



75
Azadi Ka
Amrit Mahotsav



DGQA

DIRECTORATE GENERAL OF QUALITY ASSURANCE

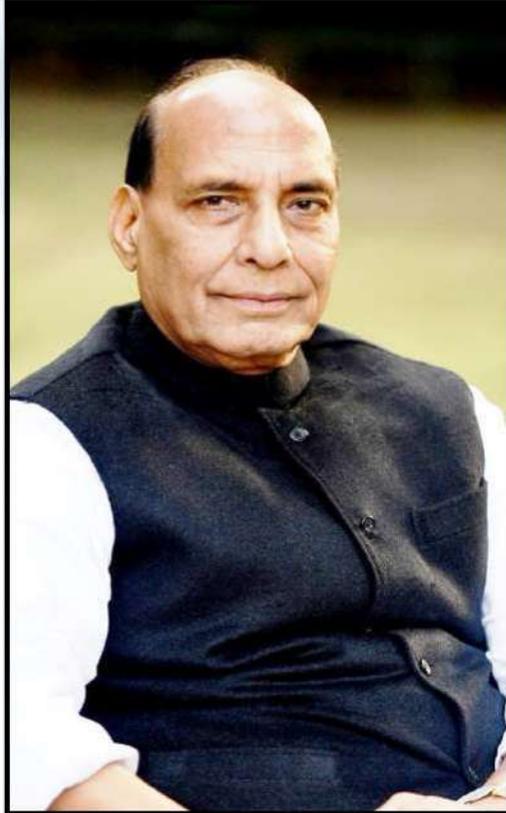
*Quality Assurance
Journey in
Defence Manufacturing*



*“The ideas of control and improvement are often
confused with one another.*

*That is because quality control and quality improvement are
inseparable.”*

- Ishihara



Shri Rajnath Singh
Defence Minister

राजनाथ सिंह
RAJNATH SINGH



रक्षा मंत्री
भारत
DEFENCE MINISTER
INDIA

MESSAGE

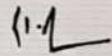
It is heartening to know that Director General of Quality Assurance is bringing out an e-Coffee Table Book regarding its origin and history. With its rich heritage, DGQA has made immense contributions in ensuring the safety and security of the country through praiseworthy Quality Assurance.

One of the major reasons for the befitting response by Indian Army to our adversaries in recent times has been due to the quality of equipment available to them for which DGQA plays a major role.

I convey my best wishes on the publication of the DGQA e-Coffee Table Book.

'JAI HIND'

Date : 07th Oct, 2021
Place : New Delhi


(Rajnath Singh)



Shri Ajay Bhatt
Minister of State for Defence

अजय भट्ट
AJAY BHATT



रक्षा एवं पर्यटन राज्य मंत्री
भारत सरकार
Minister of State for Defence and Tourism
Government of India



MESSAGE

It is encouraging to learn that Directorate General of Quality Assurance is compiling a Coffee Table Book to reflect on its rich heritage, history and the significant contributions made by the Organization.

The organization has played a key role in providing quality and reliable equipment to the Indian Armed Forces. DGQA deals with critical range of equipment covering a wide category from General Stores to State of the Art, modern technical equipment, today, the troops deployed at the forward areas and in physical challenging terrains have full confidence on their equipment as it can withstand the extreme environmental conditions only due to stringent quality standards being ensured by DGQA.

My best wishes to Director General of Quality Assurance, Officers and Staff for bringing out a Coffee Table Book on the organization.

Jai Hind.

Ajay Bhatt

(Ajay Bhatt)

NEW DELHI



Gen Bipin Rawat
PVSM, UYSM, AVSM, YSM, SM, VSM,
ADC, Chief of Defence Staff



MESSAGE

Ever since its inception, the Directorate General of Quality Assurance has been entrusted with the responsibility of ensuring that the best equipment reaches our Armed Forces.

The organisation has grown considerably and has evolved significantly from an 'Inspection' to a 'Quality Assurance' Agency. Transparency and integrity are essential for bringing about the much needed change in the organisation. I am confident that the organisation will continue to strive and achieve Global standards by imbibing best practices and will continue to be a pillar of strength for the Indian Armed Forces.

This Coffee Table Book will provide an insight into the DGQA organisation and detail its stellar contribution in service of the nation. I am sanguine that this pictorial essay will be a repertoire of the rich and vibrant history of the Directorate.

I wish the Directorate General of Quality Assurance all success in its future endeavours.

Jai Hind!

A handwritten signature in black ink, appearing to read "Bipin Rawat".

(Bipin Rawat)
General
Chief of Defence Staff



**Gen MM Naravane
PVSM, AVSM, SM, VSM, ADC,
Chief of Army Staff**



MESSAGE



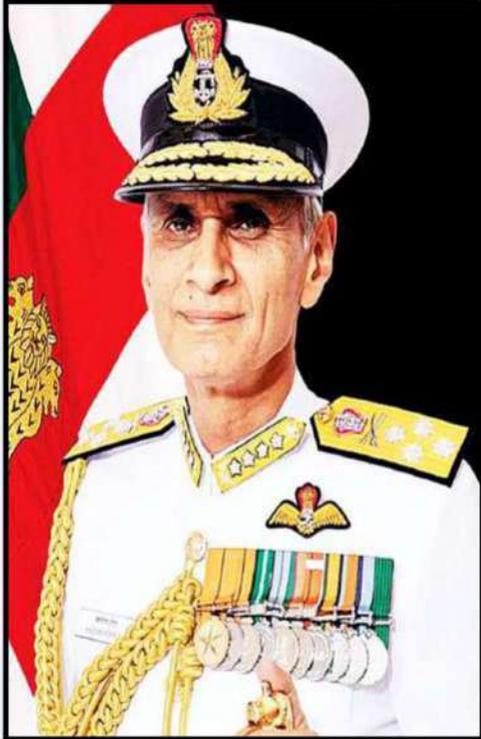
I am delighted to know that the DGQA is publishing its Coffee Table Book. This book will give a macro level insight in the DGQA's pivotal role in ensuring highest quality control in all the Arms, Ammunitions, Equipment and Stores that are procured by the Armed Forces and ensuring strict and vigilant Quality Assurance.

I am sure this Coffee Table Book will strike a chord with all readers, specially the stakeholders. I wish the DGQA, all the very best for the future.

Jai Hind !

A handwritten signature in blue ink, which appears to read 'MM Naravane'.

(MM Naravane)
General
Chief of the Army Staff



Admiral Karambir Singh
PVSM, AVSM, ADC,
Chief of Naval Staff



एडमिरल कर्मबीर सिंह
श्री श्री एम एच ए सी एम एच ए सी सी
नौसेनाध्यक्ष
Admiral Karambir Singh
PVSM, AVSM, ADC
Chief of the Naval Staff



रक्षा मंत्रालय
एकीकृत मुख्यालय (नौसेना)
नई दिल्ली 110011
Integrated Headquarters
Ministry of Defence (Navy)
New Delhi 110011

MESSAGE

1. The e-Coffee Table Book being published by DGQA on the occasion of the 75th year of India's independence highlights DGQA's pivotal role in providing reliable and high quality equipment to the Indian Armed Forces. DGQA's efforts play a key role in ensuring national security through proactive and vigilant Quality Assurance, as also giving confidence to operators in the field on the performance and reliability of their equipment, notwithstanding the harsh operating conditions.
2. DGQA's impetus to making a difference by acting as a stakeholder and facilitator, instead of an auditor, continues to be key to timely and high quality capability acquisition.
3. I wish DGQA the very best in all the future endeavours.

Jai Hind.

(Karambir Singh)
Admiral



Air Chief Marshal VR Chaudhari
PVSM, AVSM, VM, ADC
Chief of Air Staff



एयर चीफ मार्शल वी आर चौधरी
ए वि से मे अ वि से मे वा से मे ए डी सी
Air Chief Marshal VR Chaudhari
एवएसएम एवएसएम वीएम एडसी

Tel : (011) Off : 23012517
Res : 23017300
Fax : 23018853

वायु सेना मुख्यालय
नई दिल्ली - 110011
Air Headquarters
New Delhi - 110011

MESSAGE

The e-Coffee Table Book on the occasion of 75th year of Independence showcases the journey of DGQA from its humble beginnings as an inspection agency to an assurance agency. To keep up with the speed of technology, DGQA is expected to bring about strict and consistent commitment to specific standards to achieve excellence.

The clarion call of "Aatma Nirbhar Bharat" is being answered by the Indian industry with the Armed Forces as the engine of growth. DGQA's role has never been more relevant than today. DGQA is primed to exploit the boost given to indigenous R&D and manufacturing to take indigenous products to global standards and also achieve self reliance. DGQA's focus on planning, approach, techniques and processes shall benefit the Indian ecosystem proactively, thereby instilling the confidence of the users both in India and abroad.

I wish "Team DGQA" continued success in meeting the new challenges and good luck for the opportunities that lie ahead.

Jai Hind!

14 Oct 21

Air Chief Marshal
Chief of the Air Staff



Shri Raj Kumar
Secretary Defence Production

राज कुमार
सचिव
Raj Kumar
Secretary



सत्यमेव जयते



भारत सरकार / Government of India
रक्षा उत्पादन विभाग / Deptt. of Defence Production
रक्षा मंत्रालय / Ministry of Defence
नई दिल्ली - 110 011 / New Delhi - 110 011
Tel. : 23012527 (O) Fax : 23012300

MESSAGE

I am delighted to know that DGQA has penned down its first Coffee Table Book to reflect upon its days of yore and its remarkable contributions in safeguarding the country.

Over the years, DGQA has played a crucial role in providing Quality Assurance coverage during various phases of the production and its exploitation and thus ensuring that the equipment meets the highest standards and the expectations of the Armed Forces.

This book is a deep insight into DGQA's contribution in various areas of technology and holds a strong testimony in support of "Make in India" through self-reliance.

I would like to congratulate the organisation for publishing the book and wish them success in years to come.

JAI HIND!

(Raj Kumar)

Dated : 04th October, 2021
Place : New Delhi



Directorate General of Quality Assurance (DGQA) is an inter-service organisation and entrusted with the responsibility of ensuring quality of Defence Stores for Army and Navy.



Lt Gen RK Malhotra
Director General Quality Assurance



ले. जनरल आर के मल्होत्रा
गुणता आश्वासन महानिदेशक
Lt. Gen R. K. Malhotra
Director General Quality Assurance
Tele (O) : 011-23012484
011-23011060
(M) : 09013443454
Fax : (O) 011-23012814

भारत सरकार, रक्षा मंत्रालय
Government of India, Ministry of Defence
रक्षा उत्पादन विभाग
Department of Defence Production
गुणता आश्वासन महानिदेशालय
Directorate General of Quality Assurance
308 ए, डी-1, विंग, सेना भवन, नई दिल्ली - 110 011
308 A, D-1 Wing, Sena Bhawan, New Delhi - 110 011

MESSAGE

A long-felt need for a Coffee Table Book reflecting on the activities of our organization has been realized under 75 years of Indian Independence Celebrations with the publication of the "Quality Assurance: Journey in Defence Manufacturing". The book will assist the readers to gather the insight of the past, linking it to the present and offer a peep into the future. It would instill a great sense of pride in what we are and what we do.

The future battlefields will have State of the Art, high end use of modern-day technology. Weapons of the information age with artificial intelligence have already started dominating the battle field and revolutionizing today's warfare.

I encourage all DGQA personnel to regard these as opportunities and upgrade their skill set to adapt to the requirements of modern-day technology involved in multi disciplinary Network Centric Warfare. All of us must rededicate ourselves to successfully meet the aspirations and expectations of our Armed Forces and defence manufacturing eco-system.

I would like to compliment DGQA team for producing a professional, comprehensive and informative compilation capturing the ethos, elan and traditions of our Organisation. We believe and will continue to strive for excellence by enhancing our technical competence through adoption of best QA practices.

"Har Kaam, Desh ke Naam"

Jai Hind

DGQA FAMILY TREE

Armament Inspectorates at Ordnance Factories (Pre-1939-1943)

Ishapore Cossipore Jabalpur Kirkee

Chief Inspectorates (1943 - 1946)

Small Arms (Ishapore) Artillery Equipment (Jabalpur) Ammunition (Kirkee)

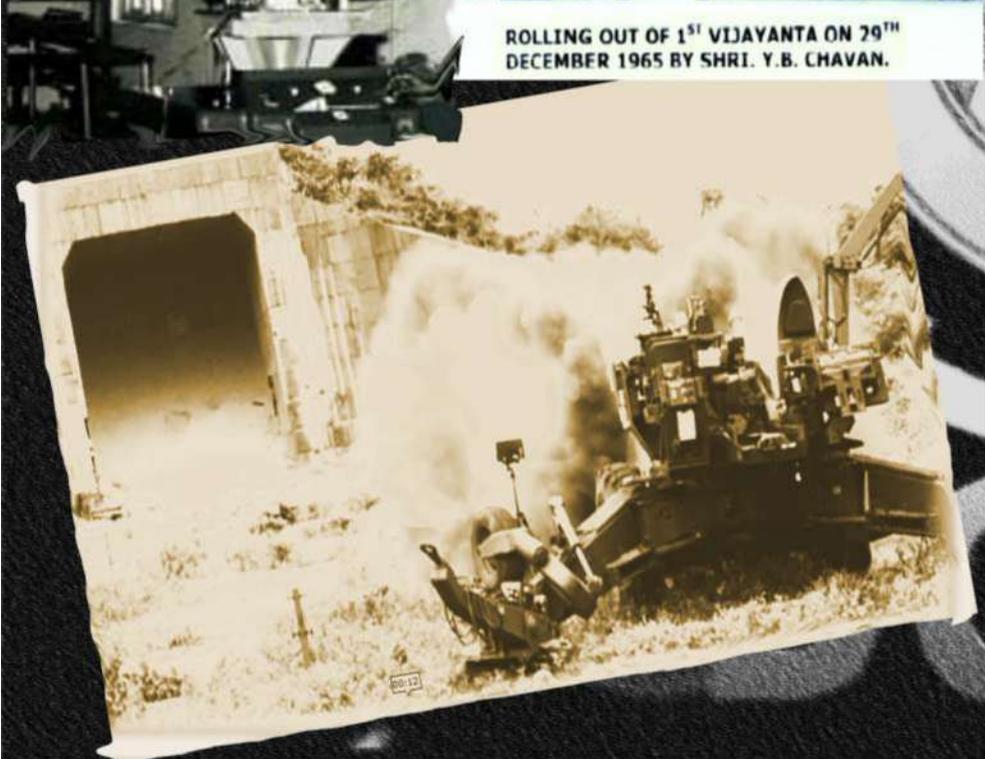
Technical Development Establishments (TDE) (1946 - 1958)

TDE (Weapons) (Jabalpur) TDE (Ammunition) (Kirkee)

Armament R & D Establishment, Pune (1 Sep 1958) Chief Inspectorate of Armaments, Kirkee (1 Sep 1958)



ROLLING OUT OF 1ST VIJAYANTA ON 29TH DECEMBER 1965 BY SHRI. Y. B. CHAVAN.



The History of DGQA dates back to the year 1869 when an Inspectorate was created at Ammunition Factory, Kirkee. This was followed by the formation of Technical Directorates.

As the tempo of Defence production built up during the Second World War, these Establishments were grouped into two Directorates functioning under MGO and one Controllerate under DGS&D. They were given the overall responsibility of ensuring the quality of stores manufactured and supplied to troops by Ordnance Factories and Trade.

In 1946, these organisations were grouped into a single composite Inspection-cum Research & Development Organisation called the Directorate of Technical Development in the MGO's Branch. Full administrative and technical control of all the functions of Inspection, Testing, Research and Development of Armament and other Stores & Equipment was for the first time, vested in a single authority, viz., DTD Organisation.

The organisation continued to function till November 1955, when, on the recommendation of the Armed Forces Re-organisation Committee, the DTD Organisation was transferred to the newly created Controller General of Defence Production (CGDP) under the Ministry of Defence.

In 1956, the Directorate of Technical Development was bifurcated into Armament and General Directorates.

In 1958, a beginning was made to bifurcate the Research & Development and Inspection functions of these two Directorates.

In 1960, Self-reliance and self-sufficiency being the key factors of the Defence policy of the country, indigenization process started during early sixties.

In August 1963, Controller General of Inspection and Planning (CGIP) was placed directly under Secretary (DP) and CGIP was redesignated as the Director Gen-

eral of Inspection (DGI).

In 1978, the officers of Defence Science Service (DSS) in the R&D and DGI organisation were also trifurcated into the following three independent organisations, viz;

(a) Defence Research and Development Organisation - DRDO.

(b) Directorate General of Inspection - DGI

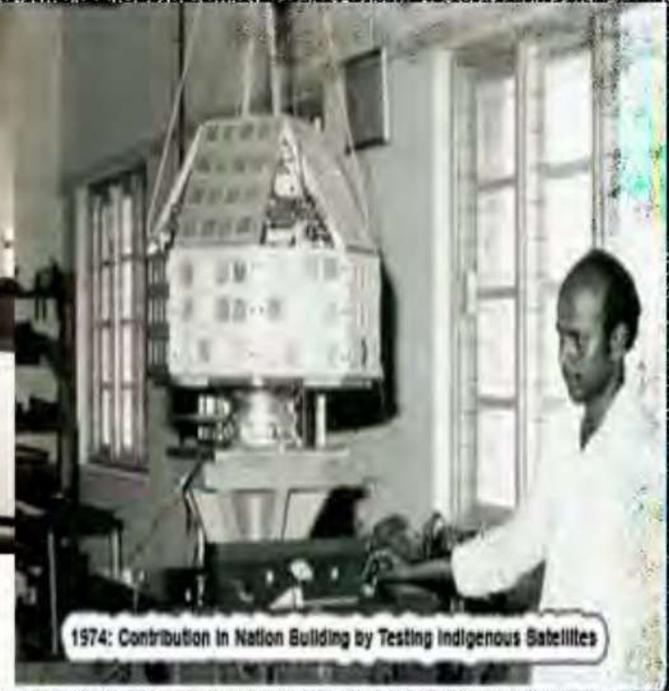
(c) Directorate of Technical Development and Production (Air) - DTDP (Air)

In 1987, DGI was redesignated as the Directorate General Quality Assurance (DGQA).





1958: SHRI JAWAHARLAL NEHRU, PRIME MINISTER ALONGWITH MRS INDIRA GANDHI VISITED MODEL ROOM



1974: Contribution in Nation Building by Testing Indigenous Satellites



1970: Jagjivan Ram, visited Kanpur Proof Range



1958: DR. RADHAKRISHNAN, VICE PRESIDENT & SHRI KRISHNAN MENON, FORMER DEF MINISTER VISITED TDE(V)



04 DEC 1981: GEN KV KRISHNARAO, CHIEF OF ARMY STAFF VISITED CIV LAB.



Replicas of Guns and Cartridge cases used in Sepoy Mutiny in 1857



Assault Rifles



14.5/20 mm Anti- Material Rifle

Our Heritage

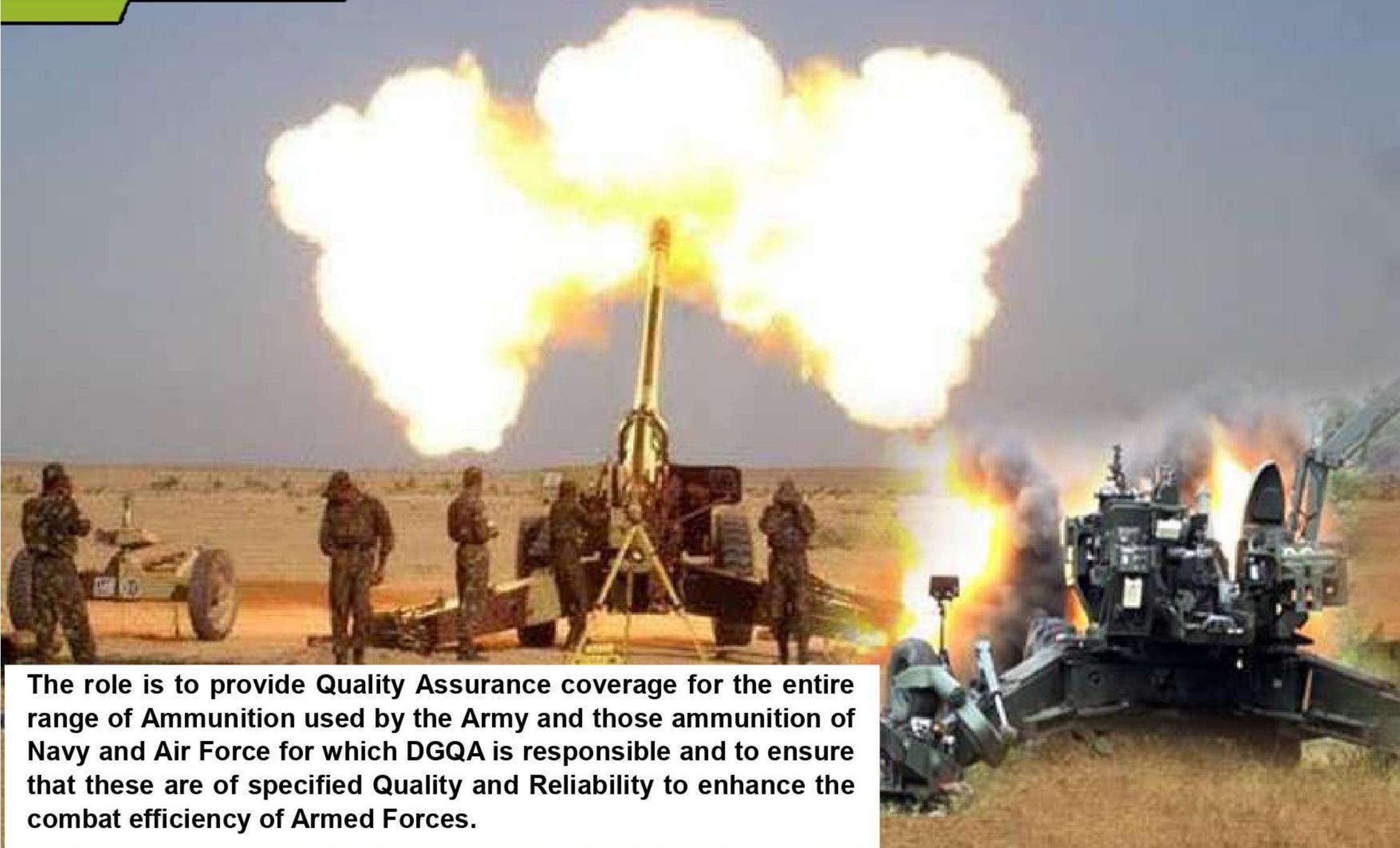


Historical Swords



World War II Vintage Guns

Armaments



The role is to provide Quality Assurance coverage for the entire range of Ammunition used by the Army and those ammunition of Navy and Air Force for which DGQA is responsible and to ensure that these are of specified Quality and Reliability to enhance the combat efficiency of Armed Forces.



23 mm SCHILKA GUN



23 mm TWIN GUN



155 mm/45 DHANUSH



155 mm/39 Cal UHL (ULTRA LIGHT HOWITZER)



84 mm RL MK-IV



30 mm AGS - 17

Electronics

A soldier in full military combat gear, including a helmet and a large backpack, is seen from the side, looking towards the right. He is operating a laptop computer. In the background, there is a large, complex radar or electronic equipment structure with many rectangular panels. The setting appears to be an outdoor field or training area under a clear blue sky.

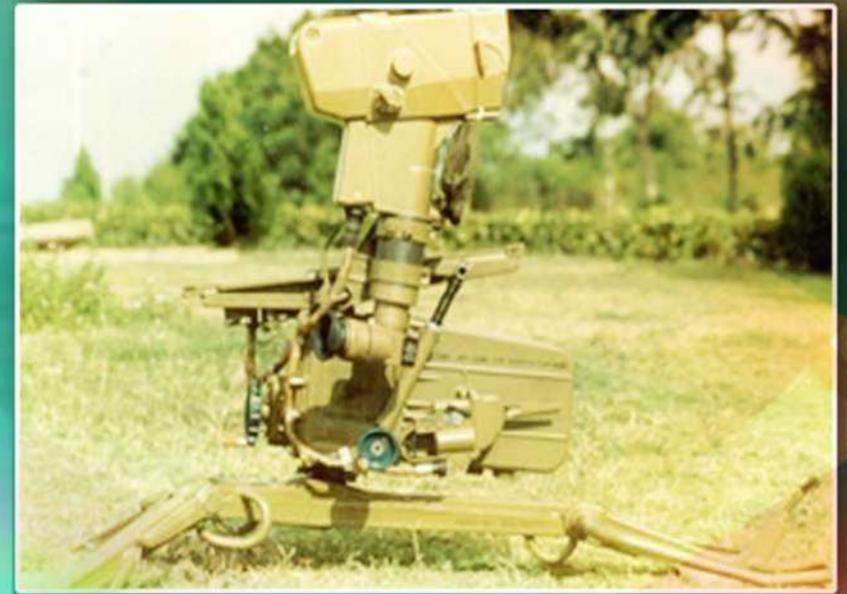
Responsible for Quality Assurance of the entire range of electronics and electrical equipment / stores for which DGQA is responsible and to ensure that these are of specified Quality and Reliability to enhance the combat efficiency of Armed Forces.



Radars and System



Responsible for QA of the entire range of Radars & Missiles equipment/stores for which DGQA is responsible and to ensure that these are of specified Quality and Reliability to enhance the combat efficiency of Armed Forces.

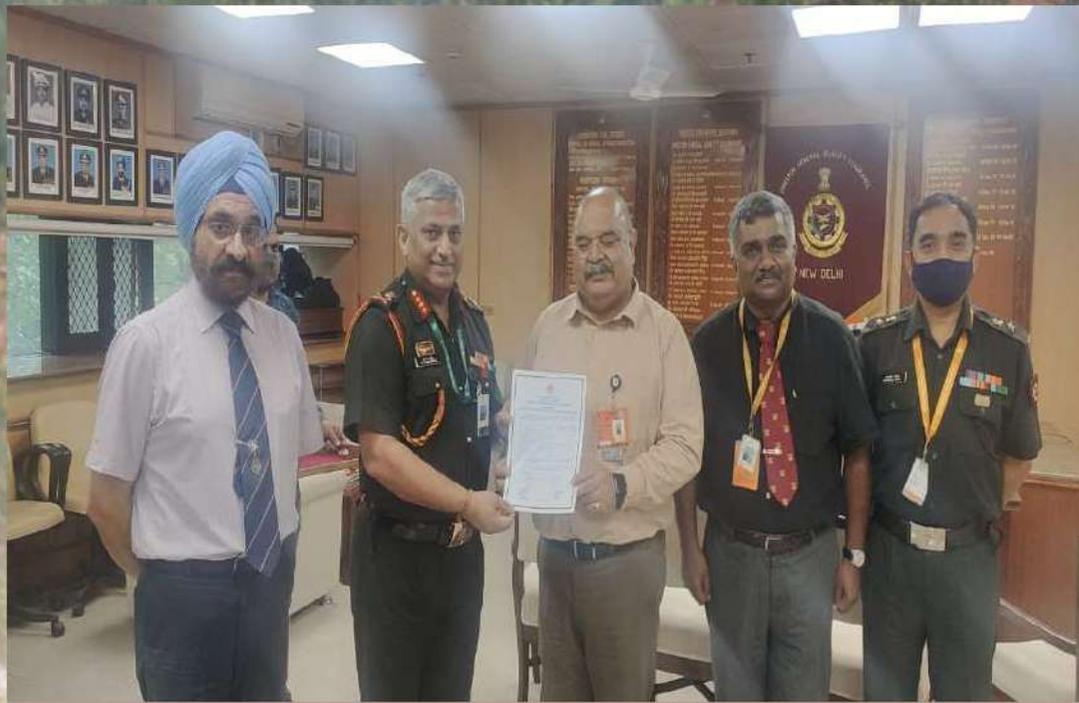




Combat Vehicles



Role is to provide QA to all Armoured Fighting Vehicles & Infantry Combat Vehicles and their variants being designed by DRDO / Productionized in Ordnance Factories / DPSUs



Presenting Green Channel Certificate to BEL-Bangalore



Fully Indigenous Engines V 92-S2 and V 46-6 being handed over to the Indian Army by Hon'ble RM Smt Nirmala Seetharaman



Maneuvering of Tank T-90



Floatation Armoured Ambulance — A BMP II Variant

Vehicles



The role is to provide Quality Assurance coverage to all kinds of vehicles used by the Army and to ensure that these are of specified Quality and Reliability to enhance the combat efficiency of Armed Forces.

PM Shri Narendra Modi inaugurates L&T's
K9 Vajra Gun making facility



300 mm steep climbing test in progress



Bull Dozer BD 80



20 Tonne Trailer with payload



K9 VAJRA

Stores



The RRM Shri Shripad Yesso Naik handed over 100,000th Bullet Proof Jacket to the Chief of Army Staff General M M Naravane in a ceremony held in New Delhi on 6th January 2021.

The role is to provide Quality Assurance coverage to all items of Textiles and Clothing, Chemicals, Drugs & Pharmaceuticals, Paints, Petroleum Products and General Stores and to ensure that these are of specified Quality and Reliability to enhance the combat efficiency of Armed Forces.



Hon'ble RM Shri Manohar Parrikar being briefed on the stringent requirement of Quality Assurance in Parachute making.

Engineering Equipment



The role is to provide Quality Assurance coverage to various types of engineering equipment and to ensure that these are of specified Quality and Reliability to enhance the combat efficiency of Armed Forces.



Naval



The role is to provide Quality Assurance to all electronic / electrical weapon systems/ equipment and spares for new construction ships and submarines & ships in service commission and to ensure that these are of specified Quality and Reliability to enhance the combat efficiency of Armed Forces.



Authority Holding Sealed Particulars



- Integral support to User and DG Capability development in accordance to DAP 2020.
- Capability development of manufacturing agency during stages of production for stores being procured out of Capital head.
- Sustenance support for provision of equipment and spares procured under Revenue procurement.
- Repository of all technical documents associated with the equipment and stores procured for the Indian Army.
- Proof firing of Ammunition and Missiles.
- Integral part and support to the manufacturing agencies during the Transfer of Technology
- Carrying out defect investigation in situ /laboratory and product improvement through value engineering study.
- Assist in user trials and DGQA Evaluation

Quality Assurance Establishment



Responsible for carrying out bulk inspection and Lab testing



JOINING HAND IN SUPPORTING AATMANIRBHAR BHARAT

Proof establishments carry out trials and are situated at places considered suitable for carrying out proofing of the weapons, filled / empty ammunition and explosives and other components manufactured by Ordnance Factories, Private Firms or procured from foreign sources.



STATE OF ART LABORATORY



DG, DGQA being briefed on Air Oven for testing of ageing of Cables.



Test Equipment of state-of-art technology and in line with NABL stipulations.



PROOF FIRING: GUNS



Quality Assuring in fitness, safety, and design margin of the article under test.



PROOF FIRING: MISSILES



ENSURING STANDARDS BASED TESTING



SHARANG



TANK T-72



PINAKA



81mm MORTAR



K-9 VAJRA



T-90



BMP II



BLT (T-72)



TRAWL T-72



LIGHT BULLET PROOF VEHICLE



LIGHT STRIKE VEHICLE



LIGHT STRIKE VEHICLE



STATE OF ART TECHNOLOGY



BFSR (SR)



WLR SWATHI



3D TACTICAL CONTROL RADAR



SCHILKA

Bridge Assault Heavy Float under test



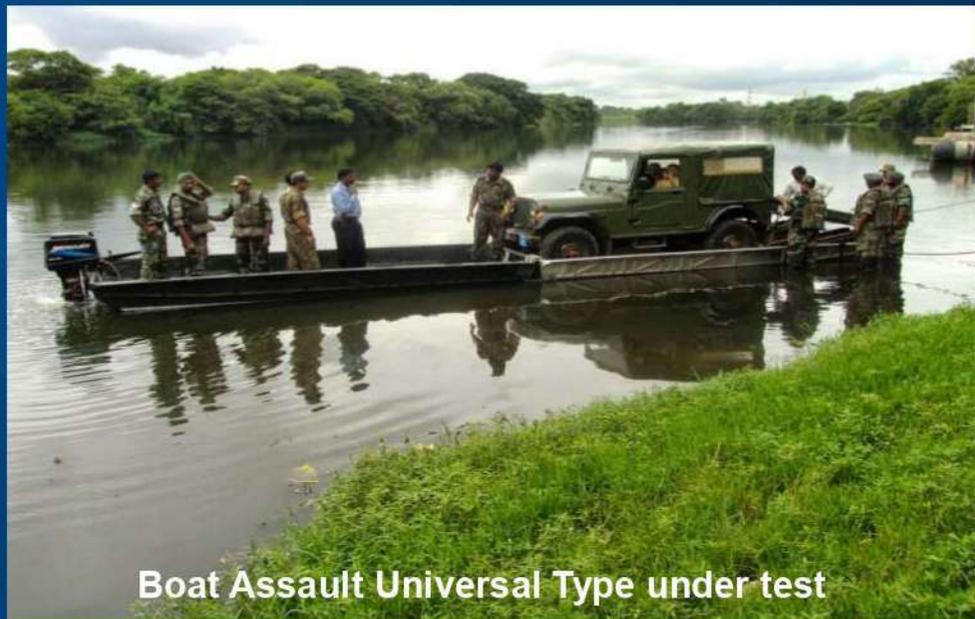
Testing of high speed boats on Pangong Tso lake



Excavator in Action



Boat Assault Universal Type under test



BUILDING FAITH AND CONFIDENCE OF TROOPS IN FIELD



Nuclear, Biological and Chemical (NBC) Equipment Wing, Pune is the Authority Holding Sealed Particulars (AHSP) for all NBC detection, protection & decontamination equipment being procured for our Armed Forces including Para Military Forces.



PINAKA MULTI BARREL ROCKET LAUNCHING SYSTEM



On 25 September 2020, Authority Holding Sealed Particulars (AHSP) responsibility of Pinaka weapon system was handed over by DRDO to DGQA. AHSP transfer marks successful establishment of production of Pinaka rockets, Launchers, Battery Command Posts, Loader Cum Replenishment and Replenishment Vehicles as well as successful establishment of Quality Assurance processes. AHSP handing over took place at ARDE, Pune wherein the documentation required by various Production agencies, Quality Assurance agencies, Maintenance agencies and Users

AHSP TRANSFER FROM DRDO TO DGQA



NBC RECCE VEHICLE



ARMOURD ENGINEER
RECCE VEHICLE



UNMANNED AERIAL VEHICLE UNDER TRIALS



RIGOROUS TESTING OF SMALL ARMS



Sand & Dust Test



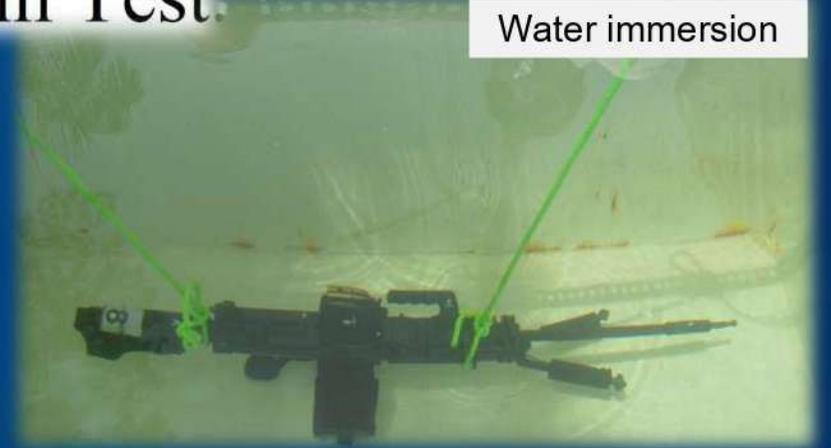
Mud Bath



ROBUSTNESS TEST



Rain Test



Water immersion

GUIDING PATH



Chairman BDL, Director DIQA and participants during 3D Printing Workshop

Defence Institute of Quality Assurance is the premium training establishment of DGQA located at Bengaluru, Karnataka. DIQA plans and conduct foundation/orientation training for DGQA and for officers from three services.

DIQA also guides the technical training schools run by Controllerates of Defence Quality Assurance Organisation and maintains active interaction and liaison with Indian and International Institutions and Organisations associated with training and quality assurance activities.

MISSION RAKSHA GYAN SHAKTI



In order to boost the IP culture in Defence and to realize the vision of Hon'ble Prime Minister for 'AATMANIRBHAR BHARAT', Mission Raksha Gyan Shakti was launched by the Government.

The production revolution **Industry 4.0**

Unique solution of Digital threading of Quality Control and Assurance Data during production process has let to :

Real time data analysis

Faster decision making

Improved reliability of the product

AI, Big Data, advanced design and maintenance software and Robotics are now the driving force.

INNOVATIVE IMPLEMENTATION OF INDUSTRY 4.0



The Hon'ble Prime Minister Shri Narendra Modi being briefed on use of IoT, Block chain, Big Data and Artificial Intelligence for Production and Quality Assurance of KONKURS-M Missile Launcher.

BANDHAN: DEF EXPO 2020

भारत सरकार
MINISTRY OF DEFENCE
भारत सरकार
DEPARTMENT OF DEFENCE PRODUCTION

defexpo
India: The Emerging Defence Manufacturing Hub
DEFEXPO 20
INDIA
10-12 FEBRUARY 2020
Ministry of Defence



TOGETHER WE CAN

डा. अजय कुमार
रक्षा स. सचिव

Dr. Ajay Kumar
Defence Secretary



सत्यमेव जयते



भारत सरकार
रक्षा मंत्रालय
Government of India
Ministry of Defence

D.O.No.25(6)02/DEO/Gen/DI-20

Dated: 24 March, 2020

Sub: Letter of Appreciation

Dear Lt Gen Sanjay Chauhan,

DEFEXPO-20 held at Sector 15, Vrindavan Yojna and Gomati River front Lucknow from 05 to 09 Feb 2020 has been conducted successfully. I would like to place on record that without your support and cooperation the 11th edition of the Defexpo could not have been conducted in such a successful manner.

I take this opportunity to express my gratitude and appreciation for the services rendered by you and your team towards preparation and organisation of the Defexpo 2020.

I extend my best wishes for your continued efforts and success in future endeavors as well.

Best wishes

Yours sincerely

(Dr. Ajay Kumar)

Lt Gen Sanjay Chauhan
DGQA
Room No. 308A, D-1 Wing
Sena Bhawan, New Delhi-110011



The Ordnance Factory Board feels the isothermal microcalorimetry method to test shelf life of multimode hand grenades might be unreliable compared to ISAT (B) test followed by OFB and approved by the Directorate General Quality Assurance.

OFB told The Statesman, “ The DGQA approved method which is well established for shelf life assessment in India and is being carried out for most of the ammunition stores are Intensified Simulated and Accelerated Test (B)”.

In reply to the reports that the Indian Army has asked for testing shelf life of Grenades before procurement.

Source: The Statesman, Soumyadip Mullick, Kolkatta 20th Oct 2020



**Lt Gen R K Malhotra, DG DGQA, presenting
Self Certification status to
M/s Panasonic Energy India Co Ltd**



**Seminar to spread awareness about the various Schemes
of MoD to facilitate the domestic defence industry.**

INCENTIVIZING DEFENCE MANUFACTURING

Defence Testing Infrastructure Scheme (DTIS): State-of-the-art test facilities aimed to provide a major impetus for domestic defence industries as defence testing and certification infrastructure.

Proof Ranges: Proof ranges and laboratories to the private industry for carrying out dynamic proof trials and development activities.

Self-Certification & Green Channel: Accord of Green Channel Status and self-certification to qualifying Indian firms to cut down inspection timelines and costs in the foreseeable future.

Defence Export Promotion Scheme (DEPC): Opportunity for indigenous manufacturers to market their products globally.

Third Party Inspection Scheme: Manufacturers have the option to undertake inspection through Third Party agencies for non-critical defence stores.



**Green Channel certificate being handed over
to M/s BEL**



**Green Channel certificate being handed over
to M/s Bharat Forge**



**Copyright Certificate issued to
DQA (Armaments)
“Procedure of breakdown of Grenade 36M”**



Date: 12/03/2021

1. Registration Number	: L-100318/2021
2. Name, address and nationality of the applicant	: THE CONTROLLER, CONTROLLERATE OF QUALITY ASSURANCE AMMUNITION KHADKI, PUNE, MAHARASHTRA-411003 INDIAN
3. Nature of the applicant's interest in the copyright of the work	: OWNER
4. Class and description of the work	: LITERARY/DRAMATIC WORK
5. Title of the work	: PROCEDURE FOR BREAKDOWN OF GRENADE 36M
6. Language of the work	: ENGLISH
7. Name, address and nationality of the author and if the author is deceased, date of his decease	: AMOL MADIKINT, SENIOR SCIENTIFIC OFFICER, GRADE II, CONTROLLERATE OF QUALITY ASSURANCE AMMUNITION KHADKI, PUNE, MAHARASHTRA-411003 INDIAN
8. Whether the work is published or unpublished	: UNPUBLISHED
9. Year and country of first publication and name, address and nationality of the publisher	: N.A.
10. Years and countries of subsequent publications, if any, and names and nationalities of the publishers	: N.A.
11. Name, address and nationalities of the owners of various rights comprising the copyright in the work and the extent of rights held by each, together with particulars of assignments and licences, if any	: THE CONTROLLER, CONTROLLERATE OF QUALITY ASSURANCE AMMUNITION KHADKI, PUNE, MAHARASHTRA-411003 INDIAN
12. Name, address and nationalities of other persons, if any, authorised to assign or licence of rights comprising the copyright	: THE CONTROLLER, CONTROLLERATE OF QUALITY ASSURANCE AMMUNITION KHADKI, PUNE, MAHARASHTRA-411003 INDIAN
13. If the work is an 'Artistic work', the location of the original work, including name, address and nationality of the person in possession of the work. (In the case of an architectural work, the year of completion of the work should also be shown)	: N.A.
14. If the work is an 'Artistic work' which is used or capable of being used in relation to any goods or services, the application should include a certification from the Registrar of Trade Marks in terms of the provision in Sub-Section (1) of Section 45 of the Copyright Act, 1957.	: N.A.
15. If the work is an 'Artistic work', whether it is registered under the Designs Act 2000 if yes give details	: N.A.
16. If the work is an 'Artistic work', capable of being registered as a design under the Designs Act 2000 whether it has been applied to an article through or industrial process and, if yes, the number of times it is reproduced.	: N.A.
17. Remarks, if any	: 2 COPIES OF THE WORK ENCLOSED

Diary Number : 8445/2020.CO/L

Date of Application : 24/06/2020

Date of : 24/06/2020



DEPUTY REGISTRAR OF COPYRIGHTS

NAVAL GOLDEN QUALITY eCONCLAVE



NGQeCON

NAVAL GOLDEN QUALITY e CONCLAVE

Naval QA & Shipbuilding Industry - Emerging Challenges and Opportunities in the New Era

FRIDAY 5th JUN 2020

1000 - 1330 Hrs



Col HS Shankar (Retd)
VSM
CMD, Alpha Design Tech



Shri Sudhakar Gande
Co- Chair
FICCI Def.



Sh J D Patil
President
SIDM



RAdm V K Saxena, (Retd)
CMD, GRSE



Lt Gen S Chauhan
Director General
DGQA



Shri Raj Kumar
Secy Def Prod
Min of Defense



VAdm S R Sarma
AVSM, VSM
CWP&A



RAdm G K Harish
VSM
DGND



RAdm GS Jawanda
DG
WESSE



Cmde S Sonmadar (Retd)
Sr Consultant (Fmr)
NITI Aayog



Technology Partner - Ministry of Electronics & Information Technology





**A WEBINAR WITH OVER 700 PARTICIPANTS FROM QA + NAVY
+INDUSTRY PARTICIPATION**



DEFENCE TESTING INFRASTRUCTURE



Defence Testing Infrastructure required for realisation of 'AatmaNirbhar Bharat' in Defence sector, got a major boost with inauguration of the upgraded Environmental Testing Lab by Lt Gen RK Malhotra, DGQA on 05 Feb 21

हिन्दी राजभाषा समिति की पहली उप-समिति की बैठक समारोह



गुणता आश्वासन महानिदेशालय की स्थापना को हिन्दी के उत्कृष्ट कार्य हेतु संसदीय राजभाषा समिति द्वारा निरीक्षण उपरान्त प्रमाण पत्र प्रदान करते हुए माननीय श्री भर्तृहरि महताब, संसद सदस्य (लोक सभा), उपाध्यक्ष, संसदीय राजभाषा समिति, नई दिल्ली।

WE WERE HONOURED



Handing over of fully indigenous V46-6 and V92S2 Engines for T-72 & T-90 (Bhishma) Tanks to Indian Army by H'oble RM Smt Nirmala Sitharaman to Lt Gen D Anbu, VCOAS on 28 Jul 2018.



Shri Pranab Mukherjee, Ex- Hon'ble President of India



Shri APJ Abdul Kalam, Ex- Hon'ble President of India

NATIONAL

'Made in India' tank engines handed over to the Army

CHENNAI, JULY 26, 2016 22:39 IST
 UPDATED: JULY 26, 2016 22:39 IST



Nirmala Sithoreman handing over two fully indigenous bottle tank engines in Chennai on Saturday.

TheHitavada

Jabalpur City Line | 2021-06-13 | Page-1
 ehitavada.com

LPR Khamaria successfully conducts trials of two indigenous guns

105 mm Garuda V2 and 155/39 mm Ultralight (ULH) Weight gun systems are developed by Bharat Forge Limited (BFL)

■ Staff Reporter

LONG Proof Range (LPR), Khamaria, is abuzz with successful proof trials of indigenously developed 105 mm Garuda V2 and 155/39 mm Ultralight (ULH) Weight gun systems developed by Bharat Forge Limited (BFL), on June 8 and 11. The two state-of-the-art gun systems test fired to examine their recoil, pressure, muzzle velocity and mechanism functioning during four-day trial.

LPR, Khamaria, made Jabalpur's biggest artillery hub in the country. Jabalpur is the only place in India where guns and its ammunitions are being manufactured, tested, validated and stored for the Indian Army. Under the Make in India initiative, test facilities of DGQA have been made available to the private sector for R&D purpose and in order to offset the set-



105 mm Garuda V2 fielded at LPR.



155 mm mounted gun being test fired at LPR.

ting up costs of these facilities. A large number of private defence industries have now shown keen interest in utilising the range facilities at LPR,

Khamaria. LPR Khamaria, Officiating Commandant, Colonel Shalendra Barve, talking to 'The Hitavada', says "Preparations

were underway since September 2020 when BFL successfully test fired their 155 mm ULH and 105 mm Garuda V2 at LPR. The testing got delayed due to restric-

tions imposed during COVID-19 pandemic however, it did not affect the morale and resolve of BFL and LPR team.

Colonel Barve informed that

105 mm Garuda V2 is ultralight gun weighing around 6.6 tons and has firing range of around 30 km, with state of the art Hybrid Recoil System equipped with 360-degree firing capability which can be mounted on 4x4 wheeled chassis for easy deployment in high altitude area.

Similarly, test firing of around 30 rounds from 155/39 mm calibre gun was successfully carried out. The ordnance was proof fired on a specially modified 130mm carriage which can also be used to test fire any other variant of ammunition of 155 mm calibre.

Named as Bharat ULH-S is an indigenously designed and developed for deployment in mountainous terrain being extremely lightweight. The ordnance test fired will now be mounted on 4x4 HMV and test fired at LPR in coming days.

VIRTUAL INAUGURATION OF 20 KW SOLAR POWER PLANT





EXCELLENCE IN SPORTS AND ADVENTURE



DGQA India @DGQAIndia · 1h
 DGQA Adventure Sports cell has carved a niche for itself in the field of adventure sports. The aim of these activities is to Foster the spirit of adventure and develop camaraderie amongst the participants.

[@drajaykumar_ias](#)
[@SpokespersonMoD](#)



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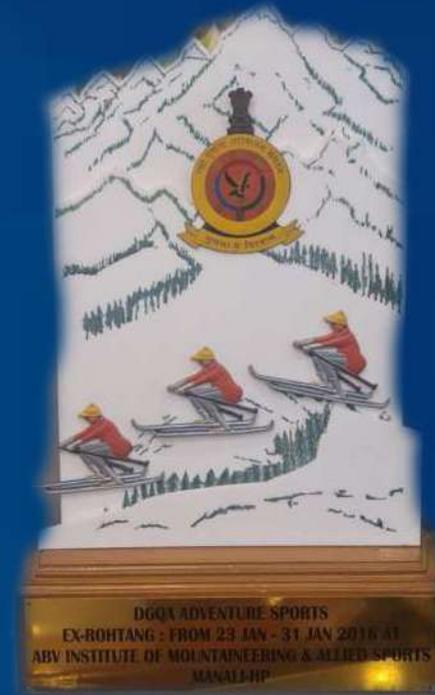
[Show this thread](#)

DGQA India @DGQAIndia · 1h
 Replying to @DGQAIndia
 Presently, a skiing camp under the chairmanship of Brig SM Ahmed Controller CQA(SV), Dehu Road is in progress for 35 DGQA Personnel in the Pir Panjal ranges from 08 to 15 Feb 2019.

[Show this thread](#)

DGQA India @DGQAIndia · 1h
 DGQA Adventure Sports cell has carved a niche for itself in the field of adventure sports. The aim of these activities is to Foster the spirit of adventure and develop camaraderie amongst the participants.

[@drajaykumar_ias](#)
[@SpokespersonMoD](#)



Ex Rohtang
 Institute of Mountaineering



Ex Jalmathan II
 Water Sports Centers, Pong Dam

OUR TORCH



MAJ GEN PRATAP NARAIN
27 SEP 57 – 22 MAY 60



REAR ADM D SHANKAR AVSM
23 MAY 60 – 19 AUG 63



REAR ADM BN LELE
23 AUG 63 – 15 MAY 66



MAJ GEN RG WILLIAMS PVSM
15 JUN 66 – 30 APR 73



LT GEN H LAL PVSM VSM
11 DEC 87-30 NOV 89



LT GEN AS BHULLAR PVSM AVSM
01 DEC 89 – 19 DEC 91



LT GEN RK MEHRA AVSM
25 DEC 91 – 31 DEC 92



LT GEN R SHIVDASANI PVSM
01 JAN 93 – 31 JUL 95



LT GEN G SRIDHARAN
01 JUL 07 – 31 AUG 08



LT GEN JS DHILLON VSM
01 SEP 08 – 31 OCT 09



LT GEN UK GANGULI
01 NOV 09 – 31 DEC 10



LT GEN VK MEHTA
01 JUN 11 – 31 JAN 12

BEARERS



MAJ GEN R JANARDHANA
01 MAY 73 - 19 AUG 76



MAJ GEN C SUNDARAM AVSM
11 FEB 77 - 30 APR 80



MAJ GEN PR DHAWAN
30 JUL 80 - 31 MAR 81



LT GEN TC JOSEPH AVSM
04 JAN 82 - 31 DEC 85



LT GEN RL KAPUR PVSM
08 JAN 86 - 11 DEC 87



LT GEN JM GARGA
01 AUG 95 - 31 OCT 95



LT GEN AK AGARWAL PVSM
01 NOV 96 - 28 FEB 98



LT GEN AMARJIT SINGH PVSM
02 MAR 98 - 31 DEC 01



LT GEN MK CHARJI AVSM
01 JUN 02 - 31 AUG 04



LT GEN RAKESH PURI
01 JUN 06 - 30 JUN 07



LT GEN VA BHAT
01 FEB 12 - 31 JUL 13



LT GEN JPS DALAL
31 AUG 13 - 31 MAR 15



LT GEN SHAMSHER SINGH
28 APR 17 - 30 NOV 18



LT GEN SANJAY CHAUHAN
01 DEC 2018 - 30 SEP 2023

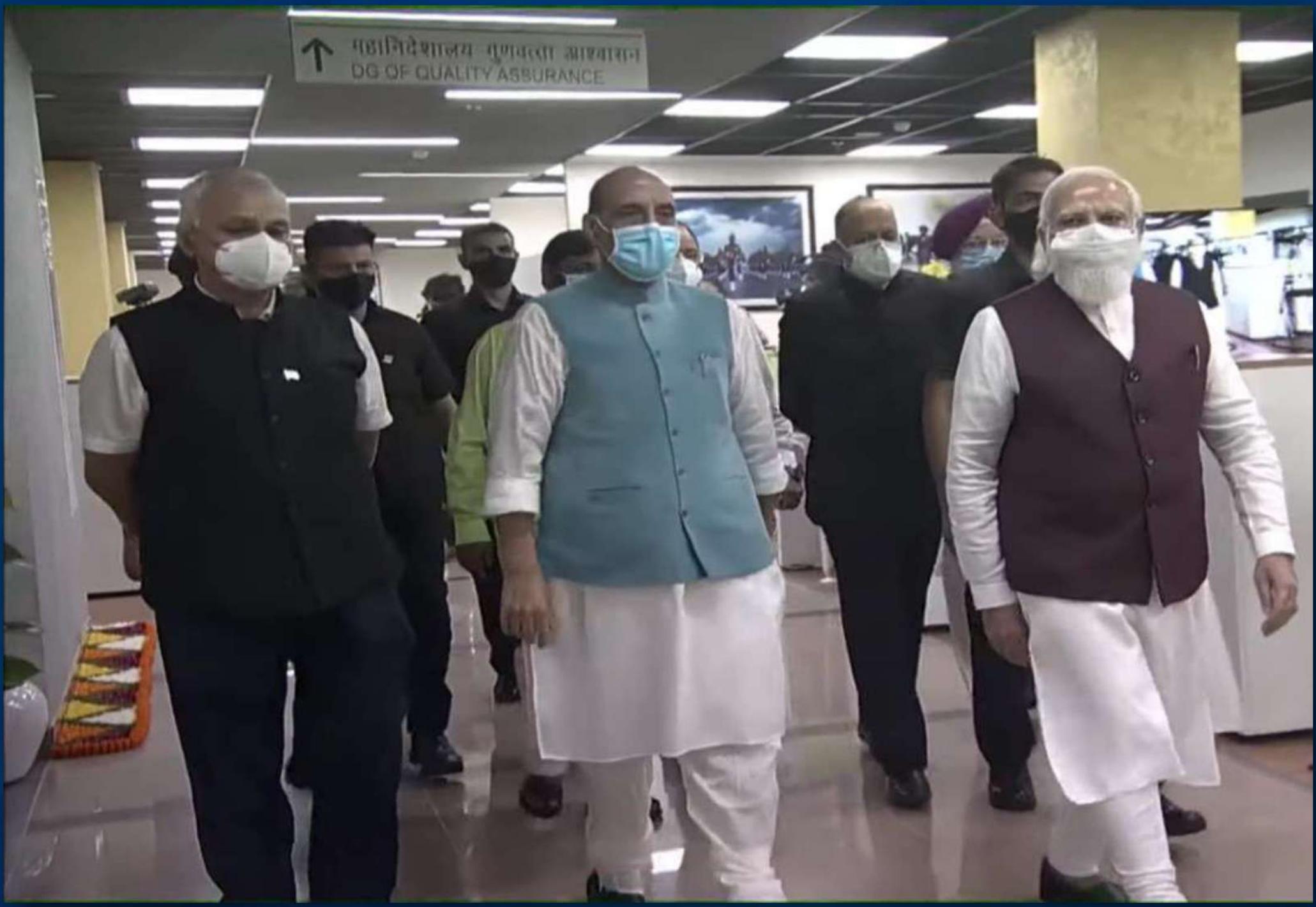
WE HAVE MOVED.....



Prime Minister Shri Narendra Modi inaugurated the Defence Office Complex at Africa Avenue on 16 September 2021.

The new Defence Office Complex provides modern, secure and functional working spaces and is state-of-the-art and energy efficient, with comprehensive security management measures. The building utilizes resource efficient green technology and promote environment friendly practices.

↑ महानिदेशालय गुणवत्ता आश्वासन
DG OF QUALITY ASSURANCE



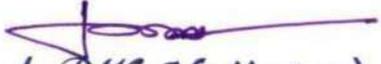


65th DGQA Raising Day 2021

Our Quest For Pursuit of Excellence Continues

Ever evolving role of DGQA organisation to meet expectations and aspirations of various stakeholders is witnessing yet another major transformation with increased participation of private industry and corporatisation of O&B.

Keeping pace with the advancements in state of art manufacturing technologies, major reforms in the existing QA practices are in the process to facilitate fast emerging defence manufacturing ecosystem towards achieving GoI objective of Atma Nirbhar Bharat through promotions of various initiatives launched by MoD towards Ease of Doing Business'


(R.K. Malhotra)
Lt Gen



Postage Stamp released in commemoration of 60 years of excellence by Army Postal Service

