VFR (Visual Flight Rules) or IFR (Instrumental Flight Rules) flight plan to the aeronautical technical authorities.

The flight crew member authorized to this presentation are the pilots, the aircraft dispatcher, or the flight operations technician, whose have the update aeronautical license emitted by the Civil Aviation Direction.

It is not accepted the presentation of this formulary by telephone or other no authorized people. The responsibility of this disposition is charged of Aeronautical Information Service area of each airport.

IFR Flight Plan Presentation:

For IFR flight plan, the control pilot or his authorized representing has to present the document with **minimums advance of 30 minutes** of the departure of the project hour of the flight.

The validity: The IFR flight plan has a **validity of 30 minutes** after this period of time it will be necessary the presentation of a new document and the expired flight plan will be filled as rules indicated.

VFR Flight Plan Presentation:

For IFR flight plan, the control pilot or his authorized representing has to present the document with **minimums advance of 10 minutes** of the departure of the project hour of the flight.

The validity: The IFR flight plan has a **validity of 60 minutes** after this period of time it will be necessary the presentation of a new document and the expired flight plan will be filled as rules indicated.

CHARGED PERSONNEL OF RECEIVED THE FLIGHT PLAN SHEET:

The charged personnel of received this document are the Aeronautical Information Service technicians, who have to familiarize with the content information and always they have to be available to advice and give help to the flight crew for the correct planning of the project flight. Moreover maintain the documentation update at the office.

The information that contents the Flight Plan is with respects to: Aircraft type, Aircraft identification, time in UTC, Departure airport, Destin airport, Route, Flight level, Cruising airspeed, Alternating airport, Pilots name, route time, etc.

The purpose of the flight plan is to relay the desires of the pilots to the controller. All information shown refers to appropriate services directives for specific instruction on contents and the filing of the flight plan.

GENERAL INFORMATION

In this section there will contain all kind of technical information respects to the International Cotopaxi Airport that the foreign flight crews will want to know formulated be questions or such us statements.

The information will be respects to:

Geography's aerodrome data (airport elevation, slope's airport, temperature reference, coordinates)

TBL.1 GEOGRAPHY AND ADMINISTRATIVE DATA

ARP Coordinates and AD Location.	005425S 0783657W 004° / 1847.68 M FM THR 36
Direction and Distance from (city)	Inside Urban Perimeter
Elevation / reference temperature	2805.7 M (9204.9 FT) / 22.4°C (DEC)
MAG VAR / Annual Change	1,35°W (2005) / 0.11°W
Administration	General Civil Aviation Direction.
	International "Cotopaxi" Airport
	Stall :0501390 - Latacunga
	Telephone :593 3 2 811800
	Telefax :593 3 2 811710
	AFS :SELTYDYX
	Commercial :Jeaeropuerto Latacunga
Transit Type allowed (IFR/VFR)	IFR / VFR

- Working's hours (administrative and technical schedule)

TBL..2. HOURS OF OPERATION

AD Administration	MON / FRI de 1300 – 2130 UTC
Customs and Immigration	1045 – 0500 UTC
Sanity dependencies	1045 – 0500 UTC
Oficina de notificación AIS	1045 – 0500 UTC
Notification Office ATS (ARO)	1045 – 0500 UTC
Notification Office MET	1045 – 0500 UTC
ATS	1045 – 0500 UTC
Supply of fuel	1045 – 0500 UTC
Scale Services	1045 – 0500 UTC
Security	1045 – 0500 UTC
Unfreezing	NIL
Observations	Operation Schedule has extended till 0600 UTC, to 3 stage aircraft equipped.

- Installations

TBL..3 INSTALLATIONS AND SCALE SERVICES.

Installations and Load Manipulation	AVINDAC with necessary equipment for load embark and disembark.
Fuel Types / lubricant	JET A-1
Installations / supply capacity	1 tanker
Unfreezing Installations	NIL
Visitants aircraft hangar space	NIL
Installations to repair visitants' aircraft.	Repair Station DIAF

- Services (aeronautical information service, meteorological service, etc)

AERONAUTICAL SERVICES
-Flight Operations
-Aeronautical Information Service
-Meteorological
-Communications
-Control Tower
-Rescue and Extinguishing Fires

- Runway data (slope, resistance, direction)
- Apron data (physical area, etc)

- TBL..6 RAMP DATA, TAXIWAY, AND CHECKING POINTS.

Surface and Resistance Ramp	Surface :Pavement
	Resistance :PCN 56/F/C/X/T
Width, Surface and resistance Taxiway.	Width :23 M
	Surface :Pavement
	Resistance :72/F/C/X/U
Location and Elevation of ACL	Location :NIL
	Elevation :NIL
Checking Points VOR / ILS	VOR : NIL
	ILS : NIL

- Radio aids for navigation (VOR/DME, ILS,)
- Dangerous Information Situation reports (See annexes)

BIBLIOGRAPHY

DGAC, Technical Regulations (RDAC's). Publicity and Studies Corporations, Quito 2002.

DGAC, Aeronautical Information Publication (AIP), 3rd edition, Quito 2003.

Aeronautical Information Manual, U.S Department of Transportation, Federal Aviation Administration, February 14, 2008

Annex 2, Air Regulation, 9^{ty} edition, Montreal Canada, July 2001.

Annex 6, Aircrafts Operation, 2nd edition, Montreal Canada, July 2003.

Annex 14, Aerodromes, 3rd edition, Montreal Canada, July 2004.

Annex 15, Aeronautical Information Services, 9^{ty} edition, Montreal Canada, July 2002

NOTAMS List, Aeronautical Information Service Area, International Cotopaxi Airport- Latacunga.

Operative Manual of Aeronautical Information Service, "Aerodrome AIS Rooms" 1st Edition, Quito, March 2007.

www.dgac.gov.ec , Aviation Field.

ENCARTA Encyclopedia, Microsoft, 2007, Projects Design.

GLOSSARY

Aerodrome: A defined area on land or water (including any building, installations and equipment) intended to be used either wholly or in a part of the arrival, departure and movement of aircrafts).

Aeronautical Chart: A map used in air navigation all or part of the following: topography features, hazards and obstructions, navigation aids, navigation routes, designated airspace and airport.

Aeronautical Information Manual: (AIM) - A primary FAA publication whose purpose is to construct airmen about operating in the National Airspace System of the U.S. It provides basic flight information, ATC Procedures and general instructional information concerning health, types of aeronautical charts and their use.

Aeronautical Information Publication: (AIP) - A publication issued by or with the authority of a state and containing aeronautical information of a lasting character essential to air navigation.

Aircraft: Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

Airport: An area or land of water that is used or intended to be used for the landing and takeoff of aircraft and includes its buildings and facilities, if any.

Airport Elevation: The highest point of an airport's usable runways measured in feet mean sea level.

Airspeed: The speed of an aircraft relative to its surrounding air mass.

Air Traffic: Aircraft operating in the air or on an airport surface, exclusive of loading ramp and parking areas.

Air Traffic Control: A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.

Ceiling: The heights above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as "broken", "overcast", or "obscuration", and not classified as "thin" or "partial".

Coordinates: The intersection of lines of reference, usually expressed in degrees/minutes/seconds of latitude and longitude, used to determine position or location.

Departure Time: The time an aircraft becomes airborne.

Flight Level: A level of constant atmospheric pressure related to a reference.

Flight Plan: Specified information relating to the intended flight of an aircraft that is filed orally or in writing with an FSS or an ATC facility.

Helicopter: Rotorcraft that, for its horizontal motion, depends principally on its engine-driven rotors.

Heliport: An area of land, water, or structure used or intended to be used for the landing and takeoff of helicopters and includes its buildings and facilities if any.

International Airport: Any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out.

Landing Area: That part of a movement area intended for the landing or takeoff of aircraft.

Movement Area: That part of an aerodrome to be used for the takeoff, landing and taxiing of aircraft, consisting of the maneuvering area and the apron.

Notam: A notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

Obstacle: An existing object, object of natural growth, or terrain at a fixed geographical location or which may be expected at a fixed location within

a prescribe area with reference to which vertical clearance or must be provided during flight operations.

Route: A defined path, consisting of one or more courses in a horizontal plane, which aircraft traverse over the surface of the earth.

Runway: A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

ANNEXES

ANNEXES

- 1- ANNEX 1: Flight Plan Sheet
- 2- ANNEX 2: Weight and Balance Load Sheet
- 3- ANNEX 3: Metar Report
- 4- ANNEX 4: Meteorological Information: Notam Report
- 5- ANNEX 5: PIB Previews Information Bulletin
- 6- ANNEX 6: ISP Dangerous Information Situation report

APPENDIX

Abbreviations

ACL: Altimeter Check Location

AFFF: Aqueous Film Forming Foam

AIP: Aeronautical Information Publication

AIM: Aeronautical Information Manual

ACFT: Aircraft

APCH: Approach

ARFOR: Area Forecast

ATS: Air Traffic Services

APN: Apron

ATC: Air Traffic Control

AWY: Airway

ATS: Air Traffic Service

DME: Distance Measured Equipment

FAA: Federal Aviation Administration

FPL: Flight Plan

FL: Flight Level

FSS: Flight Service Station

FT: Feet

HR: Hour

ID: Identification

ILS: Instrumental Landing System

ICAO (OACI): International Civil Aviation Organism

INTL: International

LGT: Length

MET: Meteorological, meteorology

MLW: Maximum Zero Fuel Weight

MRW: Maximum Ramp Weight

MZFW: Maximum Landing Weight

NDB: No directional Beacon,

NIL: Nothing

NOTAM: Notice to Air Men

OBST: Obstacle

P.Q.S: D.C.P: Dry Chemical Powder

RWY: Runway

SIGMET: Significant weather

SPECI: Special weather

TAF: Aerodrome (terminal or alternate) forecast in abbreviated form.

TWR: Tower

TWY: Taxiway

TKOF: Takeoff

PIB: Previews Information Bulletin

UTC: Universal time coordinates

VOC (COV): Vehicular Operative Credential

VOR: VHF Very High Frequency Omni directional Range

W&B: Weight and Balance Load Sheet