Centre for Joint Warfare Studies

FICCI
Federation of Indian Chambers of Commerce and Industry

International Conference on

SMALL ARMS

'From Current Paradigm on Small Arms to Next Level'

February 20, 2020

FICCI, Federation House, New Delhi





KNOWLEDGE REPORT ON

Small Arms Manufacturing in India

Knowledge Associate

Sugosha Advisory



Centre for Joint Warfare Studies

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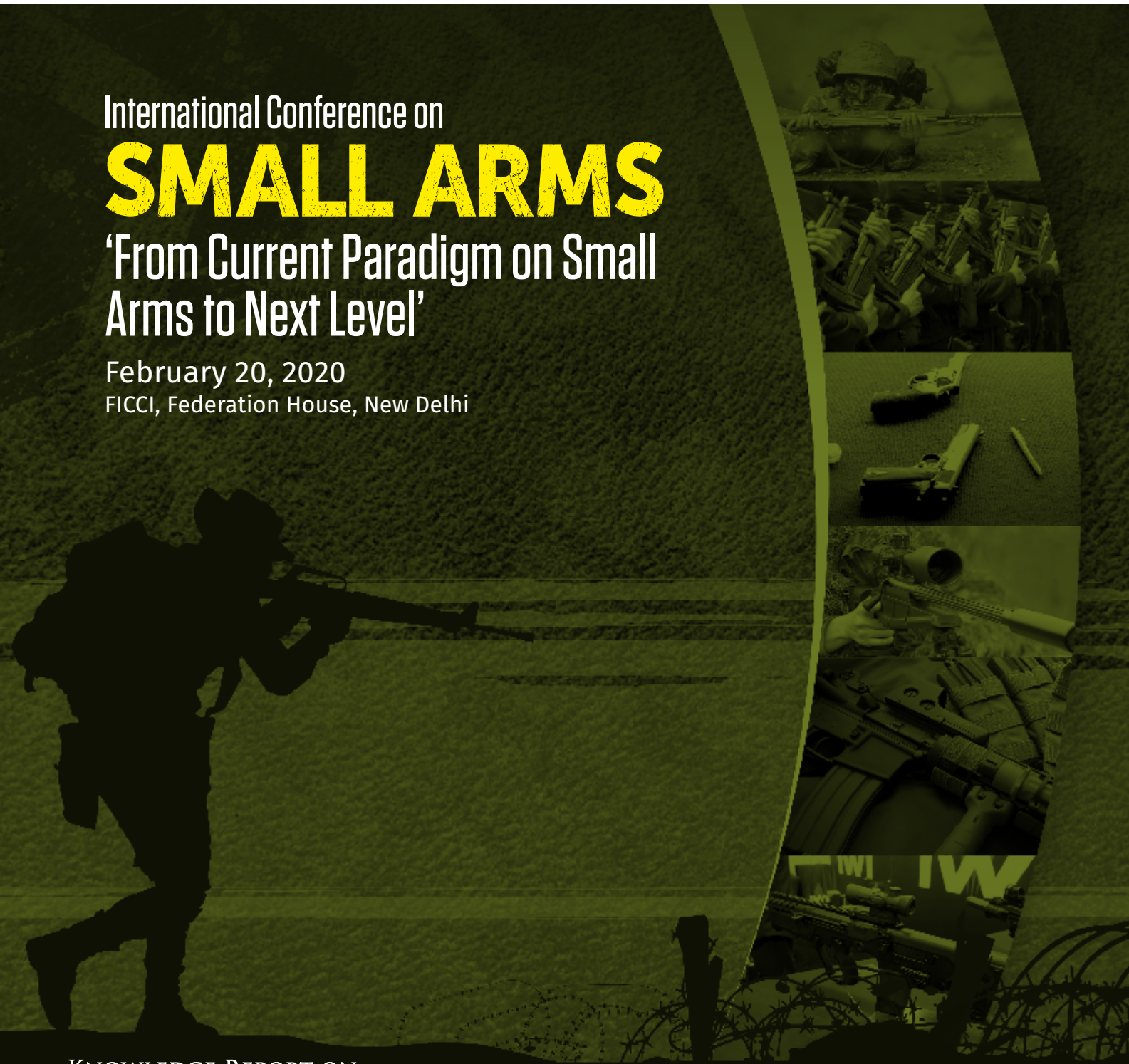
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Foreword



LT GEN VINOD BHATIA, PVSM, AVSM, SM (RETD)
DIRECTOR
CENJOWS

Barely three months after becoming Prime Minister, Narendra Modi, in his address from the Red Fort on August 15, 2014, gave a clarion call for "Make in India". From satellites to submarines, he said, "come make in India, we have steel... we have discipline, we have resolve... sell anywhere, (but) make in India."

India has the 2nd largest standing army in the world and is among the top five countries spending on defence. Despite having the fifth largest defence budget in the world, India procures most of its weapon systems from foreign markets. This offers a huge opportunity for import substitution, thus the emphasis on Make in India in Defence. The aim is to increase share of defence manufacturing to 25 billion dollars by 2025 which is eminently doable. A number of policy decisions have been taken to facilitate this initiative and these include the changes in export policies, amendment to DPP, ease of licensing, increased FDI in Defence Sector and setting up of Defence corridors with a host of incentives. This will enable Indian Industry to leverage the domestic markets as well as aim at global markets. Besides helping in building domestic capabilities, it will also bolster exports in the long term.

The Armed forces of the nation need to be equipped in the right quality and quantities to ensure National security. There is thus the need of the Indian defence Industry to rise to the challenge of producing world class equipment which will then have use both within and outside the country. R & D in key technologies and focus on emerging technologies in various fields which will impact the future battlefields are essential to capability building. Increased support by Govt by means of policy changes, greater interaction and support by the users and cooperation with OEM the world over will allow the Indian Defence Industry to exploit this huge opportunity. A key aspect in this will be changes in procedures & processes to expedite the procurement.

Future wars will involve multi domain operations but the primacy of the man on ground will remain. The need to have suitably equipped and armed soldiers will be critical to success in wars, especially in the paradigm of hybrid wars which are on the rise. The soldiers will require a family of Small Arms suitable for future wars. These will not only be required by the Armed Forces but also by CAPFs and State Police Forces, thus offering great numbers and consequentially huge opportunities for the Industry. A number of cases for small arms procurements are under progress and on the anvil in the near future. This International Conference on Small Arms being organised by the Centre for Joint Warfare Studies (CENJOWS) in association with FICCI is therefore not only relevant, timely but also very important as it brings all stakeholders in a common platform to share their requirements and concerns. I wish all the participants the very best for the conference and I am sure that the conference will bring out certain actionable recommendations which will ensure self reliance and capability building for the Nation.



Foreword



MR DILIP CHENOY
SECRETARY GENERAL
FEDERATION OF INDIAN CHAMBERS OF
COMMERCE AND INDUSTRY (FICCI)

The Defence Sector holds immense potential to contribute towards 'Make in India' and to achieve the target of USD 5 Trillion economy by 2025. Shri Rajnath Singh, Hon'ble Raksha Mantri has also set an ambitious goal to achieve a turnover of USD 26 Billion in Defence and Aerospace goods and services by 2025. However, a sustainable business case and a conducive policy environment for the Indian Defence industry is essential to the success of these aspirations.

The recently concluded Defexpo 2020 - India's flagship Defence Trade Show in Lucknow witnessed growing capabilities of Ordnance Factory and Indian Defence Industry (both DPSU and Private Sector) across all spectrums of defence manufacturing. The unprecedented number of exhibitors and footfall of business visitors from across the globe is a testimony to India being a significant market for every defence player in the world. Over the past few years, GoI has given huge impetus to enable export opportunities for local defence industries. Also, there has been a continuous positioning of India as a major manufacturing hub to attract global players to set up production facilities in collaboration with Indian companies to cater to our own military requirements and that of our friendly nations.

Within the various facets of our military requirements, 'Small Arms' segment is slowly emerging as a fine prospect for defence manufacturing. Accordingly, we have witnessed significant business decisions taken by industry giants over the last few years to tap this opportunity. Indian Defence Industry has been proactive on its part and have ventured into MOUs/JVs with FOEMs to work together and create a robust defence industrial base and supply chain in the area of small arms manufacturing. However, these standalone efforts by the industry need to be supplemented by a consistent business opportunity, failing which the long-term sustenance of indigenous small arms manufacturing will remain a challenge.

This International Conference on Small Arms being organised by FICCI in association with the Centre for Joint Warfare Studies (CENJOWS) is very timely and shall endeavour to address the key challenges in Small Arms manufacturing. The conference will also explore critical technologies in small arms manufacturing and opportunities that exist in terms of market size by aggregating the requirements of Armed Forces and Central Armed Police Forces (CAPFs).

I am confident that the deliberations during the conference will serve as critical inputs for all the stakeholders involved in the small arms segment.

My best wishes and sincere thanks to all the participants!!!

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KNOWLEDGE REPORT ON

Small Arms Manufacturing in India

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KNOWLEDGE REPORT ON
Small Arms
Manufacturing in India

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KNOWLEDGE REPORT ON

Small Arms Manufacturing in India

1 Introduction

The United States Marine Corps' Rifleman's Creed teaches:

"My rifle is my best friend. It is my life. I must master it as I must master my life. Without me, my rifle is useless. Without my rifle, I am useless. I must fire my rifle true. I must shoot straighter than my enemy who is trying to kill me. I must shoot him before he shoots me."

The Indian Army's small arms inventory is in for a near-total makeover. Straddled with an ageing INSAS (Indian Small Arm System) rifle and a World War II vintage machine carbine, it appears, the beginning of a new dawn is round the bend. Should the required procurements ultimately go through, we could expect our forces to be striding through operations with the top of the shelf American, Russian or Israeli weapons which would be made in India by Indian manufacturing partners.

The manufacturing of arms and ammunition is governed by the Arms Act (1959) and Arms Rules (1962). It was protected by the Government of India (GoI) and only Ordnance Factory Board (OFB) had the licence to manufacture arms and ammunition for the Armed Forces. Indian private industry was only allowed to produce single barrel and double barrel guns and associated cartridges. The Department of Industrial Policy and Promotion (DIPP, now DPIIT) finally opened the manufacture of small arms and ammunition in the private sector with nil or up to 26 percent FDI in 2002[1] . In 2005, DIPP further liberalised the sector by beginning to issue industrial licences to a few companies to manufacture arms and ammunition.

Has this regime undergone any change since then? Yes, and it has made significant strides in ensuring a level playing field for the Indian private industry. In a landmark move, the MHA revised Arms Rules 1962 (now called as Arms Rules 2016, published on 15 July 2016) to allow Indian companies to manufacture and proof test of firearms [2]. Subsequently in 2017 the Arms Rules were amended again to boost the 'Make in India' manufacturing initiative. These changes have been discussed under the section Policy and Procedures.

We have also seen a significant number of RFIs and RFPs issued by the MoD in the last few years for manufacturing of arms and ammunition to the Indian private companies. The most significant

[1] *Press Note 2 (2002 Series) DIPP*

[2] *Rule Number 51 to 66 of Chapter V - Part 1*

requirement was that of the assault rifle (7.62 x .51mm calibre) for the Indian Army. This requirement is to replace the existing equipment used by the army. It is estimated that the requirement for a new rifle is approximately 650,000 units. Similarly, the requirement for Close Quarter Battle (CQB) carbines (5.56 x 45 mm calibre) is estimated to be 350,000 units.

So what has been the motivation for the Government and Ministry of Defence to pursue manufacturing of arms and ammunition with the private industry? At present majority of the small arms and ammunition requirement of the Armed Forces is supported by the Ordnance Factory Board (OFB). Rifle Factory Ishapore, Small Arms Factory Kanpur, Ordnance Factory Tiruchirapalli and Gun & Shell Factory Cossipore specialize in small arms manufacturing. While they continue to be the primary supplier for small calibre firearms to the armed forces, there is certainly scope for private industries to further develop new products and indigenously manufacture for the armed forces.

In terms of private industry, there are only a few significant companies which are slowly pushing the envelope to establish a production facility despite dearth of orders or commitment from the ministry of Defence. Adani, MKU, SSS Defence are a few companies which have made inroads in terms of developing small arms with foreign collaborations in a phased manner.



2 Small Arms

The International Tracing Instrument (ITI), adopted by the United Nations General Assembly on 8 December 2005, defines small arms as:

"Small arms" are, broadly speaking, weapons designed for individual use. They include, inter alia, revolvers and self-loading pistols, rifles and carbines, sub-machine guns, assault rifles and light machine guns.

2.1 Inventory

Inventory of small arms in the Indian Army includes Handguns, Submachine Guns, Assault Rifles, Sniper Rifles and Machine Guns. The Indian armed and paramilitary forces have been juggling with a host of weapons since independence. The assortment of weapons is due to staggered purchase cycles and decentralized purchase for paramilitary forces. Certain mix of weapons is also necessitated by the operational requirements of the weapons. The operational requirement of a weapon for a frontline soldier is very different from the operational requirement of non-frontline soldiers.

Small arms in the Indian Army have been procured from multiple countries including but not limited to Russia, USA, Israel and Germany. Similarly, the weapons are of different calibre, for example there are assault rifles of calibre 5.56 x 45mm, 7.62 x 39mm and 7.62 x 51mm.

There is a new thinking that armies should standardise their assault rifles and carbines on a single cartridge for ease of logistic and production issues. However, the current dispensation does not



believe this to be a significant issue considering the operational requirements for varied combat scenarios necessitates the forces to equip themselves with different calibre weapons.

2.2 Philosophy

The philosophy of small arms usage has changed over the years. Earlier, the objective of firing a rifle was to kill the enemy. However, the thought process that gradually gained ascendance was it would be better to injure an enemy since an injured soldier would strain the opponent's logistics more. The individual will need an evacuation chain and medical attention.

The army moved from its earlier 7.62mm calibre self-loading rifle to the 5.56mm calibre INSAS rifle. Unfortunately over time the 5.56mm proved inadequate as the enemy were proving to be fast and elusive targets, in addition to being motivated to strike back even on being injured. Further, body armour came to be used more and more, rendering the smaller 5.56 caliber ineffective. Hence, the debate is coming full circle now. Militaries the world over, especially those that have fought long wars, are actively considering moving from 5.56 to the old 7.62 round.



3 Procurement Process

Modernisation of the infantry soldier is aimed at enhancing lethality and providing individual protection. Towards this end, procurement cases for modern weapons such as ATGMs, Sub Machine Gun with Ammunition, Light Machine Gun, Sniper Rifles, Assault Rifles & Under Barrel Grenade Launcher (UBGL) and Close Quarter Battle (CQB) Carbines are being progressed.



The Ordnance Factory Board (OFB) has been supplying the indigenously developed INSAS rifle and other firearms to the armed forces as and when they receive indents.

The small arms which are not being manufactured by OFB, the Army imports through capital and revenue route. However, with the governments push for Make in India in the recent years, certain measures have been put in place to encourage indigenous development of small arms through Indian private sector. There was a slew of RFIs / RFPs issued in the last 4 years, seeking participation of the industry in supply of small arms to the armed forces. Following is a list of RFI/RFP released in the last 4 years:

Type	Service	Description	QTY	Published Date
RFI	Infantry	Light Weight Anti Material Rifle (LT WT AMR) - 12.7mm / 0.50 in calibre	1500	31-Mar-17
RFI	Infantry	RFI for LMG	9000	31-Oct-17
RFI	IAF	HELICOPTER MOUNTED MACHINE GUNS	22	30-Oct-17
RFI	Army	7.62 x 51 mm Assault Rifle	5,50,000	22-Feb-18
RFI	Army	8.6mm (0.338 inches) Sniper Rifle	6000	22-Feb-18
RFI	Army	Assault Rifles (7.62 x 39 MM)	6,50,500	31-Aug-18
RFI	Army	CQB Carbine with 5.56 x 45 mm Calibre	3,50,500	14-Aug-18
RFI	Army	7.62 x 51mm LIGHT MACHINE GUN (LMG)	30000	21-Aug-18
Global Tender	CRPF	Assault Rifles (7.62 x 39 mm)	29823	6-Oct-17
Global Tender	BSF	Assault Rifles (7.62 x 39 mm)	14659	7-Mar-18
FTP	Indian Army	7.62mm x 51mm rifle Assault Rifles	72400	16-Jan-18
FTP	Indian Army	5.56mm CQB Carbines	93895	16-Jan-18
TBD	Army	LMG	41000	1-Aug-18
TBD	Army / IAF	Sniper Rifles	5719	1-Sep-18
STE (2-Bid)	Army	7.62 MM DRAGUNOV SNIPER RIFLE and accessories	100	25-Jun-18
Open Tender	Army	.338 LAPUA MAGNUM SNIPER RIFLE (8.45MM) WITH DAY AND NIGHT SIGHT AND ACCESSORIES	24	7-Nov-17
Open Tender	ITBP - MHA	7.62x 51 mm Sniper Rifle Bolt Action with accessories and spares	358	13-Jul-18
Open Tender	NSG - MHA	Sniper Rifle Bolt Action (7.62x51mm) with Telescopic Day and Night sight	6	28-Aug-18

3.1 Current Status

The Ministry of Defence (MoD) has considered a priority based procurement plan for small arms. The requirements have been prioritised under two major heads

1. Frontline requirement
2. Other than frontline

The immediate focus was to equip the frontline soldiers with the most suitable equipment available today. The small arms specified by the armed forces are not being manufactured in India. It will take a few more years for the public and private companies to setup manufacturing facilities for the newly developed assault rifles, LMGs and carbines, which are in the works. Hence it was deemed necessary to procure through the global route for immediate frontline requirement.

To this effect, Indian army is procuring 72,400 battle rifles produced by US manufacturer SIG Sauer, a New Hampshire based arms company. The deal is worth Rs 700 crore. SIG was the lowest bidder in a six-cornered contest. The entire consignment is manufactured in the USA and being delivered currently. These rifles will be the immediate replacement for INSAS under a fast track procurement programme. SIG 716, the model being procured uses 7.62 x 51mm ammunition.

Similar is the case with CQB carbines. The RFP that was issued, was for the procurement of 93,895 close-quarter-battle carbines (CQB). MoD has shortlisted UAE based Caracal to supply CQB carbines to the Indian Army. The procurement of approximately 6000 sniper rifles is also on track for closure.

The sniper rifle requirement is also being progressed though the global procurement route. However the ammunition for sniper rifles for future requirements will have to be manufactured in India. The thought process is to have an Indian company acquire ToT and manufacture the .338 calibre ammunition in India.

For all non-frontline requirements, the MoD plans to pursue Indian companies to fulfil the requirements either through public or private industry. There is a significant requirement for the non-frontline small arms, which should provide ample opportunity to all companies vying for a share of the small arms pie.

The other major development in the procurement of small arms is the deal being formalised with Russian Kalashnikov for 7,50,000 of AK 203 rifles. A plant in Amethi (in collaboration with OFB) is being setup to start manufacturing the Kalashnikov AK-203 7.62 mm assault rifles. A joint venture, Indo-Russian Rifles Private Limited, has been formed for production of AK 203 assault rifles. The technical deliberations have concluded and the MoD is expected to finalise the commercial terms as well.

4 Policy and Procedures

The Defence procurement process for arms and ammunition has been an uphill task for the Indian Armed Forces. While we have seen success in many other areas like Armoured Fighting Vehicle (AVF), Missiles etc. in terms of indigenous design, development, and manufacturing, we are still failing to fulfil basic requirements of small arms and ammunition inventory. Today almost the entire burden lies with the Ordnance Factory Board in terms of indigenous supply for arms, ammunition and artillery. While MoD has taken several steps to open this sector to private industry in the recent past, there are still many hurdles left to cross.

4.1 DPP and DPM

The procurement of ammunitions and armaments, like everything else in Defence sector, follows the procedures laid out in the DPP 2016 and DPM 2009. Through the DPP 2016, the GoI has made amendments to accelerate decision-making, simplify contractual and financial provisions, and establish a level playing field for the public and private players. With the introduction of Indigenous Design Development and Manufacture (IDDM) and enhancements to the MAKE categories, MoD has provided the right thrust to the private sector.

4.2 Industrial Licence

The licencing is governed by two major documents which are The Arms Act 1959 and the Arms Rules 2016. The Arms Rules is a comprehensive document on pre-requisites and requirements for the manufacturing of arms and ammunitions in India.

The licencing policies are managed by the Ministry of Home Affairs (MHA) and Department for Promotion of Industry and Internal Trade (DPIIT). Earlier, the onus was on DPIIT to grant Industrial License for all defence items requiring license, it was MHA which gave the security clearance. During 2017, MHA took entire ownership of licensing, which again reverted certain responsibilities to DPIIT. With regards to arms and ammunition licence, all small arms and ammunition of calibre less than 12.7mm, will have to obtain IL from MHA and all arms and ammunition 12.7mm or greater will have to obtain IL from DPIIT. This has created a lot of confusion within the industry as to which is the rightful agency to approach for any clarifications and guidance. We need a streamlined policy and a single agency to interface with the industry and external vendors to make headway in this regard.

In a substantial step forward, MHA has amended the Arms Rules, 2016 (hereinafter referred to as the "Parent Rules") vide notification G.S.R. 1342(E) dated October 27, 2017, and has subsequently brought into force the Arms (Amendment) Rules, 2017 (hereinafter referred to as the "Amendment Rules"). The Amendment Rules have been liberalised to boost "Make in India" manufacturing policy of the Government as well as to promote employment generation in the field of manufacturing of arms and ammunition.

The significant amendments are

1. **Validity of Licence:** Licence will now be valid for lifetime
2. **Approval:** No prior approval from MHA for supplying small arms and light weapons to Central Government or State Governments
3. **Capacity:** enhancement of capacity up to 15 percent of the quantity approved under licence will not require any further approval by the Government.
4. **Licence fee:** This has been reduced significantly. Earlier the licence fee was Rs. 500/- per firearm which added up to very large sums and was a deterrent to seeking manufacturing licenses. The licence fee will now range from Rs. 5,000/- to the maximum of Rs. 50,000/-.

a. **The fee for manufacturing licence** shall be payable at the time of grant of license rather than at the time of application.

5. **Applicability:** Single manufacturing licence will be allowed for a multi-unit facility within the same State or in different States within the country.

4.3 FDI Policy

FDI policy applies to any organization that is looking for establishment of branch office, liaison office, project office or any other place of business in India. If the principal business of the applicant is Defence, approval of Reserve Bank of India is not required in cases where Government approval or license/permission by the concerned Ministry/Regulator has already been granted.

In May 2001, the Defence Industry sector, which was hitherto reserved for the public sector, was opened for Indian private sector participation, with Foreign Direct Investment (FDI) up to 26 percent, both subject to licensing. Recently, Department of Industrial Policy & Promotion - Ministry of Commerce & Industry vide Press Note No. 5 (2016 Series), has allowed 100 percent FDI. As per the extant FDI policy, foreign investment of up to 49 percent is permitted under automatic

route, and above 49 percent through government approval wherever it is likely to result in access to modern technology or for other reasons to be recorded.

The latest release in August 2017 of the FDI policy allows the following investment in Defence sector

- 49 percent is automatic approval
- 50 -100 percent allowed with Government approval

Other Conditions[3] as per the most recent press note are as follows:

- Infusion of fresh foreign investment within the permitted automatic route level, in a company not seeking industrial license, resulting in change in the ownership pattern or transfer of stake by existing investor to new foreign investor, will require Government approval.
- Licence applications will be considered and licences given by the Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, in consultation with Ministry of Defence and Ministry of External Affairs.
- Foreign investment in the sector is subject to security clearance and guidelines of the MoD.
- Investee company should be structured to be self-sufficient in areas of product design and development. The investee/joint venture company along with manufacturing facility, should also have maintenance and life cycle support facility of the product being manufactured in India.

Key enablers of the FDI policy

- 100 percent FDI in defence sector; FDI upto 49 percent under Automatic route
- Requirement of single largest Indian ownership of 51 percent of equity is removed
- 03 years of lock in period for equity transfer has been abolished

FDI in defence sector is also subject to industrial license under the Industries (Development & Regulation) Act, 1951 and the Arms Act 1959 for manufacturing of arms and ammunition.

4.4 SCOMET and Export Clearance

"Special Chemicals, Organism, Materials, Equipment and Technologies (SCOMET)"

SCOMET is the nomenclature for dual use items of Special Chemicals, Organisms, Materials, Equipment and Technologies (SCOMET). Export of dual-use items and technologies under India's Foreign Trade Policy is regulated. It is either prohibited or is permitted under an Authorisation.

The SCOMET list of items was notified under Section 5 and Section 14 A of the Foreign Trade

[3] *http://dipp.nic.in/sites/default/files/CFPC_2017_FINAL_RELEASED_28.8.17.pdf*

Development and Regulation (FTDR) Act of 1992. In 2010, the FTDR Act of 1992 was amended and a new Chapter IV A was introduced.

India is a signatory to the major multilateral export control regimes, namely, Missile Technology Control Regime (MTCR), Wassenaar Arrangement (WA) and Australia Group (AG) and is in compliance with the Nuclear Supply Group (NSG). India is also a signatory to international conventions on non-proliferation, namely, Chemical Weapons Convention (CWC) and Biological and Toxic Weapons Convention (BWC). Accordingly, the SCOMET control list is aligned to the control lists of the all the multilateral export control regimes and conventions.

Standard Operating Procedure (SOP) for issue of No Objection Certificate (NOC) for Export of Military Stores by Public as well as Private Sector Units was published on 13th March 2015.

Ministry of Defence, Department of Defence Production (DDP) is the competent authority to issue "Authorization" for the export of munitions list items i.e. Items mentioned in category 6 of SCOMET List notified by DGFT vide Notification No. 05/2015-2020, dated 24.04.2017 and for the export of items specifically designed for military purposes.

The following time frame is followed while issuing authorization for export of munitions list items:

1. 04 weeks for the items contained in Appendix-II of SOP and
2. 02 weeks for the items other than in Appendix-II of SOP.

Both DGFT and DDP have adopted online application process for obtaining defence export NOC.



5 Defence Research and Development Organisation (DRDO)

The Armament Research & Development Establishment (ARDE) is DRDO's primary lab for research, design and development in the field of conventional armaments for Defence Services. ARDE has expertise in the area of development of small arms, artillery guns, rocket systems, air-delivered munitions and warheads. ARDE has established advanced infrastructural facilities and required technologies for design and development of arms and artillery.

ARDE Developed Weapons

- 7.62 mm Ishapore Self-Loading Rifle (SLR)
- Indian Small Arms System (INSAS) - 5.56 x 45 mm calibre consisting of Rifle and LMG
- 40mm Under Barrel Grenade Launcher (UBGL) for INSAS and AK-47

ARDE Weapons in Development

- A Multi calibre weapon (MCIWS) has been developed through which ammunition of various calibres like 5.56x45mm (INSAS), 7.62x39 mm (AK-47) and newly developed 6.8x43 mm can be fired by changing the Barrel Assembly to meet various tactical requirements of ranges from 100 to 700m.
- Joint Venture Protective Carbine (JVPC) is a unique calibre weapon for short range operations. Its low recoil provides stabilized firing during rapid firing and can be fired by single hand. It has ambidextrous features for cocking handle and a retractable butt for balanced firing which is most suitable for concealed area operations.
- Corner Shot Weapon System (CSWS) allows its operator to see and attack an armed target, without exposing himself for any counterattack. The weapon is being developed in two variants to accommodate in service 9 mm pistol and 40 mm Under Barrel Grenade Launcher. CSWS is also equipped with day & night camera, invisible lasers, laser aiming device, tactical flashlight, colour LCD monitor and a power source (rechargeable battery).



6 Ordnance Factory Board

Ordnance Factory Board (OFB) is a conglomerate of 41 Ordnance Factories (OF), 9 Training Institutes, 3 Regional Marketing Centres and 4 Regional Controller of Safety which functions under the Department of Defence Production.

Indian Ordnance Factories are the oldest and largest defence industrial setup. The Ordnance Factories form an integrated base for indigenous production of defence hardware and equipment, with the primary objective of self-reliance in equipping the armed forces with state of the art battlefield equipments.

OFB has indigenized a wide range of small and medium calibre firearms over the last few decades. Most of the small arms designed by DRDO have been productionised by OFB. OFBs small arms product list includes but is not restricted to the following,

- Revolver and Pistols (0.22" and 0.32" calibre)
- Sporting Rifle
- Pump Action Gun
- Sub machine gun carbine 9 x 19mm
- INSAS 5.56 x 45mm rifle and its versions
- EXCALIBUR 5.56 x 45mm rifle



- GHAATAK 7.62 x 39mm rifle
- 40 MM MULTI GRENADE LAUNCHER (MGL)
- Machine Gun (MAG) 7.62 x 51mm

New Developments

Research & Development (R&D) is being cultivated at OFB in a structured manner since 2006 with the establishment of 13 Ordnance Development Centres (ODCs). With the assistance of premier academic institutions like IITs at Mumbai, Kanpur and Kharagpur, to name a few, the Ordnance Factories are not only upgrading existing products but also developing new weapon platforms.

Following products were launched by OFB at DefExpo 2020

- 5.56 x 30mm JVPC Alpha Carbine which is more ergonomically designed weapon
- Belt fed LMG 7.62 x 51mm, this is a gas operated air cooled highly reliable accurate and lethal weapon with a low recoil.
- 7.61 x 51mm Assault Rifle, Rifle Factory Ishapore
- 7.62 x 39mm Carbine, Ordnance Factory Tiruchirapalli
- 5.56 x 45mm Carbine, Small Arms Factory Kanpur
- 8.64 x 74mm Sniper Rifle, Rifle Factory Ishapore



7 Private Industry

To achieve the goal of self-reliance in the Defence sector, continuous efforts are being made to increase indigenization, wherever technologically feasible and economically viable solutions are possible. With the said changes and amendments in various policies, the Indian private industry is keen on supporting the requirement of the Armed forces and the Make in India vision.

Here are some of the companies which have made progress in terms or collaboration and development of small arms in India:

SSS Defence, a new entrant into the defence sector, has built first indigenously designed and developed sniper platforms, chambered for cartridges of two sizes (7.62 x 51mm and .338 diameters). SSS defence has also made an assault rifle (7.62 x 39mm calibre) and a close quarter battle carbine platform. The 7.62 x 51mm sniper has already been trialed by a user in India while the .338 Lapua magnum sniper is expected to commence user trials shortly. Their small arms production facility will be operational by mid 2020, with a manufacturing capacity of 75000 per year.

Adani Defence has entered the small arms industry with the acquisition of a facility in Gwalior (PLR Systems Pvt Ltd) that will produce machine guns, carbines and other weapons. It is a Joint Venture with Israeli manufacturer IWI holding 49% stake and 51% with Adani Defence. The facility is designed to manufacture a range of weapons including Tavor assault rifle, X-95 Assault rifle, Galil sniper rifle, Negev LMGs and Uzi sub machine guns. The first set of Indian manufactured X-95 rifles were rolled out by the facility in October 2018.

MKU and EDIC Caracal signed a MoU for strategic co-operation for manufacture of the advanced CAR 817 AR rifles in India during DefExpo 2018. MKU had also signed two MoUs with Thales for strategic co-operation in the development and production of optronic devices and F90 close quarter battle (CQB) rifle in April 2018. MKU is also strongly focused on electro optics (rifle

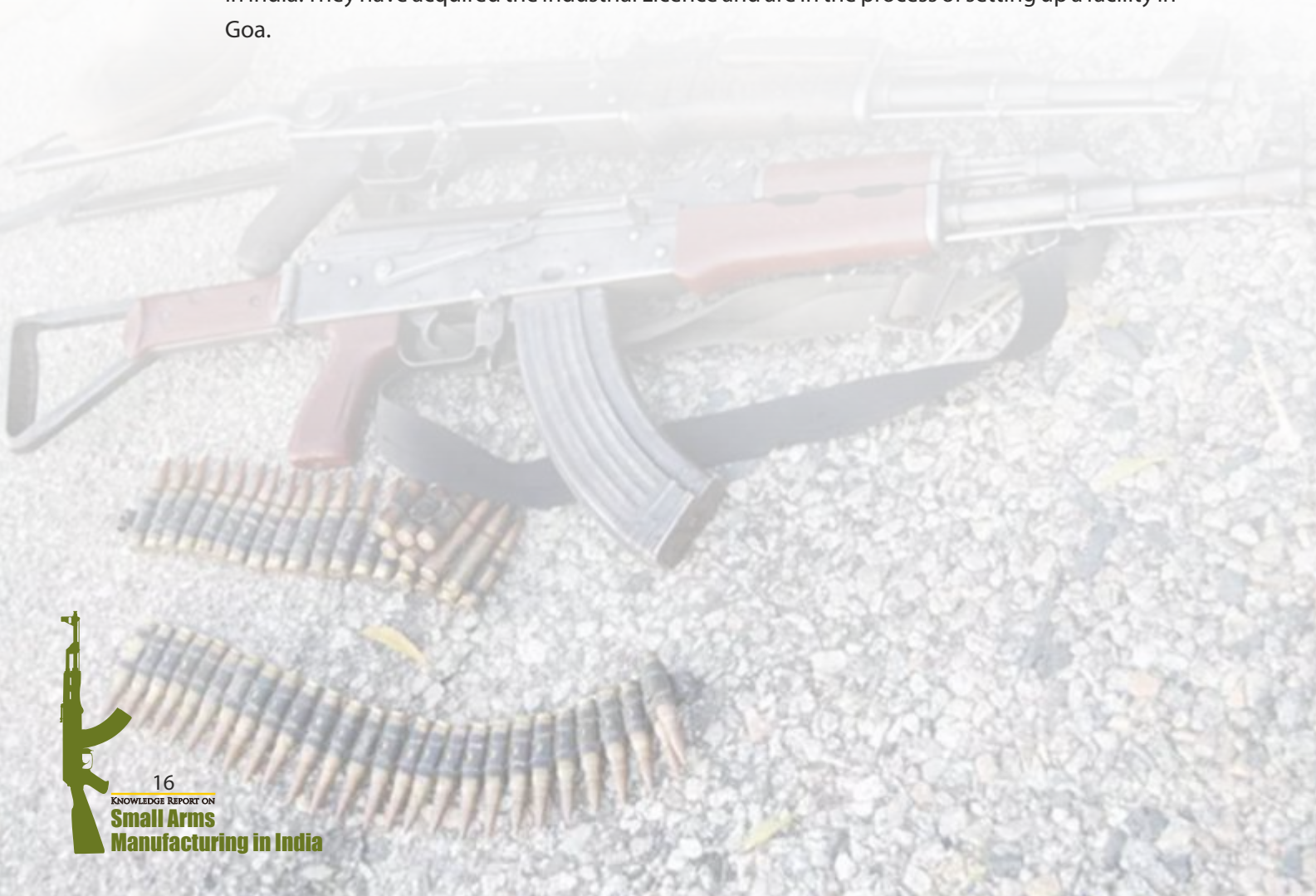
telescopes, night vision equipment and thermal imagers) with investment in technology and manpower.

Zen Technologies is entering the small arms sector with the development of a corner shot weapon system, called ShootEdge. ShootEdge facilitates shooting around corners, over the top or over the wall, without exposing the soldier. It can be fitted with a Glock 17, Glock 19 or 9mm Browning. The ShootEdge mounts a high-resolution low light IR camera, an IR illuminator, a red dot laser and a tactical torch light.

Delhi-based **Jindal Defence**, part of O P Jindal Group, has announced its foray into small arms manufacturing in India via a joint venture (JV) agreement with Taurus Armas S.A., of Brazil. With an initial investment of $5 million in a project that is to be developed in phases, the agreement proposes setting up a plant at Hisar (Haryana). The venture has equity participation from Jindal Defence and Taurus Armas S.A, in the equity ratio of 51:49.

Indo-MIM is a strategic small arms component manufacturer, using metal injection molding technologies. They are critical component supplier to all the OFBs manufacturing small arms. They also have a large global presence of small arms component exports.

Counter Measures is a Chennai based company which is venturing to make Glock 9mm pistols in India. They have acquired the Industrial Licence and are in the process of setting up a facility in Goa.



8 Way Forward

We have seen a lot enthusiasm from the industry in the arms and ammunition space for the last couple of years. MoD has been stating the need for private industry participation to fulfil the requirements of the Armed forces. We need to capitalise on this fervour before interest wanes from the Indian industry.

End users and MoD must believe in Indian designed and made products. There are firms in India (besides the DPSU, OFB) that can offer competitive designs and weaponry that is state of the art. Handholding the Private Sector will enable our armed forces to have a global standard weapon in a short time period.

Recommendations

MoD

- **Aggregation of demand:** Requirements of all armed forces including paramilitary forces should be aggregated for each weapon type so as to have a standard weapon for a specific operational requirement. This would also enhance the buying power of the MoD as the quantity would be significant compared to decentralised purchase orders.
- **Reduce procurement lead times:** Multiple RFIs and RFPs have been issued in the past with no result in the arms and ammunition category.
- **RFI Specification:** Tenders and Bids do have an RFI stage but the RFI should be used to agglomerate information on what are the key features of weapons. The user should as much as possible lay down performance parameters, test protocols to be matched and weapon capabilities instead of suggesting technical and/or production requirements. The user agency should focus on assigning compliance with test protocols - accuracy, reliability, ruggedization etc.
- **RFP must outline complete roadmap**: While issuing RFPs exclusive to private industry, it would be beneficial for a complete roadmap for a small arms RFP to be outlined, one with hand-holding and guidance to the private industry from the GoI (including agencies like the DGQA, the end user and DRDO).
- **Long-term covenant**: Should be part of any proposal for small arms manufacturing, once an order is placed on a company then for next 10 years, they would be the source for that

product (in order to get ROI on infrastructure investment).

- **Ease of Doing Business**: Support Indian OEM's with more easier to adhere processes. For example, any testing in the production facility will require the use of either Indian made or imported ammunition. If the MoD could enable Indian OEMs to acquire ammunition cartridges from the OFB and/or facilitate import ammunition simply by issuing end user certificates on their name and by simplifying the import licensing process.

Industrial Licence

- Licencing process should be streamlined:
    - DPIIT has an online process for application of Industrial Licence. MHA (which issues licence for small arms and ammunition) should also move to an online process.
    - Documents required need to be clearly stated, since the documents stated on the site and forms do not seem to suffice.
- Establish an Ombudsman for Industrial Licence: Regular feedback mechanism and intimation to the industry on details lacking in their application as well as status.

Private Industry

Lack of design and R&D within the private sector, leaves us dependent on foreign OEMs for ToT. Not withstanding the fact that this sector was not open to the private industry, there needs to be more than just intent from the companies to fructify arms and ammunition manufacturing and address the needs of the Armed Forces.



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About Sugosha Advisory

Sugosha Advisory, is founded on the principle of providing "Value Based Consulting" to our clients, partnering with them, so as to create an impact on their revenue growth. With a team of erudite industry veterans, having deep domain experience in the Aerospace and Defence verticals, Sugosha Advisory specialises in Defence Policies, Procurement Procedures and Offsets. Sugosha Advisory leverages the expertise of the sectoral experts for a comprehensive and a result-oriented approach.

Our other core services include Regulations & Licensing (Industrial, Export and Import), Strategic Business Development, Market Research for defence manufacturing companies.

We at Sugosha, also publish a monthly magazine, DefInsights, featuring news focused on procurement for the Indian Armed Forces. DefInsights, a Sugosha Media presentation, enjoys a circulation of more than 3000 professionals worldwide.



About CENJOWS

CENJOWS was raised at the initiative of Ministry of Defence on 24 Aug 2007 and is registered under 'The Societies Registration Act 1860'. The centre has been set up to:

- Rise above sectoral and departmental legacies, and examine joint warfare and synergy issues in their entirety.
- Provide the much-needed interface between various stakeholders, viz the government, public and private sector, academia, NGOs and civil society.
- Initiate debates and discussions in an independent and unbiased milieu for emergence of best possible alternative.

Mission

To promote Integration as a synergistic enabler for the growth of Integrated National Power and provide alternatives in all dimensions of its applications through focused research and debate.

About FICCI

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies.

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