

GOVERNMENT OF INDIA
MINISTRY OF DEFENCE
DEPARTMENT OF DEFENCE PRODUCTION
LOK SABHA

UNSTARRED QUESTION NO.5589
TO BE ANSWERED ON THE 7TH APRIL, 2017

MODERNISATION OF ORDNANCE FACTORIES

5589. SHRI VENKATESH BABU T.G.:

Will the Minister of DEFENCE please be pleased to state:

- (a) whether the Government has any proposal to modernise ordnance factories across the country through introduction of state-of-the-art-technologies;
- (b) if so, the details thereof, unit-wise and the amount allocated for the purpose;
- (c) the time by which the above proposal is likely to be implemented; and
- (d) the extent to which modernisation would help in cost cutting and reducing imports and indigenization?

A N S W E R

MINISTER OF STATE
IN THE MINISTRY OF DEFENCE

(DR. SUBHASH BHAMRE)

रक्षा राज्य मंत्री

(डा. सुभाष भामरे)

(a) to (c): Modernisation is an ongoing process. Investment made towards modernization during 2012-17 (XIIth Plan period) and the capital investment planned for 2018-22 are given in Annexure 'A'.

(d) Modernization helps in reduction of costs as well as import substitution.

**ANNEXURE 'A' REFERRED IN THE REPLY GIVEN IN PARTS (a) TO (c) OF
LOK SABHA UNSTARRED QUESTION NO. 5589 FOR ANSWER ON 7.4.2017**

Modernization of Ordnance Factories is undertaken under the following three major categories:

- **Renewal & Replacement (RR):** For replacement /reconditioning of outlived P&M to sustain the original capacity.
- **New Capital (NC):** Acquisition of modern technology/ manufacturing processes for capacity augmentation of existing product mix or creation of capacity for new product.
- **Civil Infrastructure:** Civil Infrastructure and services viz. Production & Services of buildings, Power supply, Water supply, Compressed Air supply etc.

Thrust areas for modernization are:

Chemical Process Plants	Small Arms and Ammunition production	Ammunition Filling & Assy
Latest technologies for Safety, Productivity Programmable Logic Control (PLC) based modern and remote control systems In-built provision for Spent Acid concentration and recycling Pollution free effluents.	Multi-Station Transfer Presses for higher yield Integrated Plants Automatic Packing	Automatic Screw/Pour Filling Automatic Detonator Filling Automatic Explosive Pellet Pressing & Composition Making Automated Ammn Assy. Plant
Foundry & Extrusion	Metal Forming, Machining & Fabrication	Quality Control & Assurance
<u>Ferrous Alloys:</u> Energy-Efficient Melting & Holding Furnaces Ladle Furnace Vacuum De-gassing (LFVD)ESR Plant. <u>Non-Ferrous Alloys:</u> Energy-Efficient Melting & Holding Furnaces Direct Chilled Semi-Continuous Casting (Al.) Continuous Casting (Brass Coils) Direct & Indirect Oil Hydraulic Presses with PLC controls and automation.	Modern Forging Plants with robotic manipulators Energy Efficient Single & Double-Action Presses with modern Hydraulic & PLC systems CNC Turning and Machining Centers Auto-Loading / Unloading Robotic Welding Laser, Plasma & Water-Jet Cutting	Networked Quality Database Management System (NQDMS)3D Coordinate Measuring Machines (CMM)On-line Gauging & Off-Line Multi-Gauging (for SQC) Spectrometers with CCD & PMT technologies Laser Marking Real time Radiography

<u>Troop Comfort Items:</u>		
Integrated automatic plants.		

Capacity creation/augmentation:

- i) During XI plan period, OFB has executed projects for creation of capacity for the following:
- MBT Arjun @ 30 p.a.
 - Tank T 90 @100 p.a.
 - PINAKA rocket @ 1000 nos. p.a.
- ii) Following major Augmentation projects have been undertaken:

(Rs. in Crores)

1	Production of 50 nos. of T-72 Variants.	280
2	Aug. of Prodn. Cap. of Engines to 750 Nos.	351
3	Aug. of Spares Capacity for OH of T-72, T-90 Tanks.	368
4	T-90 (OE) Tanks from 100 to 140 Nos.	971
5	Large Caliber Weapons.	376
6	Pinaka Rocket @ 5000 p.a.	1263
7	Akash Booster & Sustainer.	106
8	125mm FSAPDS.	484

- iii) Investment on modernization:

- 1) The expenditure incurred on Modernisation during XIth Plan was as under:

(Rs. in Crores)

RR	P&M (NC)	Capital CW	Total
1259.87	879.85	787.07	2926.79

- 2) Capital investment during XIIth Plan:

(Rs.in Crores)

	2012-13	2013-14	2014-15	2015-16	2016-17 MA Projection	XII Plan Total
RR (including RR Cap)	415.85	697.00	441.78	385.73	450.00	2390.36
P&M (NC)	90.42	239.00	485.66	312.30	363.83	1491.21
Capital CW	265.22	220.00	300.61	339.52	340.45	1465.8
Total:	771.49	1156	1228.05	1037.55	1154.28	5347.37

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(3) Capital investment planned for modernization during next 5 yrs.

(Rs. in Crores)

Proposed investment	2017-18	2018-19	2019-20	2020-21	2021-22	Total
RR(including RR cap)	475.00	450.00	450.00	450.00	450.00	2275.00
NC	1041.67	981.00	1352.00	738.00	186.00	4298.67
Civil Works	500.00	554.00	602.00	647.00	523.00	2826.00
Total	2016.67	1985.00	2404.00	1835.00	1159.00	9399.67

(4) Factory-wise amount allotted for modernisation during 2016-17 are as under:-

(Rs. in Crores)

Fy	RR	NC	CW
Metal and Steel Factory, Ishapore	15.42	24.52	1.30
Grey Iron Foundry, Jabalpur	1.65	0.00	0.00
Ordnance Factory Ambernath	7.75	0.92	0.39
Ordnance Factory Katni	1.84	0.00	0.00
Ordnance Factory Bhusawal	7.93	6.35	25.40
Machine Tool Prototype Factory, Ambernath	0.37	2.36	0.27
Ordnance Factory Ambajhari, Nagpur	82.83	23.08	57.52
Heavy Alloy Penetrator Project, Tiruchirapalli	4.03	17.14	4.02
M&C (Total)	121.81	74.37	88.90
Gun Carriage Factory Jabalpur	47.30	3.17	0.71
Rifle Factory Ishapore	18.24	4.40	0.02
Gun and Shell Factory Cossipore	26.15	0.00	0.53
Ordnance Factory Kanpur	22.56	54.52	3.23
Small Arm Factory Kanpur	10.25	0.12	0.03
Ordnance Factory Dum Dum	3.02	4.29	0.00
Ordnance Factory Tiruchirapalli	7.10	4.00	0.00
Vehicle Factory Jabalpur	1.52	0.02	1.09
Field Gun Factory Kanpur	40.16	41.57	0.40
Ordnance Factory Project Korwa	0.00	4.50	15.52
Weapon Vehicle & Equipment (Total)	176.31	116.60	21.53
Ammunition Factory Khadki	14.71	2.36	0.52
Cordite Factory Aruvankadu	1.14	1.61	0.91

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High Explosive Factory, Khadki	0.93	16.85	0.02
Ordnance Factory Khamaria	6.62	5.82	4.33
Ordnance Factory Bhandara	8.25	2.79	3.98
Ordnance Factory Varangaon	5.36	4.24	0.52
Ordnance Factory Chandrapur	3.27	18.46	40.54
Ordnance Factory Bolangir	1.82	5.27	2.88
Ordnance Factory Itarsi	2.46	21.02	34.36
Ordnance Factory Dehuroad	1.45	0.60	0.15
Ordnance Factory Nalanda	0.36	16.31	0.78
Ammunition & Explosive (Total)	46.36	95.34	89.00

(Rs. in Crores)

Factory	RR	NC	CW
Heavy Vehicle Factory, Avadi	24.55	66.86	8.10
Ordnance Factory Medak	29.71	10.15	0.27
Engine Factory Avadi	4.75	19.33	1.02
Ordnance Cable Factory Chandigarh	0.48	0.00	0.23
Ordnance Factory Dehradun	8.44	1.80	0.64
Ordnance Factory Muradnagar	4.23	0.03	0.41
Opto Electronic Factory Dehradun	15.79	1.39	0.00
Armoured Vehicle (Total)	87.95	99.56	10.68
Ordnance Equipment Factory Kanpur	0.80	0.70	0.00
Ordnance Clothing Factory Shahjahanpur	15.71	0.00	0.20
Ordnance Parachute Factory Kanpur	0.40	0.80	0.00
Ordnance Clothing Factory Avadi	0.54	1.50	0.31
Ordnance Equipment Factory Hazratpur	0.05	0.08	0.25
Ordnance Equipment Factory (Total)	17.50	3.09	0.76
National Academy of Defence Production	0.08		
Military Engineering Service	-		127.50
Ordnance Factory Board Total	450.00	388.94	338.37
