COAST GUARD AERONAUTICAL INSPECTION SERVICE (BHUBANESWAR)

QUALITY MANAGEMENT SYSTEM (IS/ISO 9001:2015)

QUALITY MANUAL

CGAIS(BSR)/QM-001

ISSUE NO: 01

ISSUE DATE: 02/05/2024

PREFACE

This document has been prepared to define and communicate the CGAIS(BSR) Quality Policy, Quality objective & Scope for the purpose of effective implementation of Quality Management System in order to assure Quality Maintenance of ICG aviation assets through continual inspection /analysis towards achieving zero defects /incidents. The Quality Management System has been based on the requirement of IS/ISO 9001: 2015. The Quality Manual is the property of CGAIS Bhubaneswar, so its circulation is limited to those mentioned in the distribution list, unless otherwise specified, no part of this manual may be reproduced or utilized in any form or by any means, either electronic or mechanical including photocopying & microfilm without permission in writing /without authorized permission. Preparation of additional copies is not permitted without authorized approval.

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APPROVALS

Management is ultimately responsible for making balanced judgments, assessing the significance of variations in our Quality Assurance and making decisions. In arriving at such decisions, the quality and personal integrity of staff are of fundamental importance. In this context, every effort is made to ensure that each person in this unit understands that Quality Assurance is important to their future, that they know how they can assist in the achievement of adequate Quality and that they are encouraged to do so.

This Quality Manual and the Quality Policy are approved by the undersigned and are supported by all levels of management within the Coast Guard Aeronautical Inspection Service, Bhubaneswar.

SO (ISO)

Date: 02 May 2024

Management Representative

Date: 02 May 2024

Officer-in-Charge

Date: 02 May 2024

MANUAL DISTRIBUTION LIST

S No	Designation of Copy Holder	Copy No.
1	Officer-in-Charge	Controlled Copy No. 01
2	ISO Cell	Master Copy
3	Admin Section	Controlled Copy No. 02
4	Technical Section	Controlled Copy No. 03
5	Certifying body (M/s Bureau of Indian Standards)	Controlled Copy No. 04

PAGE REVISION STATUS

To ensure that each copy of the Quality Management System (QMS) manual maintains a complete record of amendments and this amendment page is updated and issued with each document when revised and with each issue of the entire manual. Amendments of a minor or editorial nature may be undertaken and incorporated by the Management Representative. Amendments affecting policy shall only be incorporated with the approval of the Officer-in-Charge, CGAIS(BSR).

Page	Issue	Revision	Details of Change	Date	Approved By
1 - 56	01	00	Initial issue	02.05.2024	Commandant Pramod Kumar

1. SCOPE

General : ***"Assuring the Quality Maintenance of aircraft in ICG Aviation units & aviation facilities onboard OPV/PCV class of ships located in North East regions by conducting periodical Quality Audits and assuring quality maintenance of ICG Dhruv Mk I & Mk III fleet by providing Super imposed Quality Assurance cover under I-Level Servicing at Bhubaneswar, investigation of aircraft major defects, acceptance inspection of GSEs /GHEs, updating/review of air publication, technical analysis of incident & rotable failure data and continually improvement of QMS to meet customer requirements and enhance customer satisfaction"***

Introduction:

(a) Coast Guard Aeronautical Inspection Service Bhubaneswar is an Aviation Quality Assurance organization under the command of Officer-in-Charge and functions under the functional control of Coast Guard Headquarters, administrative control of the Coast Guard Commander (Eastern Seaboard)[CGC(ES)], Vizag & Coast Guard Regional Headquarters (North East) [CG RHQ(NE)], Kolkata and logistics support by Coast Guard Air Enclave, Bhubaneswar.

Role:

(b) Coast Guard Aeronautical Inspection Service (CGAIS) Bhubaneswar was activated on 27 Jul 2020 by Coast Guard Headquarters *vide* letter AM/0933/CGDP/CGAIS(BSR) dated 18 Jun 2020 with the task to provide continual QA coverage to Dhruv Mk-III helicopters of 830 SQN(CG)/CGAE(BSR) and CGASD(BSR) under PBL regime. CGAIS Bhubaneswar was designated as the Nodal Agency and Main Data Centre (MDC) for all Dhruv Mk-I & Mk-III helicopters fleet of ICG *vide* Coast Guard Headquarters letter AM/0902/ALH/CGAIS(BSR) dated 09 Feb 2021. In addition to the above roles and responsibilities, Major servicing (600 hrly/ 'I' level maintenance) of Dhruv Mk-III helicopters ex 830 Sqn(CG) are being undertaken under custodianship of CGAIS Bhubaneswar. Wherein, super-imposed QA coverage is being provided by CGAIS Bhubaneswar.

(c) The charter of duties as per CGO 07/2010 :-

(i) Material survey of aircraft on as required basis including SNAP inspections and quality audits.

(ii) Deck inspection of AOPVs/OPVs in CG service, in association with respective CGRPS/refit authority on completion of refit of ships as and when required.

(iii) Provide the inspection coverage for major aircraft servicing being undertaken by M/s HAL or as and when specified by CGHQ.

(iv) Acceptance inspection of equipment manufactured, installed, repaired or reconditioned within the Coast Guard service.

(v) Acceptance inspection of indigenously procured aviation stores where inspection authority is Coast Guard service.

(vi) Pre-survey of repairable/defective equipment to determine its condition and extent of rectification required to bring up to the specified standards.

(vii) Defect analysis and defect investigations raised by units on form A-21 of items within CG service.

(viii) Inspection of Air equipment in storage of specific requisition from store depots and advice on matters likely to affect condition of equipment in storage.

(ix) Assistant in aircraft accident investigation.

(x) Scrutiny of draft modification proposal and evolution of proof and trial modification.

(xi) Periodic review of SIs/STIs/NTIs/ with a view of updating the same.

(d) The charter of duties promulgated as per PBL regime are as below: -

(i) Monitor the quality aspects of servicing/repairs undertaken by M/s HAL reps onsite and report deviations etc.; if any to Coast Guard Headquarters.

(ii) Periodic review on comprehensive quality assurance to ensure continual improvement in maintenance practices.

(iii) Introduce stages of physical quality assurance which should be comprehensive and cover quality assurance right from the first stage of inspection till signal out of aircraft. They are to be reviewed periodically for ensure better supervision over M/s HAL maintenance and quality assurance organization.

(ix) Scrutinise the repairs order and finalise the work scope of aircraft for which servicing is to be undertaken.

(vi) Ensure all orders and instructions affecting inspection and testing are complied with.

(vii) Complication of inspection instructions affecting inspection and testing are complied with.

(viii) Acceptance/pre-transfer inspection of aircraft and aero engine.

(ix) Inspection of aircraft undergoing major servicing/inspection (I-level servicing).

(x) Co-ordinate various activities related to servicing and repairs of ALH Mk III, Aero engines and rotables with various divisions of M/s HAL to ensure meticulous monitoring and timely completion of servicing.

(xi) Scrutinizing aircraft/aero engine concession / production permits.

(xii) Periodic updating of all technical instructions in respect of aircraft, engine and associated equipment.

(xiii) Monitoring and maintaining MOD status of all aircrafts, engines and associated equipment.

(xiv) Laid down periodicity of calibration for the equipment and tools and ensure that all have valid calibration certificate.

(xv) Maintaining up-to-date modification standard of each type of aircraft and ensure that all aircrafts are modified to that standards.

(xvi) Determination of stages of inspection of production process where applicable.

(xvii) Inspect auxiliary facilities like power supply points, washing rigs etc, and advice units to take corrective actions.

(xviii) Inspects all loose equipment supplied along with aircraft for proper storage/preservation.

(xix) Ensure that the M/s HAL QA inspectors are qualified for the right job and inspection/servicing being undertaken at the bases.

(xx) Coordinate with RDAQA Bangalore for periodical audit of HAL/ICG QA setup at bases.

(e) Coast Guard Aeronautical Inspection Service Bhubaneswar has developed and implemented a Quality Management System. In order to document the basic quality policies and procedures and to monitor the Quality Assurance requirements of Coast Guard Aviation units and to continually improve Quality Assurance services through the use of the Quality Management System.

(f) The Quality Management System of CGAIS Bhubaneswar meets the requirements of the International Standard IS/ISO 9001:2015. This system addresses the Quality Assurance requirements of Aviation units in their day-to-day functioning to meet the operational flying task of the organizational requirement.

(h) The manual describes the Quality Management System, defines its authorities, inter relationships and duties of the personnel responsible for performing within the system. The manual also provides procedures or references for all activities comprising the QMS to ensure compliance to the necessary requirements of the ISO standard.

(j) Internally the manual is used to guide the CGAIS Bhubaneswar Staff through the various requirements of the ISO standard that must be met and maintained in order to ensure customer satisfaction and continual improvement.

(k) Externally, the manual is used to introduce our Quality Management System to our customers (CG Aviation Units) and other external organizations or individuals. The manual is also used to familiarize them with the controls that have been implemented and to assure them that the integrity of the QMS is maintained, thus demonstrating that the CGAIS Bhubaneswar is focused on customer satisfaction and continual improvement.

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2. NORMATIVE REFERENCE:

This Quality Manual defines the policies and principles applied against each of the requirements of IS/ISO 9001:2015 QMS standard and relates to all activities carried out in the Coast Guard Aeronautical Inspection Service, Bhubaneswar that determines quality and lays down guidelines within which the unit can operate.

Each section of the manual is related to an identified element of IS /ISO 9001:2015 QMS Standard.

CGAIS(BSR)

3. TERMS & DEFINITIONS:

Terms: The intended meaning of the following terms used in the QMS Manual of Coast Guard Aeronautical Inspection Service, Bhubaneswar is as under:

a.	Applicable	:	Related to this Quality Management System or any reference standard
b.	Appropriate	:	Reasonable
c.	Documented	:	Written or soft
d.	Inspectors	:	Technical /Non Technical personnel specialized in relevant field
e.	Product/ Service	:	End result of a process (Quality Audit Report, Investigation/ Analysis Report, Work done Report)
f.	Shall	:	Must
g.	Suitable	:	Reasonable for intended purpose.
h.	Organization	:	Indian Coast Guard
j.	Company	:	CGAIS(BSR), Bhubaneswar
k.	Management	:	The Officer-in-Charge and Management Representative

Definitions: This section is for definitions unique to Coast Guard Aeronautical Inspection Service, Bhubaneswar

AE	:	Air Engineer
AI	:	Aircraft Investigation
AL	:	Air Electrical
AR	:	Air Radio
AFS	:	After Flight Servicing.
ABER	:	Anticipated Beyond Economical Repair
ARDS	:	Arming, Re-arming and De-arming Servicing
AOG	:	Aircraft on Ground
ADW	:	Awaiting Disposal and final write off.
A-21	:	Defect Report
BH	:	Bird Hit
BFS	:	Before Flight Servicing
BER	:	Beyond Economical Repair
Customer	:	Indian Coast Guard Air Stations, Squadrons, Flights & OPV/PCV Class of ICG ships
CGAIS (BSR):		Coast Guard Aeronautical Inspection Service (Bhubaneswar)

CGHQ	:	Coast Guard Headquarters
CGAOT	:	Coast Aeronautical Overseeing Team
DI/DR	:	Defect Investigation / Defect Rectification
DTG	:	Signal Reference Details. (Date, Time & Group)
FOD	:	Foreign Object Damage
FUR	:	Follow up report
FIR	:	Frontline aircraft Immediate Replacement
GRACC	:	Ground accident
GSE	:	Ground Support Equipment
GHE	:	Ground Handling Equipment
ICG	:	Indian Coast Guard
Inspectors	:	Technical/Non Technical personnel specialized in relevant field
(I) STI	:	(Indian) Special Technical Instruction
(I) SI	:	(Indian) Servicing Instruction.
(I) NTI	:	(Indian) Naval Technical Instruction
IC	:	Inspection Certificate
INSIG	:	Incident Signal

CGAIS(BSR)

IQA	:	Internal Quality Audit
LP	:	Local Procurement
LTI	:	Local Technical Instructions
MMF(I)/(D)	:	Material Mal Function(intermittent)/Design Defect)
MF(P)/(F)/ /(R)	:	Material Failure (premature/ fatigue /corrosive action /repeated) (C)
MSO	:	Main Signal Office
OPV	:	Off shore Petrol Vessel
PLL	:	Permanent Loan Ledger
Product	:	Quality Assurance Service
PIC	:	Pre Installation Checks
QAS	:	Quality Assurance Services
QA	:	Quality Audit
QM	:	Qualify to Maintain
QS	:	Qualify to Sign
ROLE AOG	:	Particular role of aircraft unserviceable
REP	:	Repairable aircraft undergoing or awaiting major repairs/work

CGAIS(BSR)

RHQ	:	Regional Headquarters
SDI	:	Serious Defect Instructions
TRS	:	Turn Round Servicing
TAE	:	Training and miscellaneous Aircraft Establishment
TIR	:	Training and miscellaneous aircraft Immediate Replacement.
SS	:	No damage
LQ	:	(Light damage)-Defects which will be repaired by squadron resources
LX	:	(Light damage) - Repairable by ship or air station resources.
LC	:	(Light damage) - Repairable on ship or at air-station but requiring repair organisation or contractors working party.
LY	:	(Light damage) - Not repairable on ship or air-station.
HX	:	(Heavy damage) - Repairable by ship or air-station resources.
HC	:	(Heavy damage) - Repairable on ship or at air-station but requiring repair contractor working party.
HY	:	(Heavy damage) - Not repairable on ship or at air-station.
HZ	:	(Heavy damage) - Likely to be beyond economical repairs.
ZZ	:	(Total loss) - Clearly un-repairable.
LRUs	:	Line Replacement Units

4. CONTEXT OF THE ORGANIZATION:

CGAIS(BSR) has established, documented and implemented Quality Management System for assuring Quality Maintenance of CG aviation assets through continual improvement, inspection/ analysis towards achieving zero defects/ incidents across ICG Dhruv Mk I & Mk III fleet in accordance with ISO 9001:2015 International Standard requirements.

4.1 Understanding the organization and its context: CGAIS(BSR) has been solely established to provide Quality Support to its front line squadrons, Air Stations and assist its higher echelons the need to improve the aircraft maintenance philosophy, in line with the current and future technological advances in aviation field worldwide. This unit also needs to be orient itself with the current maintenance trends being practiced /adopted and to improve upon it by adapting to various technological advances thereby saving natural resources, manpower, Cost, time to the organization and to enhance operational efficiency of the Squadrons & Air Stations.

The necessity to maintain the Aircraft in operational state at maximum duration of the year to meet any operational and administrative contingencies will directly hamper the qualitative issues which needs to be maintained based on an effective and robust administrative systems.

CGAIS(BSR) has determined and understood the external issues such as legal, technological, cultural, social & economical environment [viz Govt of India, Ministry of Defence Guide lines, laid down duties as per Coast Guard Order (CGO 07/2010)] and internal issues such as values, culture, Knowledge & performance of employees that are related to its Quality Management System and constantly monitoring and reviewing changes of the issues.

4.2 Understanding the Needs and expectations of Interested Parties: Interested parties of CGAIS(BSR) related to Quality Management System have been identified and their requirements have been determined. Coast Guard Headquarters(CGHQ), CGC(E), Regional Headquarters(RHQs) and Coast Guard Aeronautical Overseeing teams (CGAOTs), Indian Coast Guard Aviation units & Ships, CGASD(Goa/Bhubaneswar), CGAIS(Chennai/Porbandar/Kochi/Mumbai/Goa), HAL divisions, RCMA, RDAQA, Local traders supplying Ground supporting unit to ICG aviation units and employees of CGAIS(BSR) has been identified as the main interested parties.

4.3 <u>Determining the Scope of the Quality Management System</u>: CGAIS(BSR) has determined the boundaries and applicability of the Quality Management System to establish its scope when determining this scope.

(a) The external and internal issues referred in 4.1

(b) The requirements of relevant interested parties referred in 4.2

(c) The Quality Audit & support services provided by CGAIS(BSR) to ICG aviation units & aviation facilities nboard ship

(d) Super imposed Quality Assurance cover under I-Level Servicing at Bhubaneswar

CGAIS(BSR) applies all the requirements of this international Standard if they are applicable within the determined scope of its Quality Management System. The Scope of CGAIS(BSR)'s Quality Management System is available and maintained as documented information. The scope states the types of services covered as per assigned functions laid down Coast Guard Order [CGO] 07/2010 such as :-

(a) Quality Audit of aviation units and aviation facilities onboard ship based at North East region

(b) Quality Assurance coverage for major aircraft servicing (I-Level) undertaken by M/s HAL team

(c) Acceptance inspection of equipment

(d) Material Survey of aircraft

(e) Defect analysis and defect investigation raised by units

(f) Quality surveillance of POL

(g) Assist in aircraft accident investigation

(h) Periodic review of SIs /STIs /NTIs(I), NAMO's etc

(i) Deck inspection of AOPVs /OPVs class of ICG Ships

(j) Recommendation for modification of equipment

Conformity to IS/ISO 9001:2015 standard are only claimed if the requirements determined as not being applicable do not affect CGAIS(BSR)'s ability to ensure the conformity of its services and the enhancement of customer satisfaction.

The Scope Associated with CGAIS(BSR) Activities and Registration:- The scope of Coast Guard Aeronautical Inspection Service, Bhubaneswar [CGAIS(BSR)] is as follows:-

"***Assuring the Quality Maintenance of aircraft in ICG Aviation units & aviation facilities onboard OPV/PCV class of ships located in North East regions by conducting periodical Quality Audits and assuring quality maintenance of ICG Dhruv Mk I & Mk III fleet by providing Super imposed Quality Assurance cover under I-Level Servicing at Bhubaneswar, investigation of aircraft major defects, acceptance inspection of GSEs /GHEs, updating/review of air publication, technical analysis of incident & rotable failure data and continually improvement of QMS to meet customer requirements and enhance customer satisfaction***"

The following clauses of IS/ISO 9001:2015 standard is not applicable for QMS of CGAIS(BSR):-

Exclusion No. 1:
Design and Development of product & services- clause 8.3 of ISO 9001:2015

Justification:

As CGAIS Bhubaneswar is involved in Providing quality assurance cover for ICG Dhruv Mk III helicopter during I-Level Servicing under PBL regime, carried out by the teams from M/s HAL and do not indulge in any design and devvelopment.

4.4 <u>Quality Management System and its processes</u>: CGAIS Bhubaneswar has established, documented and implemented a Quality Management System (QMS) in accordance with the requirements of IS /ISO 9001:2015. The system is being maintained and is continually being improved through the use of the Quality Policy, Quality Objectives, Audit results, analysis of data, corrective and preventive action and management review.

4.4.1 CGAIS (BSR) has determined the processes needed for the Quality Management system and their application throughout the organization:

(a) The inputs required and the output expected from the processes

Ref: Are listed in QMS Process Flow Chart placed at page 52 ,Annexure III of this manual

(b) The sequence and interaction of these processes.

Ref: QMS interaction Flow Chart& organizational Structure on page 50 [Annexure I] of this manual.

(c) Determined and applied the criteria and methods for Quality Audit of units and maintenance of returns /data [including monitoring, measurement and related performance indicators] needed to ensure the effective operation and control of processes [see 8.5.1].

(d) Determined the resources needed for processes and ensure their availability viz vehicle, check list, Feedback reports, Policy letters, Maintenance Manual, Aircraft publication and test Equipments] [see 7.1].

(e) Assigns the responsibilities and authorities for processes [see 5.3]

Ref: Officer-in-Charge Temporary memorandum

(f) Address the risks and opportunities as determined in accordance with the requirements of 6.1. The risks involved are increase in Incidents, accidents to aircraft, life and property.

(g) Evaluates process and implement any changes needed to ensure that these processes achieve their intended results [See 9]

(h) Improves the processes and the Quality Management System [see 10]

4.4.2 CGAIS Bhubaneswar has the following documents to maintain effective QMS:

(a) Maintains documented information to support the operation of its processes **[Ref: Quality Procedure Manual QP-001]**

(b) Retain documented information to have confidence that the processes are being carried out as planned **[Ref: Master Document List]**

5.0 LEADERSHIP

Top management has been actively involved in developing and implementing the Quality Management System (QMS). It has provided the vision and strategic direction for the growth of the QMS and established Quality Objectives/ Quality Policy. To continue to provide leadership and show commitment to the improvement of the QMS, management provides:

(a) Communication within the organization the importance of meeting customer as well as statutory and regulatory requirements.
(b) Establish the quality policy.
(c) Establish quality objectives.
(d) Conduct half yearly management reviews.
(e) Ensure the availability of resources.

5.1 Leadership and Commitment

5.1.1 General:

The Top management [Viz Officer-in-Charge] of CGAIS(BSR) is committed to the development and implementation of the Quality Management System by:-

(a) Taking accountability for the effectiveness of the Quality Management System
(b) Ensuring that the quality policy and quality objectives are established for the Quality Management System and are compatible with the context and strategic direction of CGAIS(BSR)
(c) Ensuring the integration of the Quality Management System requirements into the Aviation Quality Audit Process of ICG units /Ships conducted by CGAIS(BSR)
(d) Promoting the use of process approach and risk based thinking
(e) Ensuring that the resources needed for the Quality Management System are available
(f) Communicating the importance of effective quality management system and of conforming to the Quality Management requirements
(g) Ensuring that the Quality Management System achieves its intended results
(h) Engaging, directing and supporting persons to contribute to the effectiveness of the Quality Management System
(j) Promoting improvement
(k) Supporting other relevant management roles to demonstrate heir leadership as it applies to their areas of responsibility.

5.1.2 Customer focus:

CGAIS(BSR) strives to identify current and future flight safety requirements and to enhance flight safety with optimal and efficient flying operation by ensuring Quality maintenance of ICG Air Asset. The detailed Technical analysis of each aircraft incident / accident, component failures and Quality Audit observation is carried out by the trade specialized QAS(Aero) Inspectors and the office-in-Charge and necessary remedial measures issued to ICG operating units in-consultation with OEM /M/s HAL. Maintenance operation and flight safety requirements are determined, converted into internal requirements and communicated to the concerned personnel in this organization through documented procedure.

5.2 POLICY:

5.2.1 Establishing the Quality Policy:- This level of Quality is achieved through implementation of a system of documented procedures that provide guidance to our employees and reflect the competence of the CGAIS Bhubaneswar to existing customers, potential customers and higher audit authorities. Achievement of this policy involves all personnel, who are individually responsible for the Quality of their work, resulting in a continually improving working environment for all. This policy is provided and explained to each EPs/ civilian by the Officer-in-Charge. To achieve and maintain the required level of assurance the Management Representative retains responsibility for the Quality Management System with routine operations controlled by the Officer-in-Charge. Quality policy is documented and depicted below:

"We, the personnel of Coast Guard Aeronautical Inspection Service (Bhubaneswar) are committed to assure Quality Maintenance of Indian Coast Guard aviation assets through continual inspection /analysis towards achieving zero defects/ incidents. Further, we are committed to comply with the requirements and continually improve the effectiveness of our Quality Management System(QMS)"

5.2.2 Communicating the Quality Policy:

Top management viz The officer-in-Charge ensures that quality policy is communicated to all individuals of CGAIS(BSR). It is included in unit training programme and training on QMS. The defined Quality policy is displayed in prominent places throughout the unit to maintain highest standard within our organization. Management reviews the Quality policy at each management review meeting to determine the policy's continuing suitability for our organization.

5.3 Organizational roles, Responsibilities and Authorities:

CGAIS(BSR) has defined responsibilities and authorities at all levels of the organization and communicates the same through Officer-in-Charge temporary memorandum to ensure the effective implementation of the Quality Management System. The organization structure of CGAIS(BSR) as shown in **Annexure-I** depicts the inter-relationship of personnel of the organization. The Job descriptions define the responsibilities and authorities of each of the positions on the organizational chart and the same are reviewed and approved by executive management for adequacy. Quality Procedure Manual describes the responsibility of each personnel as shown in the organizational chart. **[Ref: CGAIS(BSR)-QP 001, Oi/c Ty Memo]**

Common Responsibilities

- *Closure of Non - Conformities.*
- *Follow ISO 9001 (QMS) as applicable to respective Dept. / Section.*
- *Ability to co-ordinate effectively with other Depts.*
- *Finalize QMS Objectives and strive to achieve the QMS Objectives.*
- *Implementation of Corrective actions*
- *Timely closure of Internal Audit Non Conformities.*
- *Ensure Process & Effectiveness of his / her function.*

NOTE: (a) Common responsibilities mentioned above are applicable to all the Dept. Heads. Mentioned below.

(b) Specific responsibilities and authorities on departmental level being maintained by each dept. H.O.D.

One Subordinate Officer has been appointed as Management Representative by the Officer-in-Charge. As management representative, he has the following responsibilities and authority:

- *Overall responsible for QMS activities throughout the Organisation.*
- *Coordinating management review meetings.*
- *Selecting Internal Auditors and arranging training for Internal Auditors.*
- *Planning, Conducting & Co-ordinate Internal Audits.*
- *Ensure and promote awareness of QMS Policy throughout the organization and make it available to the public.*
- *Reviewing internal / external audit non-conformity reports and ensuring corrective actions thereof.*
- *Select and co-ordinate with the external bodies like certification agency, consultants etc.*
- *Ensure promotion of customer requirements within Organisation.*
- Ensure that processes needed for the quality management system are established and implemented.
- Report to management on the performance of the Quality Management system and note any needed improvements.
- Promote awareness of customer requirements throughout the organization.
- Act as a liaison with external parties such as customers or higher authorities on matters relating to the QMS.

The top management viz The officer-in-Charge ensures that the responsibilities and authorities for relevant roles are assigned, communicated within CGAIS(BSR). The Officer-in-Charge assigns the responsibility and authority for :-

(a) Ensuring that the Quality Management System conforms to the requirements of IS/ISO 9001:2015 international standard.

(b) Ensuring that the processes are delivering their intended outputs.

(c) Reporting on the performance of the Quality management System and on opportunities for improvement.

(d) Ensuring the promotion of Customer focus throughout CGAIS(BSR)

(e) Ensuring that the integrity of Quality Management System is maintained when changes to the QMS are planned and implemented.

CGAIS(BSR)

6.0 PLANNING:

6.1.1 **Actions to address risk and opportunities:** Planning of the realization processes in CGAIS(BSR) is consistent with the other requirements of the organization's Quality Management System and is documented in a form suitable for the organization's method of operation.

[Ref: Quality Procedure Manual QP-001].

In planning the processes the requirements of Organization and its need & expectations of interested parties referred to in 4.1 & 4.2 and risk & opportunities has been determined to address the following:-

(a) To give assurance that the Quality Management System can achieve its intended results.
(b) To enhance desirable effects.
(c) To prevent or reduce undesirable effects
(d) To achieve improvements

6.1.2 CGAIS(BSR) plans for determining various risk and opportunities for improvement and also to integrated and integrate /implement these actions into its Quality Management process. The half yearly compilation of Incidents and rotables failure reports received from various ICG Dornier operating units is being discussed by in-house meeting and the necessary interim modifications in the affected aircraft system / components / amendments on maintenance procedure on trial basis are incorporated in consultation with M/s HAL(TAD) Kanpur and respective Original Equipment Manufacturer of the component. The evaluation and effectiveness of these trial modifications are also undertaken to add further modification for fleet compliance. Post occurrence of any incident, the Outcome of the One Time Check of Dhruv helicopter fleet is analaysed and taken up to the competent authority/ OEM/ M/s HAL(MRO) for incorporation requisite remedial measures.

The core customer of CGAIS(BSR) is the ICG Aviation units and helo operating ICG ships. During the visit for Quality Audit Process & aircraft defect investigation, the interaction with the unit technical personnel is being undertaken for finding any opportunities towards improvement on the existing aircraft maintenance procedure, maintenance of equipment's and aircraft components.

6.2 Quality objectives and planning to achieve them:

6.2.1 CGAIS(BSR) has established the Quality Objectives for relevant functions, levels and process needed for the Quality Management System. The Quality policy of the unit is translated into following quality objectives:

S No	Department	Objective
1.	Technical Section	➢ To provide Quality Assurance Services in Maintenance of CG Aviation Assets through periodical Aviation Quality Audit of Aircrafts/ Air Stations/ Air Enclaves /Squadrons & Ships [Embarking Helicopter] and their associated departments based at North East Region. ➢ To achieve zero Incidents due to Ground Crew Error (GCE), Maintenance Error (ME) and Support Lapse (SL). ➢ To assure high standard of aircraft ground maintenance equipments procured by units through local venders
2.	Admin Section	➢ To assist all sections by distributing various correspondences within 24 hours and taking action towards in/out mail as specified in the mail or as directed by the Officer-in-Charge. ➢ To monitor Leave / Service record of all personnel borne in this unit every month. ➢ To put up all application /request received from the staff to the Officer-in-Charge for approval within one days of receipt.
3.	Training Section	➢ To enhance knowledge /skill of all inspectors at par with the current latest procedures /guidelines / instructions by imparting minimal of 10 periodical training sessions in a year.

The quality objectives are measured through performance indicators as outlined in the "Performance Report" which MR submits for management review. The Quality Objectives are specified for all the functions & levels and are specified in Quality Objective Document. These are reviewed for its suitability during Management Review meeting.

6.2.2 While planning to achieve the Quality Objectives, CGAIS(BSR) has determined following:-

(a) What will be done
(b) What resources will be required
(c) Who will be responsible
(d) When it will be completed
(e) How the results will be evaluated

6.3 <u>Planning of changes</u>:- CGAIS(BSR) ensures that the resources needed to achieve the quality objectives are identified and planned for effective implementation. Quality planning is the responsibility of the Management Representative and its implementation is the responsibility of all the employees of the organization. The planning of the Quality Management System is carried out in order to meet the requirements given in 4.1 as well as the quality objectives. The integrity of the Quality Management System is maintained when the changes to the Quality Management System are planned and implemented. The various QMS procedures pertaining to the various functional activities in the organization provide guidelines on how to plan and implement the entire Quality Management System.

At the beginning, Quality Audit methodologies and aircraft maintenance procedures undertaken by the unit are analyzed and requirements regarding processes and resources etc. are identified and planned so as to fulfill these specifications. During Quality Management System planning, consideration is given to the following activities as appropriate:-

(a) The purpose of the changes and their potential consideration
(b) The integrity of the Quality Management System
(c) The availability of resources
(d) The allocation or re-allocation of responsibilities and authorities
(e)

7.0 SUPPORT:

CGAIS(BSR) has established, documented, implemented and maintained QMS procedures pertaining to Quality Audit Process of ICG Aviation Units and OPV/AOPV/PCV class of ICG ships.

7.1 Resources:

7.1.1 General: The management of CGAIS(BSR) determines and provides, in a timely manner, the resources needed to implement, maintain and continually improve the effectiveness of the processes of the Quality Management System for assuring the Qualitative maintenance of aircraft in ICG aviation units and aviation facilities onboard ICG ships. The resources include human resources, infrastructural resources, work environment and informational requirements. Unit also provides class room training, practical training and takes other actions required to enhance the competence of the personnel performing maintenance /servicing of aircraft.

The record of competency is of all the inspectors is being maintained by SO in-Charge (Training). The shortlisted personnel from various ICG units are deputed for QAS(Aero) course conducted by Indian Air Force at Jalahali, Bangalore and Indian Navy at Kochi. Post successful completion of the QAS(Aero) course the Inspectors are posted to this unit as per sanction by Bureau of Naviks, Mumbai.

7.1.2 People (Personnel): CGAIS(BSR) determines, provides and maintains the environment necessary for the effective implementation of its Quality Management System and for the operation and control of its processes.

[Ref: Quality Procedure Manual QP-001].

To ensure competence of our personnel, job descriptions have been prepared identifying the qualifications required for each position. Qualifications include requirements for education, skills and experience. Appropriate qualifications, along with required training, provides the competence required for each position.

7.1.3 <u>Infrastructure</u>:- To meet quality objectives and Quality Assurance Services requirements CGAIS (BSR) has determined the infrastructure needed. The infrastructure has been provided, and includes:

(a) Building, office workspace for staff work, utilities.
(b) Process equipment
(c) Supporting services.(Transport, communication and IT).
(d) Equipment, hardware and software
(e) Technical library & Training hall
(f) Admin office, Technical section & Equipment Inspection room

The infrastructural facilities include ergonomically designed workspace, equipments with environment friendly working ambience. The maintenance of these office equipments is carried out at planned intervals and the records of the same are maintained. Efforts are taken to ensure proper upkeep & working of the equipment's & facilities at all times.

7.1.4 <u>Environment for the operation of processes</u> :- The Management of CGAIS(BSR) ensures that the appropriate human and physical factors of the work environment are considered and provided, including such factors such as social [non-discriminatory, calm, non-conformational], psychological [stress reducing, burnout prevention, emotional protective], physical [noise, temperature, lighting, heat, airflow & hygiene] etc. CGAIS (BSR) is committed to maintain its facilities in a safe and healthy manner to establish and provide an infrastructure that is needed to comply with Quality Assurance requirements.

7.1.5 <u>Monitoring and measuring of processes:</u> CGAIS (BSR) has determined and provides the resources needed to ensure valid and reliable results when monitoring or measuring is used to verify the conformity of product and services to requirements. CGAIS(BSR) also applies suitable methods for monitoring and, where applicable, measurement of the quality management system processes. These methods demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action is taken, as appropriate, to ensure conformity of the product. The appropriate documented information as evidence of fitness for purpose are retained.

7.1.5 Measurement traceability: CGAIS(BSR) monitors and measures the characteristics of the quality audit and quality assurance services are fulfilled. This is carried out at appropriate stages of the product realization process in accordance with the planned arrangement as outlined in Quality procedure. The checklist for quality audit is being revised on yearly basis and as and when required as per latest maintenance guidelines /policies. The same is used as measuring tool for checking the compliance of the procedures for aircraft maintenance undertaken by the ICG units and to improve the performance of the customer (ICG Units) and enhances its result. The measuring tools used during aircraft inspection by CGAIS(BSR) inspectors during the course of Quality Audit which are being drawn from the unit Tool Control [As per CGHQ guidelines] and the 'Portable Ski Tester' used for ship's helo deck friction test [held with CGAIS(BSR)] are ensured for following prior use:-

(a) Calibrated or verified or both at specified intervals or prior to use, against measurement standards traceable to international or national measurement standards. When no such standard exists, the basis of used for calibration or verification is retailed as documented information.

(b) Identified in order to determine their status

(c) Safeguard from adjustments, damage or deterioration that would invalidate the calibration status and subsequent measurement results.

CGAIS(BSR) determines if the validity of previous measurement results has been adversely affected when measuring equipment is found to be unfit for its intended purpose and takes appropriate action as necessary.

7.1.6 Organizational knowledge: CGAIS(BSR) determines the knowledge necessary for the operation of its processes and to achieve conformity of products and services. This knowledge is maintained and made available to the extent necessary. When addressing changing needs and trends, CGAIS(BSR) considers its current knowledge and determines how to acquire or access any necessary additional knowledge which requires updates.

7.2 Competence: CGAIS(BSR) determines the competence of persons(s) doing work under its control that affects the performance of QMS and take actions to acquire the necessary competence :

(a) The Inspectors are selected according to relevant technical qualifications by means of selection procedure laid down by Indian Coast Guard.

(b) Every year one inspector from each trade are nominated by BUVIK for imparting technical training by Navy & Air Force for achieving necessary competence of relevant trade.

(c) Evaluate the effectiveness of the action taken.

(d) Personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objective.

(e) Maintain appropriate records of training.

7.3 Awareness:- CGAIS(BSR) have a dedicated training hall along with the technical library to ensure that :-

(a) The persons are aware of Quality Policy, relevant Quality and importance of their activities and how they contribute to the achievement of the quality objectives for effectiveness of the Quality Management System.

(b) Identify competency needs for personnel performing activities affecting quality/ maintenance /servicing/corrective/preventive actions.

(c) Provide training to satisfy these needs.

(d) Evaluate the effectiveness of the training provided to the individuals

(e) Maintain appropriate records of education, skill, experience, training and qualifications.

A "Training Register" is prepared and maintained based on the requirements of the jobs specifying skill, competence, education and experience required. Training needs are identified for improving competence specified in the "Training Register" by CGAIS(BSR). An "Quarterly Training Programme" is prepared by SOI/C training in consultation with the respective department heads and duly approved by the Officer-in-Charge. The training is imparted to the personnel and the training records are maintained and its effectiveness is assessed. Personnel are deputed for training to various aviation agencies e.g. M/s HAL, OEM, Indian Air force, Indian Navy, Indian Army and other Coast Guard units as and when required post approval of higher authorities.

7.4 <u>Communication</u>: CGAIS(BSR) has determined the internal and external communications relevant to the Quality Management System.

(a) CGAIS (BSR) has implemented an effective procedure for communicating with customer in relation to: **[Ref: QP 0008]**

(i) Quality Audit schedule and confirmation of date of QA.

(ii) Quality Audit Report post aviation quality of respective unit

(iii) Customer Feedback in terms of follow up report and subsequent liquidation of Quality Audit observations.

(iv) Rending of Minutes of Induction meeting, Handing Over report to competent authority post I-Level Servicing

(b) Processes are established for communication within the organization. Methods of communicating the effectiveness of the QMS include department and management meetings, management review, circulation of minutes of management review meetings:- **[Ref: QP 0004]**

(i) Daily briefing at 0930 Hrs.

(ii) Main Notice Board.

(iii) SMS /Circular

(iv) Officer-in-Charge temporary memorandum

(v) Respective trade heads and staff officer to Officer-in-Charge

7.5 Documented Information:

7.5.1 General The Quality Management System followed by CGAIS(BSR) is a means of ensuring that the procedures for the analysis, monitoring & measurement of all activities in unit are defined and standardized and that they meet the requirements of IS/ISO 9001: 2015. The Quality Management System documents include:

(a) A documented Quality Policy and objectives.
(b) The Quality Manual.
(c) Documented procedures required as per IS/ ISO 9001:2015 [Quality Procedure Manual]
(d) Documents including records needed by the organization to ensure the effective planning operation and control of its processes [Master List of documents]

7.5.2 Creating and updating: When creating and updating the documented information, CGAIS(BSR) ensures following:-

(a) Identification and description [viz title, date , author or reference number]
(b) Format [language, software version, graphics] and media [viz paper, electronics]
(c) Review and approval for suitability and adequacy

The Quality Procedure for creating /updating of Quality records by the Quality Management System is elaborated in succeeding paragraph: **[Ref: QP 0002]**

(a) Legible, readily identifiable and retrievable.
(b) Stored in protective environment.
(c) Retention period is mentioned.
(d) Disposal of Records.

All QMS records belonging to CGAIS(BSR) which include quality audit reports, management review records, corrective and preventive action records etc. are updated. The primary responsibility lies with the concerned /designated person. All quality records are identified in the respective procedures and at appropriate stages in the performance of related activities. QMS records are completely legible, stored & retained to ensure ready retrieval ability to protect it against damage or deterioration. Soft copies of some records are stored in a main server and its security features set to ensure preservation of data. Records retained longer than specified period are identified. As per Coast Guard Orders (CGO) the financial documents has to be retained for 10 Yrs and other than the financial it is 05 Yrs. The unit also follows the interim guidelines as directed time to time by higher authorities. Upkeep and disposal of Aircraft servicing forms (Form-A 700) and associated documents are maintained as per the guidelines promulgated by CGHQ letter AM/0917/Tech/Documents dated 13 Mar 2013.

7.5.3 <u>Control of Documented Information</u>: A documented procedure "Control of Quality Records" is established and maintained for identification, collection, indexing, access, storage, protection, retrieval, retention and disposal of QMS records to demonstrate conformance to Quality Management System requirements. The control of documents required by the quality management system as denoted in the Quality Procedure for: **[Ref: QP 0002]**

The Quality Procedure for control of documents required by the quality management system is elaborated in succeeding paragraph:

(a) Approval before issue.
(b) Review and updating after obtaining re-approval.
(c) Identification of Changes and current revisions are ensured.
(d) Relevant versions are available at the point of use.
(e) Legible and readily identifiable.
(f) External origins are identified and distributions are controlled.
(g) Obsolete documents retained for legal purposes if required.

All documents and data that relate to this Quality Management System are controlled by means of a documented procedure "Document & Data Control" (Admin Office) for approval, issue, and change /modification. It is ensured that the documents are adequate for fulfilling the functional needs and are duly approved. It is also ensured that all current documents are easily accessible to persons who need them.

MR maintains the "Master Copy" as 'Hard' as well as 'Soft' copy preferably as .DOC file. MR sends one controlled copy as 'Hard' copy each to the officer-in-Charge, SO I/c Technical Section, SO I/c Admin Section and the certifying body [BIS] as mentioned in the distribution list. MR with permission of the Officer-in-Charge also issues an "Uncontrolled Copy" by marking it as "For reference only, no revision Product/ Services will be provided" and shall make it available to anybody who desires for reference.

In order to avoid frequent changes for addition and deletion of QMS procedures, QMS manual is revised for additions or deletions in July every year. The document review is carried in the months of January and modifications, if any, are incorporated. For any changes in the system, the changes are communicated through internal circulars & implemented immediately. MR is overall responsible for document and data control. The document identifies the authorized personnel for approval and issue of documents, document name, document issue, revision number and date.

"Master list of documents" identifies the revision status, the name of the controlled copyholders and the location of documents. Invalid and /or obsolete documents are promptly removed from all points of issue and use and assured against unintended use by marking them as "Obsolete". Marking "Obsolete" identifies any obsolete documents retained for legal and / or knowledge preservation purpose.

Document and data changes are reviewed and approved by authorized personnel as per original documents unless others are designated for the purpose. In case of review by alternative personnel, they shall have access to pertinent information on which to base their review and approval. The amendment details will be recorded in the "Master list of documents". Anyone who proposes any changes in documents communicates it on a "Document Change Note" to the MR, to affect the changes they must be approved by the Officer-in-Charge and documented. The sources for initiating document changes are:

(a) Document change request.
(b) Any technical changes.
(c) Non confirming report of product / services.

8. OPERATION: Coast Guard Aeronautical Inspection Service, Bhubaneswar plans and develops the process needed for product realization.

8.1 Operational planning and control:- Planning of product realization shall be consistent with the requirement of the other processes of the quality management system. Customer requirements are scrutinized against the capacity of CGAIS (BSR). During this planning, management determines the following:

(a) The quality objectives and requirements for Quality Assurance services.
(b) Processes, documentation and resources required.
(c) Verification, validation, monitoring, inspection and QA requirements.
(d) Records needed to provide evidence that the realization process and resulting quality assurance services meet requirements. The output of the planning to be in a form suitable for the organisation's method of operation.

The QMS procedures pertaining to product realization planning are established, documented, implemented and maintained. The primary responsibility for all the above processes rests with the Officer-in-Charge.

8.2 Requirements for products and services:

CGAIS(BSR) is committed to fulfill and enhance customer satisfaction and has established documented, implemented and maintained procedures to assist in achieving that objective.

8.2.1 Customer Communication: CGAIS (BSR) has implemented an effective procedure for communicating with customer in relation to:

(a) Quality Audit schedule and confirmation of date of QA.
(b) Customer Feedback in terms of follow up report and subsequent liquidation of Quality Audit observations.

[Ref: QP 0008]

8.2.2 Determining the requirements for products and services: CGAIS Bhubaneswar determines Quality Assurance requirements before undertaking the quality audit. Customer requirements include those:

(a) Requested by the customer.
(b) Required for delivery and post-delivery activities.
(c) Not stated by the customer but necessary for specified use or known and intended use.
(d) Statutory and regulatory requirements related to the QA.
(e) Additional requirements considered necessary by CGAIS (BSR).
(f) Aircraft Maintenance policy promulgated by OEM /M/s HAL /CGHQ/ CGC and RHQs.
(g) RDAQA /RCMA instruction related to aircraft maintenance is being intimated to all ICG aviation units

8.2.3 Review of the requirements for products and services: CGAIS (BSR) reviews the requirements related to the QA services. The process ensures that:

(a) Quality Audit schedule and check off list are defined.
(b) QA observations previously audited are resolved.
(c) CGAIS Bhubaneswar has the ability to undertake quality audit and quality assurance services.
(d) Records are maintained showing the previous audit and corrective actions initiated from the review.
(e) Where a customer does not provide a documented statement of requirement, the customer requirements are confirmed before acceptance.
(f) When Quality Audit check off lists is changed, CGAIS Bhubaneswar communicates changes to relevant personnel and amends relevant documents.

8.2.4 Changes to requirements for products and services: CGAIS(BSR) ensures that relevant documented information is amended and that relevant persons are made aware of the changed requirements, when the requirements for product and services are changed.

8.3 <u>Design and development of product and services:</u> CGAIS Bhubaneswar is an aeronautical inspection service undertaking quality audits of all Aviation assets of Air Stations, Squadrons, OPV/PCV class of CG ships as per maintenance policy /guidelines promulgated by OEM/HAL/CGHQ & RHQs. Since the unit is the nodal agency for monitoring the maintenance work undertaken on ICG Dhruv only, the compilation and analysis of incidents and rotables pertaining to ICG Dornier is undertaken to disseminate the maintenance policies promulgated by OEM /HAL /CGHQ. Dornier Aircraft is originally designed, developed and manufactured by Germany. Further M/s HAL(TAD), Kanpur obtained license for manufacturing of Dornier aircraft in India. Any design or development, modification proposed by OEM / M/s HAL(TAD), Kanpur is intimated to Coast Guard Headquarter (New Delhi), further CGHQ in consultation with Aircraft operating units and CGAIS(BSR) analyses the requirement of modification and intimates applicability on CG Aircraft to M/s HAL(TAD), Kanpur. At times when aircraft operating units realises need for specific changes in design or modification on system / component / procedure, unit intimate the requirement to CGHQ through CGAIS(BSR) and in turn CGHQ after analyzing intimates the requirement to M/s HAL(TAD), Kanpur. Research and development wing of M/s HAL(TAD), Kanpur studies the requirement and prepares draft modification leaflet and forwards to RCMA. Post analyzing various design and Airworthiness factors, RCMA clears the draft modification leaflet. During local modification committee meeting the modification is discussed with other "type aircraft" operating agencies and decision on implementation of modification is taken. If other aircraft operating agencies also feel the necessity for modification the same is carried out on aircraft in agreed manner by agencies. Design of aircraft ground support equipments (GSEs /GHEs) manufactured & supplied by Local venders are being vetted by CGAIS(BSR) prior supply to the ICG units considering the flight safety aspect and core purpose of the equipment during aircraft maintenance work. **<u>A such design and development is not a part of unit's activity, IS/ISO (9001:2015) clause 8.3 design and development is not applicable to CGAIS(BSR)). Hence this clause is excluded.</u>**

8.4 Control of externally provided processes, products and services:

8.4.1 General:

The admin section of CGAIS(BSR) also looks after the Local Purchase duties and SO I/c LP Cell ensures that purchased products confirm the specified requirements. The cell is bound to follow the procurement's rules and regulations as laid down in the Defence Procurement Manual (DPM 2009 and Sup. 2010) and Delegated Financial Powers Rules [DFPCG-2017] issued by Ministry of Defence (MoD). Suppliers are evaluated and selected based on their ability to supply product in accordance with the requirements.

8.4.2 Type of extant of control: CGAIS(BSR) identifies and implements the activities necessary for verification of purchased product /Service as per the specified purchase requirements. The unit proposes to vendor to undertake verification /user satisfaction activities at the unit's premises. CGAIS(BSR) ensures that externally provided processes, products and services do not adversely affect CGAIS(BSR)'s ability to consistently deliver confirming products and services to its customers. CGAIS(BSR)

(a) Ensures that externally provided processes remain within the control of its Quality Management System.

(b) Defines both the controls that it intends to apply to an external provider and those it intends to apply to its resulting output.

(c) Takes into consideration :-

(i) The potential impact of its externally provided processes, products and services on CGAIS(BSR)'s ability to consistently meet customer and applicable statutory and regulatory requirements.

(ii) The effectiveness of the controls applied by the external providers.

(d) Determines the verification or other activities, necessary to ensure that the externally provided processes, products and services meet requirements.

8.4.3 Information for external providers: Purchasing documents [Request for proposal(RFP) /Supply Order] of CGAIS(BSR) contain information describing the Product/ Service to be purchased, including where appropriate:

(a) Requirements for approval of Product/ Service, procedures, processes and equipment.

(b) Requirements for qualification of personnel and Quality Management System requirements.

CGAIS(BSR) ensures the adequacy of specified purchase requirements contained in the "Sanction Register" prior to their release. Evaluation and revalidation of external providers is centrally undertaken by Regional Headquarters (North East).

8.5 Production and service provision: CGAIS (BSR) plans and carries out service provision viz Quality Assurance services under controlled conditions according to documented procedures.

8.5.1 Control of production and service provision: The Controlled conditions include:

(a) The availability of information that describes the characteristics of the maintenance through Aircraft maintenance Manual, Technical Manuals, SI's, LTI's, STI's and SB's

(b) The availability of check off list, past records and documents that determines the modalities of carrying out quality audit.

(c) The availability of work instructions/ Job cards / SOPs /PERT Chart for I-Level servicing of Dhruv Mk III aircraft.

(d) The use of suitable equipment [viz Portable Skid tester for helo deck friction test and test equipment from tool control of ICG units as laid down in CGHQ's guidelines and Naval aircraft Maintenance Manual(NAMM)].

(e) The availability and use of monitoring equipment's, documents and measuring devices.

(f) The implementation of monitoring and measurement procedures.

(g) The promulgation of observations and monitoring of follow up report.

8.5.2 Identification and traceability: CGAIS (BSR) undertake the quality audit of aviation units/ships and their associated departments. Audit reports and follow up reports are stored in respective ICG aviation unit's /ICG Ship's folders for easy identification and traceability of the previous records.

[Ref: QP 0006]

8.5.3 Property belongs to customers or external providers:

CGAIS Bhubaneswar is a Quality Assurance Service organization of Indian Coast Guard and is responsible for ensuring the quality maintenance of aircrafts through quality audits of the Aviation units and their associated departments. CGAIS(BSR) will be custodian of aircraft post induction of Dhruv Mk III helicopter under I-Level servicing by M/s HAL (MRO) team at Bhubaneswar for super imposed QA coverage and overseeing the scheduled inspection. Handing over team in-charge is responsible for safety and security of the aircraft (i.e., ground aircraft movement, induction ground run, CTF and system check) till induction of the aircraft.

8.5.4 Preservation: CGAIS(BSR) preserves the records of Quality Audit reports during internal processing in order to maintain conformity to requirements. This preservation includes identification, handling and dispatching to the concerned unit.

[Ref: QP 0007]

8.5.5 Post-delivery activities: As per CGHQ /RHQs directives the follow up report towards liquidation of observation of Quality Audit undertaken by CGAIS(BSR) is being submitted by the concerned ICG Unit /Ships within one month to the respective administrative authority. The observations which are pending is being documented and being followed up till their liquidation and same is cross checked during next Quality Audit. The reliability/ maintainability/ serviceability/ availability of Dhruv Mk III helicopter upto 10 Hours of flying post delivery aircraft is being monitoring.

8.5.6 Control of changes: CGAIS(BSR) reviews and controls changes for production or service provision to the extent necessary to ensure continuing conformity with requirements during the Management review meeting on half yearly basis or and as and when warranted. CGAIS(BSR) retains documented information describing the results of the review of changes, the persons authorizing the change and any necessary action arising from the review.

8.6 <u>Release of products and services</u>: CGAIS(BSR) has implemented planned arrangements at appropriate stages to verify that the product and service requirements have been met.

(a) CGAIS Bhubaneswar monitors and measures the characteristics of the quality audit and quality assurance services are fulfilled. This is carried out at appropriate stages of the product realization process in accordance with the planned arrangement as outlined in Quality procedure. Records indicate the person authorizing release of QA for delivery to the customer.

(b) The release of Product and delivery of service does not proceed until all the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority, and where applicable by the customer.

8.7 <u>Control of Nonconforming Outputs</u>:- CGAIS Bhubaneswar prepares the check off lists according to the manufacturer requirements, policies on technical issues and promulgation of technical instructions issued by the manufacturer /CGHQ /CGC(E) /RHQs. These check lists are effective tools for ensuring that quality maintenance of aircraft and also to verify the standard operating procedures are being followed. CGAIS(BSR) takes actions appropriate to these effects or potential effects, of the nonconformity. These activities and responsibilities are defined in documented quality procedure. Records of the nonconformities and actions taken are kept in accordance with Control of Documents and Quality Records. Non conforming procedures are corrected and subjected to re-verification after correction to exhibit conformity to manufacturer requirements.

[Ref: QP 0010]

9. PERFORMANCE EVALUATION: CGAIS(BSR) applies suitable methods for monitoring and, where applicable, measurement of the quality management system processes.

9.1 Monitoring, measurement, analysis and evaluation:

9.1.1 General: These methods demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action is taken, as appropriate, to ensure conformity of the product. CGAIS(BSR) determines:

(a) What needs to be monitored and measures

(b) The methods for monitoring, measurement, analysis and evaluation

(c) When the monitoring and measuring is performed and results of the same are needed to be analysed and evaluated.

CGAIS(BSR) evaluates the performance and the effectiveness of the Quality Management System and retains documented information as evidence of the results.

9.1.2 Customer satisfaction: As one of the measurements of the performance of the quality management system, CGAIS Bhubaneswar monitors information relating to customer perception as to whether the organization has fulfilled customer and organization requirements. The method for obtaining and using this information is identified in the Customer Related Process, Procedures. **[Ref: QP 0008]**

9.1.3 Analysis and evaluation:

(a) CGAIS Bhubaneswar determines, collects and analyses appropriate data to demonstrate the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the quality management system can be made. Analysis of data related to number of quality audit reports undertaken periodically, customer satisfaction through follow up report, findings of IQA are carried out.

(b) The analysis is done for the continual improvement and effectiveness of QMS. The data generated as a result of monitoring and measurement and from other sources will be discussed and reviewed in the periodical meeting and Management Review Committee meeting.

(c) The analysis of data provides information relating to:- **[Ref: QP 0011]**

(i) Customer satisfaction.

(ii) Conformance to Quality Audit requirements.

(iii) Characteristics and trends of processes and products including opportunities for preventive action.

9.2 <u>Internal audit</u>: CGAIS Bhubaneswar being a Aeronautical Inspection Service conducts internal audits in every 06 months or earlier if required to determine whether the quality management system:

(a) Conforms to the planned arrangements to the requirements of this International Standard and to the quality management system requirements established by the organization is effectively implemented and maintained.

(b) An audit program has been designed and implemented and identifies an audit schedule based on the importance of the areas to be audited, as well as the results of previous audits.

(c) The audit criteria, scope, frequency, methods, responsibilities and requirements for planning and conducting audits, has been defined in Quality Procedure. **[Ref: QP 0009]**

(d) Audits are conducted by personnel other than those who perform the activity being audited. The documented procedure includes the responsibilities and requirements for planning, conducting audits ensuring their independence, recording their results and reporting to management.

(e) Records of the audits and their results are maintained for future reference

(f) The management accountable for the area being audited is responsible for ensuring that actions are taken without undue delay to eliminate detected nonconformities and their causes.

(g) Follow up activities include the verification of the actions taken and the reporting of verification results.

9.3 Management Review:

9.3.1 General: Top management reviews the QMS once in six months at management review meeting. This review assesses the continuing QMS suitability, adequacy and effectiveness, identifying opportunities for improvement and needed changes to quality management system including the quality policy and quality objective. Records are maintained for each management review meeting. Management review committee comprises of the Officer-in-Charge, Management Representative and SO I/c of all departments. MR is the co-ordinator of all the management review meetings and maintains the "Minutes of Management Review Meeting". **[Ref: QP 0005]**

9.3.2 Management Review Inputs: Assessment of the QMS is based on a review of information inputs to management review. These inputs include the following:

(a) The Status of actions from previous management reviews

(b) Changes in external & internal issues that are relevant to the Quality Management System

(c) Information on the performance and effectiveness of the Quality Management System, including trends in:

- (i) Customer satisfaction and feedback from interested parties
- (ii) The extent to which quality objectives have been met
- (iii) Process performance and conformity of products and services
- (iv) non-conformities and corrective action
- (v) Monitoring and measurement results
- (vi) Audit results
- (vii) The performance of external providers

(d) The adequacy of resources

(e) The effectiveness of actions taken to address risk and opportunities

(f) Opportunities for improvement

9.3.3 Management Review Outputs: The outputs of the Management review includes decision and actions related to:

(a) Opportunities for improvement

(b) Any need for changes to the Quality Management System

(c) Resource needed

CGAIS(BSR) retains documented information as evidence of the results of Management reviews.

10 IMPROVEMENT:

10.1 General: CGAIS Bhubaneswar continually improves the effectiveness of the quality management system to meet customer requirements and enhance customer satisfaction through the use of the quality policy, quality objectives, audit results, analysis of data including customer feedback, corrective and preventive actions and management review. **[Ref: QP 0016]**

10.2 Nonconformity and Corrective action:

(a) CGAIS Bhubaneswar takes action to eliminate the causes of nonconformities in order to prevent recurrence. Corrective actions are appropriate to the effects of the nonconformities encountered.

(b) A documented procedure defines requirements for:

(i) Reviewing nonconformities (including customer complaints).

(ii) Determining the causes of nonconformities.

(iii) Evaluating the need for action to ensure that nonconformities do not reoccur.

(iv) Determining and implementing action needed.

(v) Records of the results of action taken.

(vi) Documented information being retained

(c) Reviewing the effectiveness of corrective action taken. **[Ref: QP 0012]**

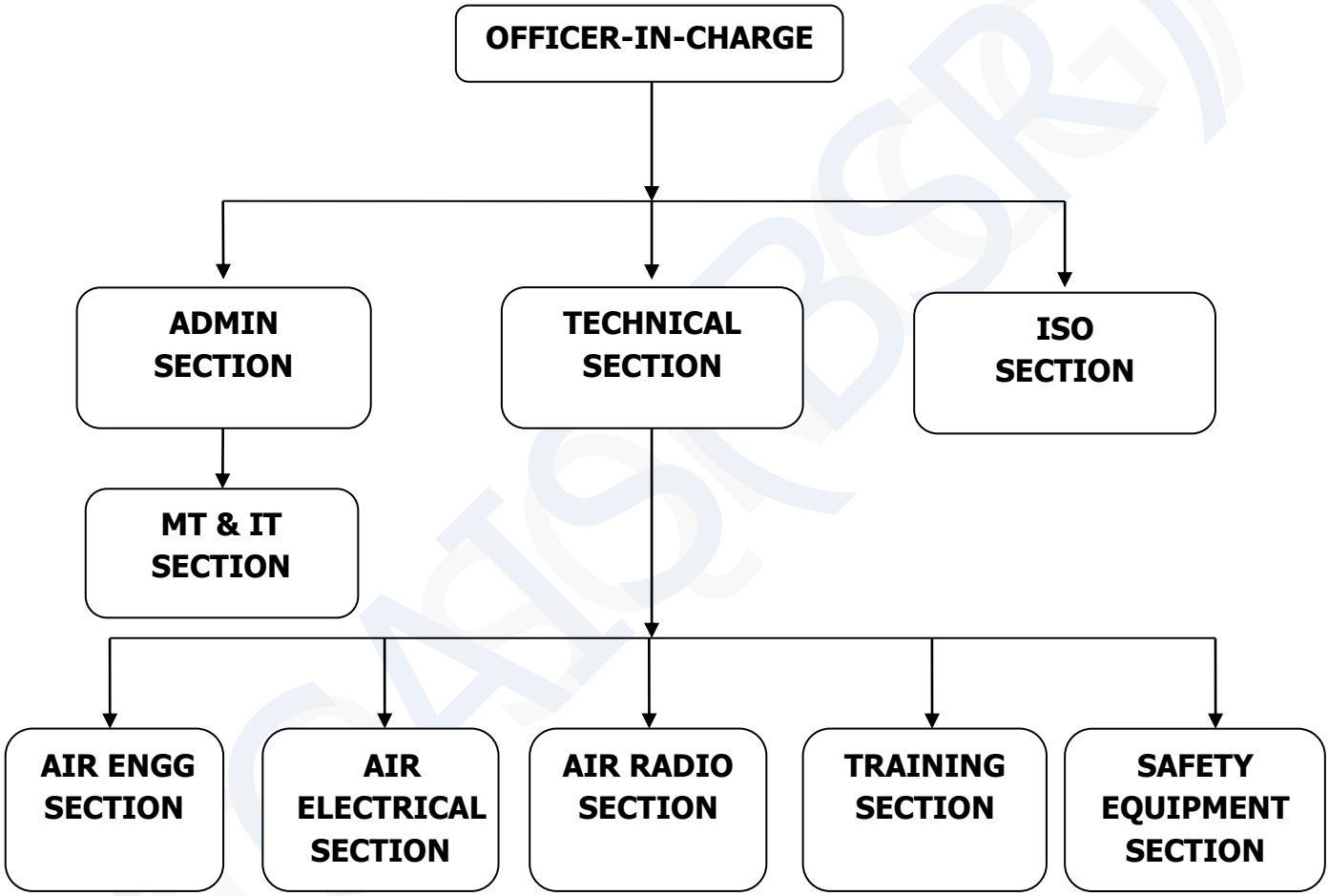
10.3 Continual improvement:

CGAIS(BSR) plans and manages the processes necessary for the continual improvement of the Quality Management System.

CGAIS(BSR) facilitates the continual improvement of the Quality Management System through the use of the quality policy, objectives, audit results, analysis of data, corrective and preventive action and management review.

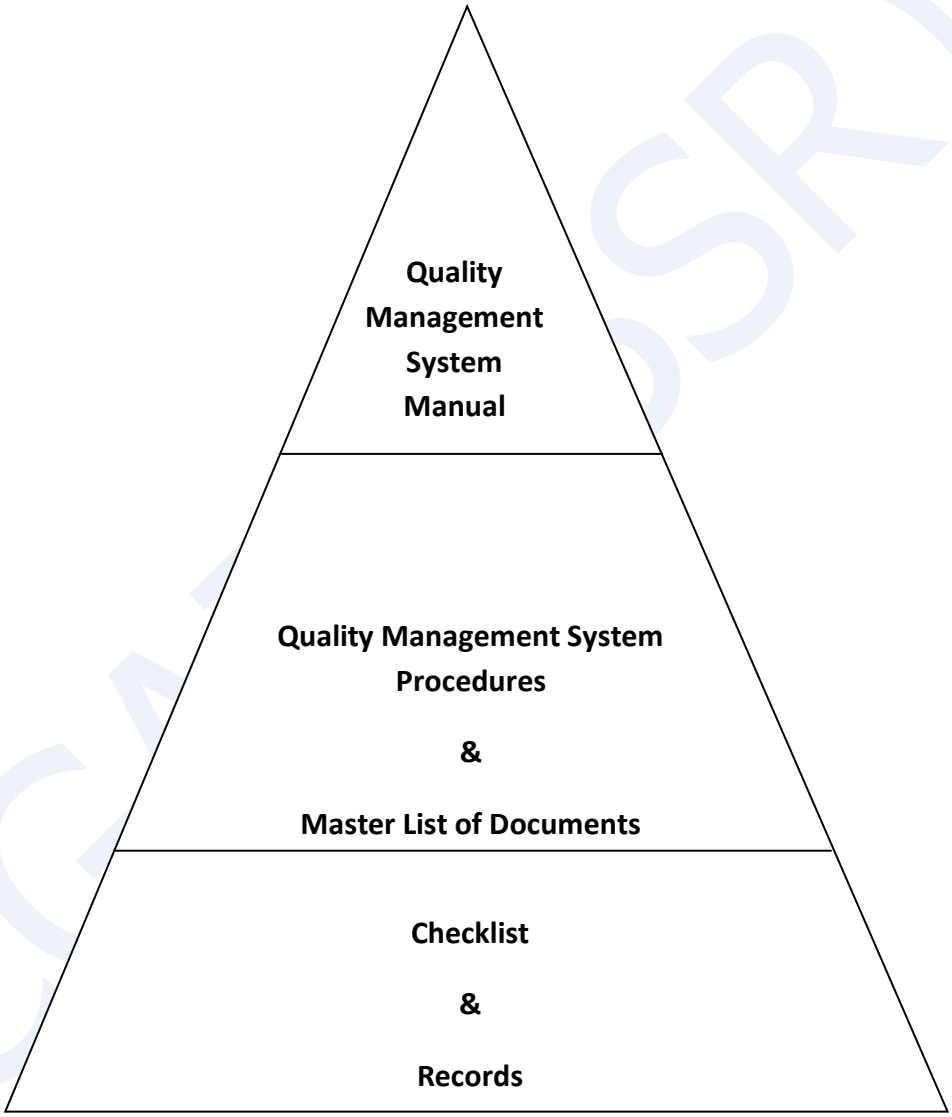
ANNEXURE-I

QMS INTERACTION FLOW CHART- ORGANIZATION STRUCTURE



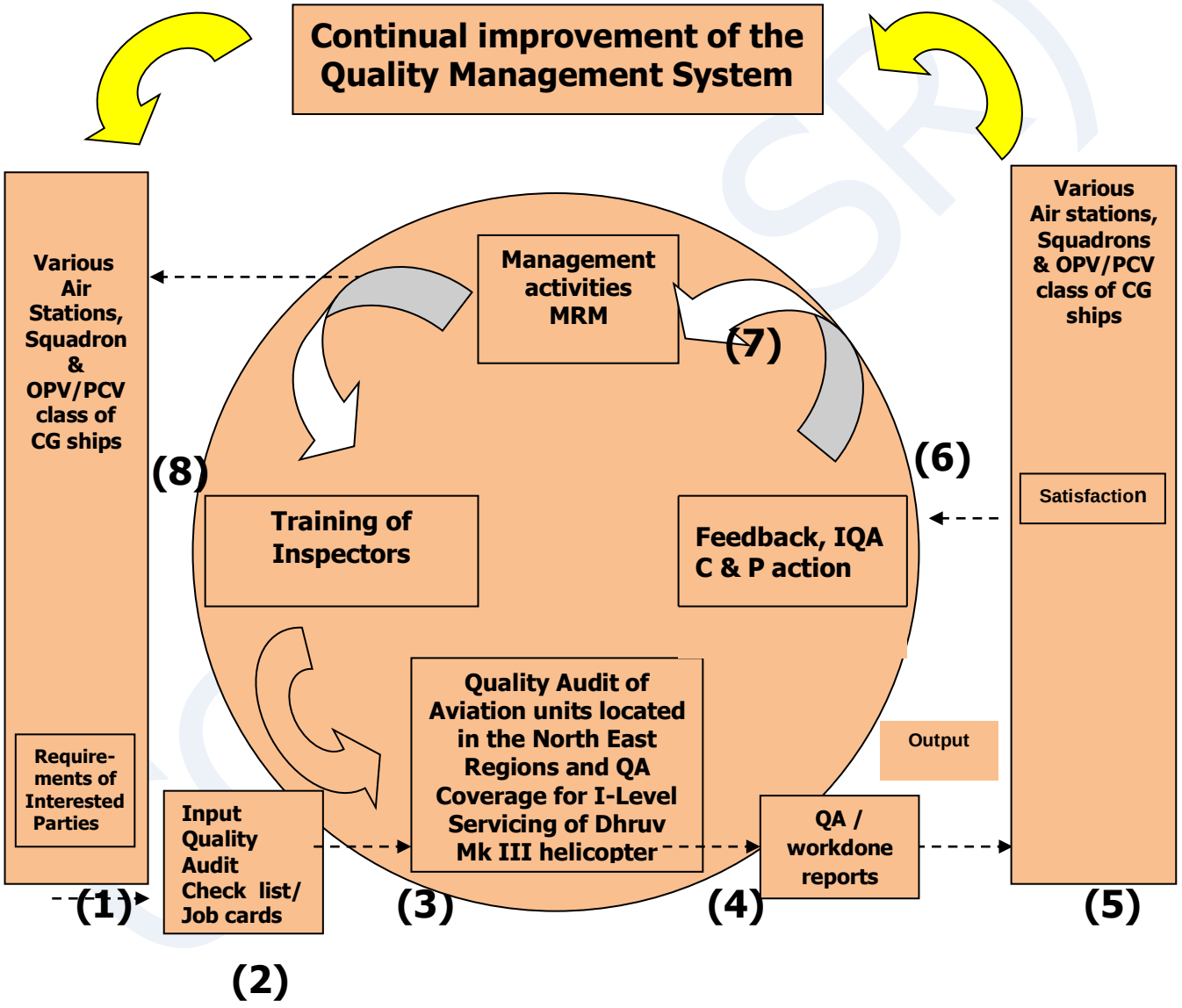
ANNEXURE - II

DOCUMENTATION MATRIX



ANNEXURE - III

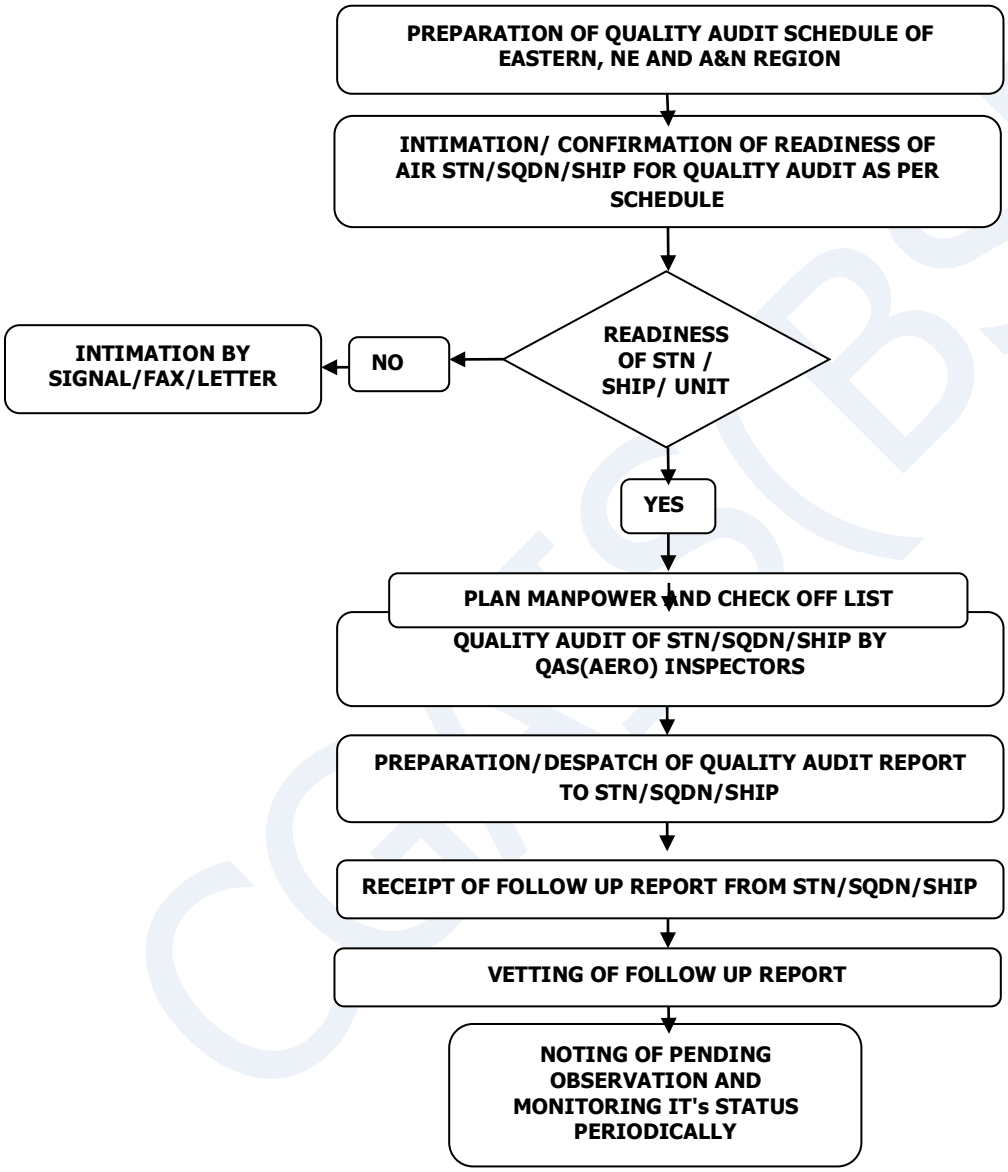
QMS PROCESS FLOW CHART



ANNEXURE - IV

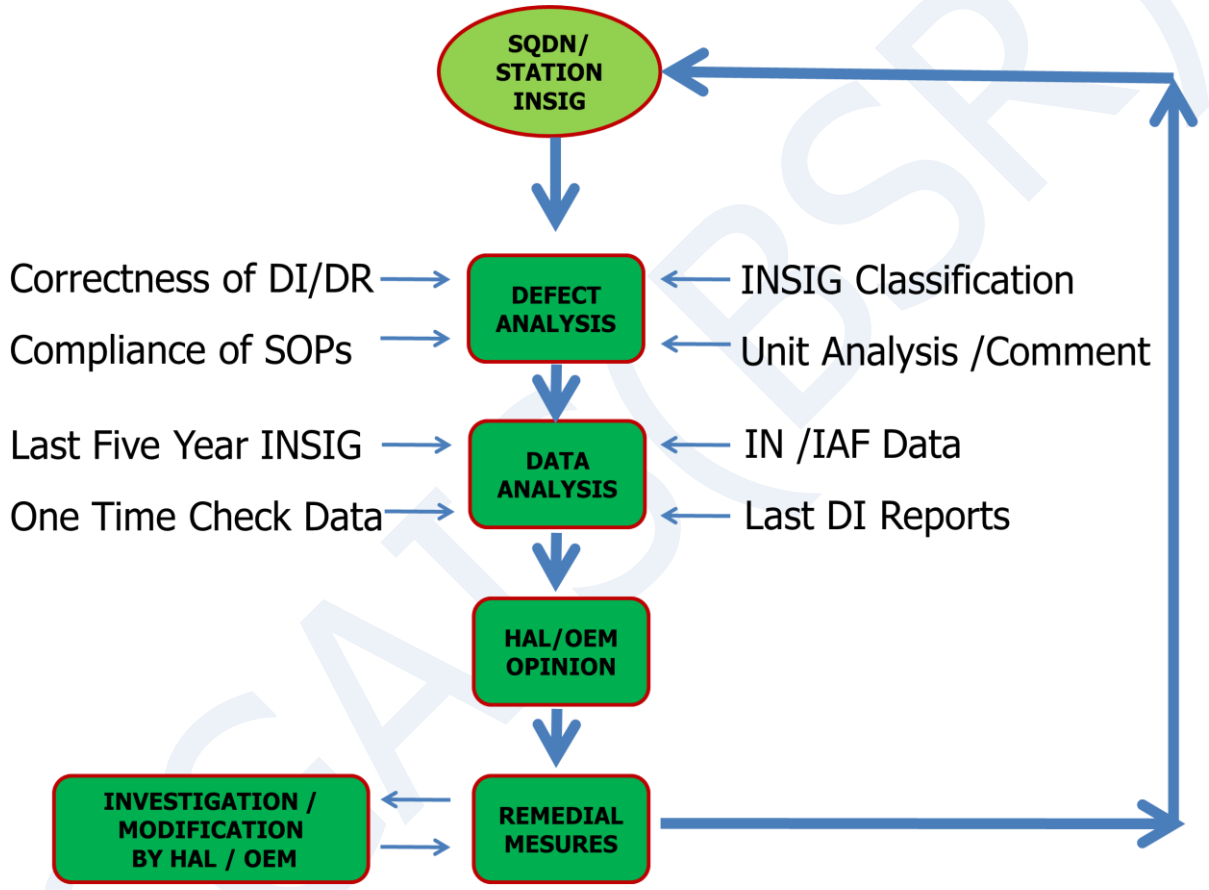
QMS INTERACTION FLOW CHART- QUALITY AUDIT OF STATION/ SQUADRONS / SHIPS

[File No 110/1 & F0031]



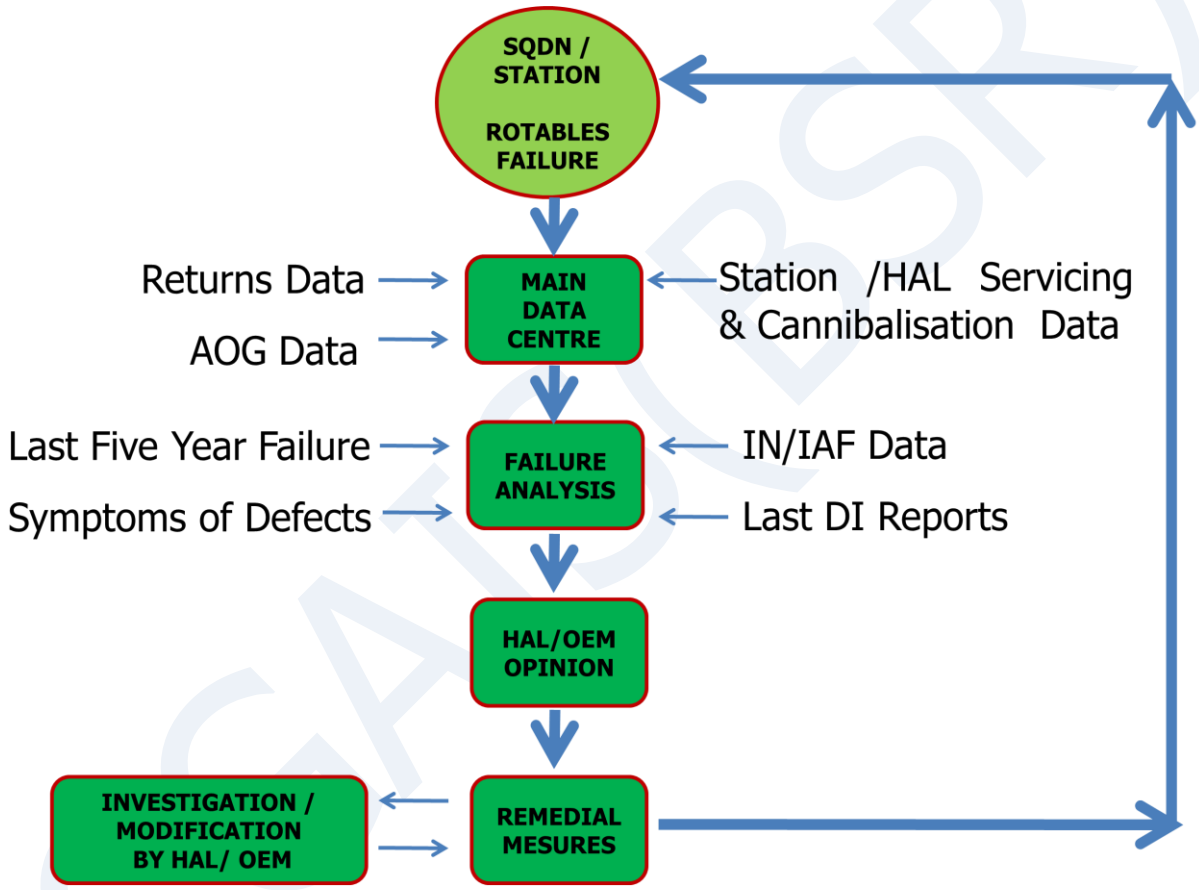
ANNEXURE - V

PROCESS FLOW CHART –INCIDENT /DEFECT ANALYSIS OF ICG DHRUV FLEET



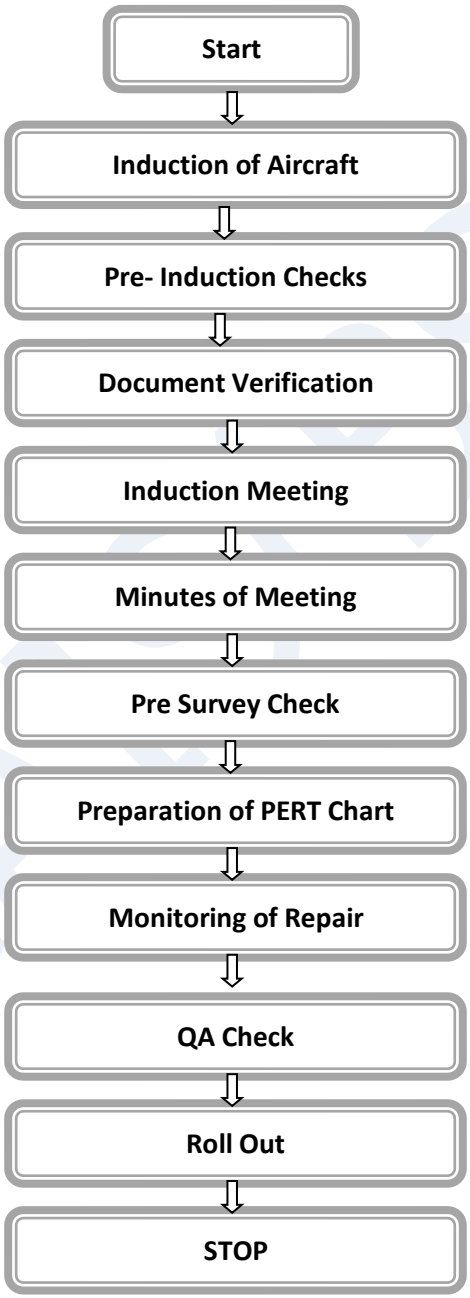
ANNEXURE - VI

PROCESS FLOW CHART –ROTABLE FAILURE ANALYSIS OF ICG DHRUV FLEET



ANNEXURE - VII

PROCESS FLOW CHART – I-LEVEL SERVICING DHRUV MK III UNDER PBL REGIME



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