

COMPILATION TEAM OF YEAR BOOK 2013-14

1. **Mr.Ehsanur Rahim**
Joint Secretary (Admin)



2. **Mr. Rizwan Ahmed Sheikh**
Deputy Secretary (Coord)



3. **Muhammad Munir**
Section Officer (Coord)



4. **Mr.Tamour Khan**
Composer/Steno





MESSAGE FROM THE MINISTER FOR DEFENCE PRODUCTION

To express my thoughts in the Year Book (2013-14) of the Ministry of Defence Production bestows me with immense pleasure. This book will serve as authentic and useful source of information regarding the activities and accomplishments of the Ministry and its constituent organizations with specific reference to Ministry's Mission Statement.

I am quite confident that Ministry of Defence Production ever loyal to its Mission Statement is constantly and positively moving forward in meeting the demands of its armed forces through indigenous production, local and foreign procurements as well as export of surplus products to friendly countries. Ministry of Defence Production is committed to develop and implement pragmatic policies in promoting sustainable defence production resulting in economic growth through transparent and efficient financial management of public resources.

Being in a Government with a vision and mission, let me also explicitly convey that we are committed to make Pakistan a peaceful and prosperous country. In this regard every support to Pakistan's Armed Forces is our priority. Pakistan is presently entangled by multifarious problems like internal and external threats, terrorism, energy crisis, delicate law and order situation, economic issues, etc. But these impediments do not defer us in applying our zeal, enthusiasm and honest commitment to achieve self-reliance in defence production. We are proud to have all these. Only patience is required to pull Pakistan out of such unprecedented problems.

At the end, I congratulate and appreciate all those officers and staff who have contributed in the compilation of this book.

Rana Tanveer Hussain
Federal Minister for Defence Production
Government of Pakistan

Rawalpindi



FOREWORD

It is a matter of great pleasure for me to present the Year Book 2013-14 of Ministry of Defence Production, in pursuance of sub-rule (2) of Rules of Business, 1973. It includes brief introduction of the Ministry, as well as its function and performance during the year. The Ministry of Defence Production geared itself to meet the requirements of Armed Forces within available sources.

The primary purpose of the book is to highlight activities undertaken by Ministry of Defence Production and its constituent organizations during the year under review with reference to the Division's mission statement. The Year Book elaborates functions, organizational structure, areas of responsibilities, working setup and chain of command of Defence Production Division which is reflected in the activities and accomplishments during fiscal year 2013-14.

Ministry of Defence Production is primarily responsible to meet the requirements of armed forces through procurement (local and foreign) as well as through indigenous production. It is also the responsibility of MoDP to export surplus products to friendly countries. MoDP comprises of Pakistan Ordnance Factories (POFs), Heavy Industries Taxila (HIT), Pakistan Aeronautical Complex (PAC), Karachi Shipyard and Engineering Works (KS & EW), R & D Establishments, Directorate General Defence Purchase (DGDP), Defence Export Promotion Organization (DEPO) and National Radio Telecommunication Corporation (NRTC).

Out of these Defence Production Establishments, POFs caters for need of small arms and ammunition of all types for our three services. HIT and PAC are dedicated to maintain the cutting edge of our Pak Army and Pakistan Air Force respectively. KS & EW has been designed and built to undertake construction & repair of small to medium size ships and submarine and engineering activities. NRTC is a high tech industry engaged in manufacturing of telecommunication and security related equipment in Pakistan.

DGDP, an important segment of the Ministry, ensures efficient supply chain management. It is successfully engaged in centralized, cost controlled and quality procurement for the three services. DGMP is organized on a tri services basis and has three Directorates dealing with Army, Navy and PAF R & D projects. DEPO is primarily responsible for conducting biennial Defence Exhibition, i.e., International Defence Exhibition and Seminar (IDEAS) at Pakistan and promotion of defence exports.

The Year Book highlights the main achievements of Defence Production Division as a whole and also individually of its attached departments and organizations in their concerned operational and policy areas.

I acknowledge and appreciate the efforts of the concerned officer and staff of the Ministry in the compilation of the Year Book.



It is my fervent hope that this compendium would be useful as a reference document.

Lt Gen (R)
Tanvir Tahir, HI(M)
Secretary Ministry of Defence Production

Rawalpindi

HEADS OF MINISTRY OF DEFENCE PRODUCTION

Sr. No	Name	From	To	
1.	Mir Hazar Khan Bijarani	Nov'91	Apr'93	
2.	Mr. Aftab Ahmed Khan Sherpao	Apr'93	May'93	
3.	Lt Gen Rahm Dil Bhatti (Retd)	Aug'93	Sept'93	
4.	Mr. Ellahi Bux Soomro	Jun'93	July'93	
5.	Maj HabibUllah Waraich (Retd)	Dec'02	Nov'07	
6.	Syed Salim Abbas Gillani	Nov'07	Mar'08	
7.	Rana Tanveer Hussain	Mar'08	May'08	
8.	Mr. Abdul Qayyum Khan Jatoi	Nov'08	Oct'10	
9.	Makhdoom Shabuddin	Dec'10	Feb'11	
10.	Mian Manzoor Wattoo	Mar'11	May'11	
11.	Ch. Pervez Ellahi	May'11	June'12	

12.	Sardar Bahadur Ahmed Khan Sehar	June'12	Mar'13	
13.	Rana Tanveer Hussain	June'13	to-date	



*Ministry
Of
Defence Production
(MoDP)*

MINISTRY OF DEFENCE PRODUCTION



INTRODUCTION:

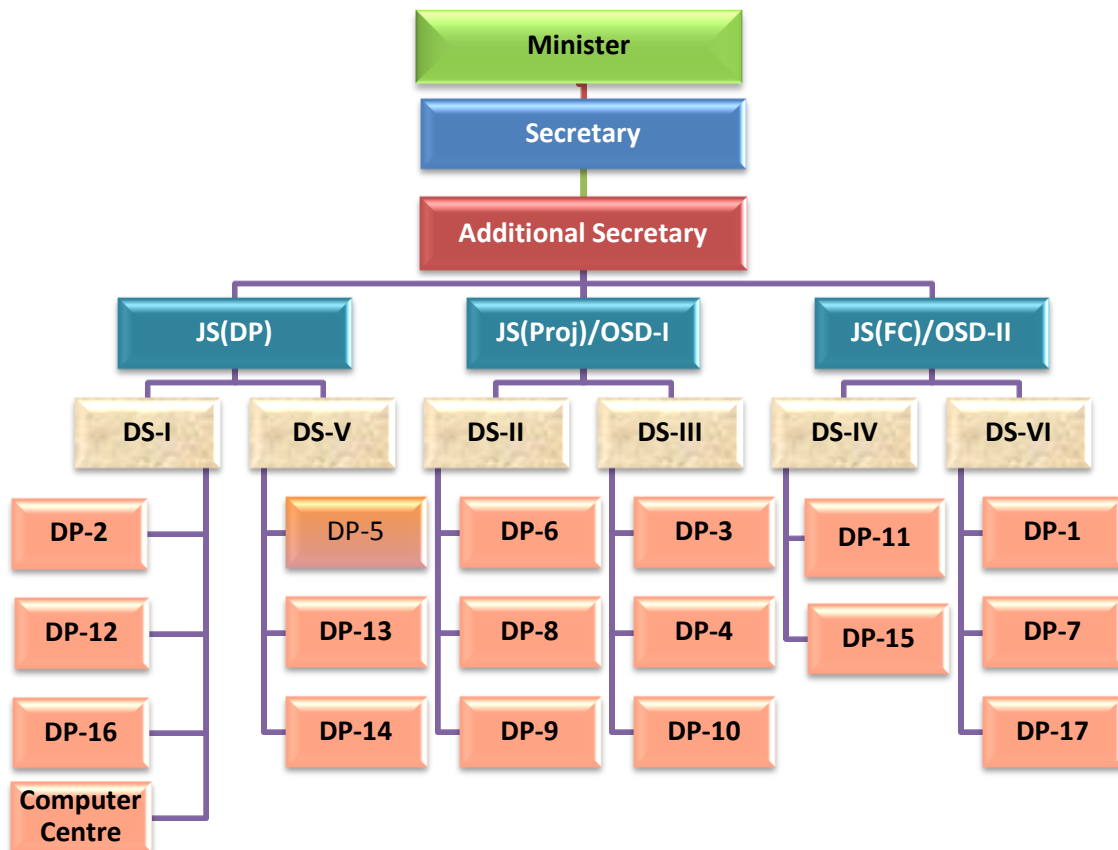
After 1971 war it was decided to initiate a programme of relatively greater self-reliance and in pursuance Defence Production Division was created in 1972. The mandate given to this Division was to lay-down policy, formulate plans, coordinates between procurement and developmental activities and to accelerate the pace of technological development to achieve greater self-reliance through indigenization. In 2004, the Division was re-designated as Ministry of Defence Production.

The Division has been headed by the following notables:

S.No	Name	From	To
1.	Mr. Abdul Hamid SQA, TPK	22-07-1972	30-11-1973
2.	Mr. Masood Hasan	30-11-1973	01-12-1977
3.	Mr. Tariq Mustafa, Addl Secy Incharge	01-12-1977	19-04-1981
4.	Vice Admiral Ahmed Zamir, HI(M), SJ	19-04-1981	28-08-1982
5.	Mr. Abdul Majid Mufti	29-08-1982	16-07-1985

6.	Maj Gen (R) Anwar Masood, A/Secretary Incharge	01-08-1985	22-02-1986
7.	Mr. Tariq Mustafa, Addl Secy Incharge	23-02-1986	12-04-1986
8.	Mr. Tariq Mustafa	13-04-1986	26-06-1988
9.	Lt Gen (R) Talat Masood, HI(M), S Bt.	26-06-1988	11-10-1990
10.	Maj Gen (R) Riaz Ahmed Chaudhari, A/Secretary	12-10-1990	17-12-1990
11.	Dr. Akhtar Hasan Khan	17-12-1990	20-05-1991
12.	Mr. F.I. Malik	21-05-1991	26-12-1992
13.	Mr. Mazahar Rafi	27-12-1992	28-02-1997
14.	Lt Gen (R) Lehasab Khan, HI(M), SJ, SBt.	01-03-1997	28.02.2001
15.	Air Marshall (R) Zahid Anis, Secretary	01-03-2001	28-02-2005
16.	Lt Gen (R) Ali Muhammad Jan Orakzai	01-03-2005	23.05.2006
17.	Lt Gen (R) Shahid Siddiq Tirmizey	09.06.2006	08.06.2009
18.	Lt Gen (R) Israr Ahmed Ghumman	09.06.2009	08.06.2011
19.	Lt Gen (R) Shahid Iqbal	23.06.2011	22.06.2013
20.	Lt Gen (R) Tanvir Tahir	04-07-2013	To Date

ORGANOGRAM



BUSINESS ASSIGNED TO MINISTRY OF DEFENCE PRODUCTION IN RULES OF BUSINESS 1973

- Laying down policies or guidelines on all matters relating to defence production.
- Procurement of arms, firearms, weapons, ammunition, equipment, stores and explosives for the defence forces.
- Declaration of industries necessary for the purpose of defence or for the prosecution of war.
- Research and development of defence equipment and stores.
- Co-ordination of defence science research with civil scientific research organizations.
- Indigenous production and manufacture of defence equipment and stores.
- Negotiations of agreements or MOUs for foreign assistance or collaboration and loans for purchase of military stores and technical know-how or transfer of technology.
- Export of defence products.
- Marketing and promotion of export of defence products.
- Co-ordinate production activities of all defence production organizations or establishments.

To achieve this goal, Ministry has assigned following objective for itself:

- To provide base for maximum self-reliance in the production of defence requirements of the three services.
- To accelerate pace of technological development to contemporary levels.
- To identify, integrate and utilize industrial potential available in public and private sector for production and procurement of defence stores and equipment.

- To attain economy of scales through optimum production.

Over the years, the MoDP has worked towards its assigned goal. There is an increased self-reliance in all defence fields. The Armed Forces are not only being supported and kept in a high state of readiness through indigenous means, but defence equipment and munitions is being exported to some of our friendly countries. However still number of defence equipment has to be imported to meet the defence needs. Advancement in defence technology results in obsolescence of defence equipment at a rapid pace and adds burden on the defence budgets. Pakistan, with a weak economy, hardly meets rising defence expenditure. To lessen burden on defence budget, our defence industry has to boost up indigenization process as well to increase export of surplus products. Even our local market has great potential to be an important buyer of products of our defence establishments. The large expenditures that we presently incur on imports need to be instead channeled to expand our domestic manufacturing capabilities. Pakistan defence industry has the necessary capabilities and capacities to manufacture high-tech equipment and components. Purchase of defence equipment from MoDP's defence establishments can promote indigenization, self-reliance and minimize dependence on foreign manufactures accruing substantial savings in foreign exchange. It will also address apprehensions on stoppage of supply from abroad due to foreign government's sanctions and export restrictions.

To further increase the productivity and efficiency of Ministry of Defence Production, many sincere measures have been taken with the grace of Almighty Allah. The focus of all steps was to make best use of all available resources to make Ministry of Defence Production self-sufficient, self-reliant, promote indigenization and enhance our role in the field of defence production. Every effort has been made to tap potential sources which may promote and develop defence production to a level that will greatly contribute in the defence and economy of the country. The Ministry of Defence Production has organized itself to meet the challenges in regional and global environment and to convert them into opportunities.

With this target in view, Federal Minister of the Ministry, Rana Tanveer Hussain took great interest for sale of products of MoDP's Organizations and spoke to political leadership of Federal and provincial governments to give products of MoDP establishments First Right of Refusal under the prevailing rules. As a follow up Chief

Secretaries of the provinces and Gilgit Baltistan were written letter by the Secretary to introduce some specific products of MoDP's establishments with the request to allow price preference, being locally manufactured, and to give First Right of Refusal under the existing government rules.

As a result of these endeavors, positive and encouraging response is forthcoming. Federal and Provincial Law Enforcement Agencies are now evaluating products of MoDP's defence establishments. A handsome orders for purchase of arms/ammunitions has been placed by Ministry of States and Frontier Regions to POFs Wah. Various Jails of Punjab have installed NRTC's Jammers which are working successfully.

The detail of export of defence stores during financial year 2013-14 remained as under:

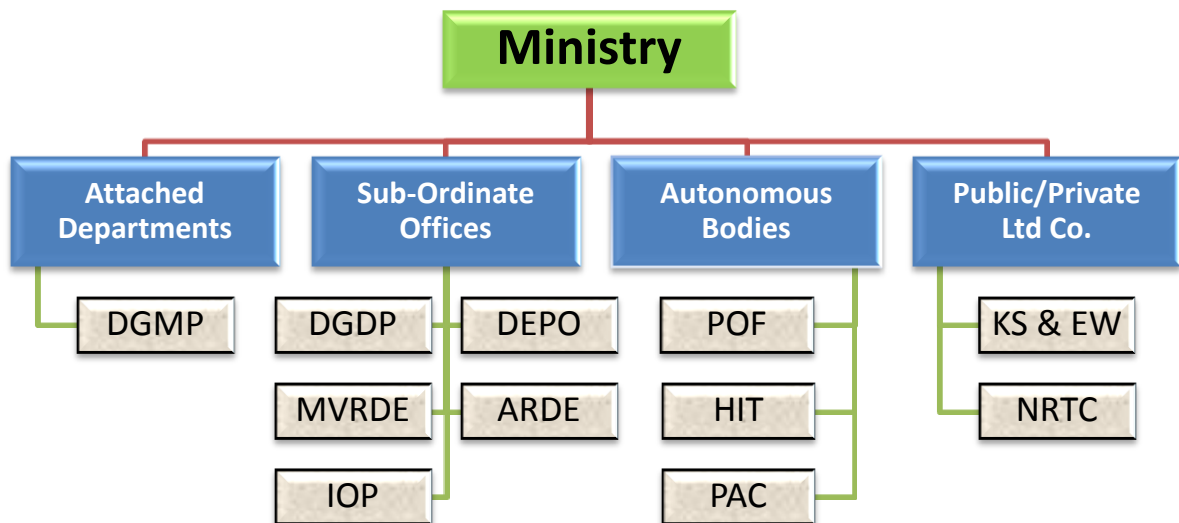
- Public Sector = US \$19.99 (MN) (101.92% Increase over last year)
- Private Sector = US \$6.71 (MN) (57.45% decrease over last year)

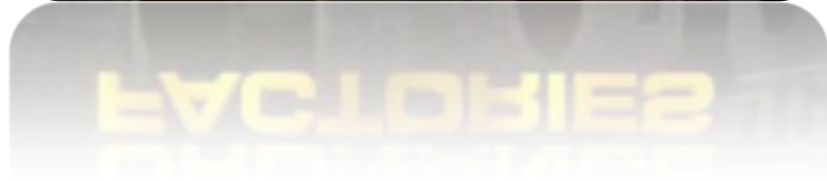
ACTIVITIES DURING FINANCIAL YEAR 2013- 2014

S. No.	Date/Period	Activities
i)	July 2013 to Jan 2014	<ul style="list-style-type: none"> • Federal Minister, Rana Tanveer Hussain after assuming the charge as Federal Minister of Defence Production visited all the Defence Production Establishments and organizations.
ii)	September 2013	<ul style="list-style-type: none"> • Japanese Parliamentary vice Minister called on Secretary Defence Production • Chinese delegation from SASTIND visited MoDP
iii)	October 2013	<ul style="list-style-type: none"> • Japanese Ambassador called on Federal Minister Delegation of Nigeria and Tajikistan called on Additional Secretary.
iv)	November 2013	<ul style="list-style-type: none"> • Secretary of State for Defence of UK called on Federal Minister. • Federal Minister led MoDP delegation to Dubai Air Show. • Performance Review Meeting of All DPEs. • Briefing to UAE Delegation by the Secretary(DP).
v)	December 2013	<ul style="list-style-type: none"> • Federal Minister participated in Bridex-2013, a defence exhibition held in Brunei. • Lebanese Ambassador called on Federal Minister.
vi)	January 2014	<ul style="list-style-type: none"> • Ambassador of Bosnia called on Federal Minister.
vii)	February 2014	<ul style="list-style-type: none"> • Iraqi Defence Delegation visited defence industries of Pakistan and called on Federal Minister. • Meeting of National Assembly Standing Committee on Defence Production in Parliament House.
viii)	March 2014	<ul style="list-style-type: none"> • Korean Ambassador called on Federal Minister. • Federal Minister visited China

ix)	April 2014	<ul style="list-style-type: none"> • Senate Standing Committee on Defence Production visited Karachi Shipyard and Engineering Works Karachi and Romanian Ambassadors had separate calls on Federal Minister. • Federal Minister led MoDP delegation to DSA-2014, a defence exhibition in Malaysia. • National Assembly Standing Committee on Defence Production visited POFs Wah • President ALIT, China called on Federal Minister. • Ambassador of Ukraine called on Federal Minister
x)	May 2014	<ul style="list-style-type: none"> • Federal Minister led MoDP delegation to Black Sea Defense and Aerospace Expo, Romania. • Federal Minister visited Kazakhstan to attend defence exhibition KADEX-2014.
xi)	June 2014	<ul style="list-style-type: none"> • Federal Minister accompanied President of Pakistan to visit Nigeria. • National Assembly Standing Committee meeting in Parliament House.

MINISTRY AND ITS ORGANIZATIONS





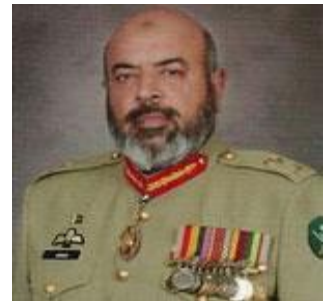
*Pakistan
Ordnance Factories Wah
(POFs)*

PAKISTAN ORDNANCE FACTORIES BOARD WAH



POF Board was constituted under the authority of POF Board Ordinance No. XVII of 1961, as amended. The functions given therein are:-

“The Principal function of the Board shall be to manage and administer the affairs of the factories and to run them on sound commercial lines so as to adequately meet during war and peace the needs of the defence of the country and to utilize the surplus capacity of the factories to meet the needs of the civilian population”.



**Lt Gen Muhammad
Ahsan Mahmood,
HIM,
Chairman POFs
Board Wah**

POF Board has at present following 14 factories and also possesses 100% shares of Wah Industries Ltd., which is a subsidiary and commercial window of POF.

- Medium Artillery Ammunition Factory, WahCantt.
- Heavy Artillery Ammunition Factory, SanjwalCantt.
- Tank/Anti Tank Ammunition Factory, GadwalWahCantt.
- Bombs & Grenade Factory, WahCantt.
- Small Arms Ammunition Factory, WahCantt.
- Weapons Factory, WahCantt.
- Machine Gun Factory, WahCantt.

- Explosives Factory, WahCantt.
- Propellant Factory, HavelianCantt.
- Tungsten Alloy Factory, WahCantt.
- Brass Mill, WahCantt.
- Clothing Factory, WahCantt.
- Filling Factory, WahCantt.
- Carbide Factory, WahCantt.



Range of Products:

Scope of products developed and produced by POF is around 73. Below is a list of these.



➤ **Weapons**

- Rifle G3A3/G3P4 (7.62 mm x 51 Caliber)
- Machine Gun MG3 (7.62 mm x 51 Caliber)
- Sub Machine Gun MP5A2/P3 (9 mm x 19 Caliber)
- SMG PK & PK1
- 12.7mm AA Anti Aircraft Gun
- POF Eye
- SMG PK (7.62X51mm)
- Designated Marks Man Rifle (DMR) (7.62x51mm)



Small Arms Ammunition

- 7.62 mm x 51 Carton Packed
- 7.62 mm x 51 Link Belted
- 7.62 mm Blank
- 9 mm x 19 (1Z & 2Z)
- 7.62 mm x 39mm SMG
- 7.62 mm x 39mm SMG Blank
- 7.62x51mm HMG



➤ Artillery Ammunition:

- 25 Pdr HE & Blank
- 105 mm (HOW), HE Smoke and Blank
- 122 mm HE HOW and 122 mm D30 Ammo
- 122 mm HOW Trg
- 130mm HE Gun Ammo RC & FC
- 155 mm HOW HE M107
- 155mm HOW Trg



➤ Mortar Bombs:

- 60 mm HE & Smoke WP, Illu, Signal (Red & Green)
- 81 mm HE & Smoke WP, Illu
- 60mm Mor Inert
- 81mm Mort Inert
- 120 mm HE & Smoke WP
- 120mm Mor Inert



➤ **Aircraft Bombs, Aircraft & Anti Aircraft Munitions:**

- 500 Lbs – Mk 82 Aircraft Bomb
- 6 Kg Practice Bombs
- 25 Lbs Practice Bombs
- 20mm Phalanx (for Navy)
- 23 mm Ball
- 23mm HEI
- 30mm HEI
- 30 mm API
- 30 mm Ball
- 37 mm Anti Aircraft
- 12.7 mm x 108 API & APIT



➤ **Tank & Anti Tank Ammunition:**

- 125 mm APFSDS
- 125 mm HE TK
- 105 mm APFSDS
- 105 mm HE
- 106 mm RR HEAT/Trg



➤ **Rockets:**

- Rocket Propelled Grenade 40 mm HEAT (RPG-7P)
- 73 mm Recoilless at Grenade (SPG-9P) HEAT
- 73mm SPG-9 HE



➤ **Grenades, Pyrotechniques & Mines:**

- Hand Grenade Arges 84
- Grenade Target Indication, White, Red, Yellow, Green Orange, Blue
- Grenade Hand/Discharger WP P3 Mk-1
- Mine AP Fragmentation (Shrapnel)
- Flare Trip Wire



➤ **Military Explosives & Propellants:**

- Black Powder
- TNT, RDX, Compo B, Tetryl, Nitroguanidine, PETN
- Single, Double and Triple Base Propellants
- Ignition Charges

➤ **Commercial Explosives:**

- Emulsion Explosives, Dynamites
- Powder Explosives
- Blasting Accessories, Safety Fuze Cords
- Detonating Cords
- Detonators (Plain & Electrical)
- Leher Ignition System

➤ **Commercial Products:**

- Brass Rods, Pipes, Plates, Sheets & Extrusions
- Gilding Metal Clad Steel Strips
- Tungsten Carbide Tool Tips, Nibs & dies
- 12 Bore Sporting Ammo
- Chemicals (Polymers)

➤ **Garments:**

- Personal Load Carrying Equipment (PLCE)
- CCD
- Mosquito Nets
- Industrial working dress
- Gowns etc.
- Bullet Proof Jackets

SWOT:

➤ **Strength:**

- Skilled manpower
- Strong internal control system

- International certificates of Quality (ISO 91), Environmental protection (ISO 14000), Laboratory accreditation (ISO 17025), and Occupational health and safety (ISO 18000)
- Diversified products & range
- Quality of products

➤ **Weaknesses:**

- Old technology
- Weak inventory management due to manual accounting
- Lack of professional costing and financial management staff
- High cost of production due to overheads.

➤ **Opportunities:**

- Improved productivity, cost effectiveness and revenue generation through automation, restructuring and quality control.
- Better marketing can result in improved access to international markets.
- Utilization of spare capacity for production of civil products.

➤ **Threats:**

- Sanctions and restrictions on purchase of Raw Materials, machines, spares and replacement plants.
- Reluctance of International OEMs to share high technology
- Non commercial marketing.
- High product cost due to overheads/unutilized capacities.

Financial Highlights:

➤ **Normal Budget (From GoP):**

For the fiscal year 2013-14, against a Budget Estimate (B.E) of Rs. 28,222.366 Million, an annual Budget of Rs. 22,280.266 Million was allocated. POF spent Rs. 1,604.476 Million (upto 05/2014) from its own sources to augment the budgetary deficiencies for procurement of raw materials, stores, plant & machinery required for exports and civil production.

➤ **Deposits with State Bank of Pakistan:**

POF is allowed to retain its export earnings and receipts from commercial sales to meet expenditures in connection with production and promotion of items meant for exports and commercial sales. POF has at present a balance of Rs. 7,619.217

Million in Special Deposit Fund (SDF) of Exports earnings and Rs.1690.429 Million in local currency account of commercial sales (RD&R). (Receipt of Rs 834.001 Million for 07/2014 has also been realized and credited to RD&R head making total balance available Rs 2,533.430 Million after deducting further sub-allocations to PCAs).

Efficient Procurement – 2013 – 14:

The product cost usually contains 60% of material cost as per internationally criteria of planning & procurement of material, therefore, to play a vital role to keep the product cost lowest, an effective planning was made during 2013-14 for procurement of material in POF and as a result of that a saving of Rs.81.854 million was acquired without compromising on quality of the product. The details are as under:-

Budget Head	Department		Total Saving (Rs in million)
	P & S	Sanjwal	
Indigenous	0.724	5.650	6.374
Foreign	74.551	0.929	75.480
Grand Total			81.854

PERFORMANCE OF SERVICES GROUP 2013 - 14:

Services Group is responsible for provision of following centralized services:

- Generation and Distribution of Electricity
- Generation and Distribution of Steam
- Telecommunications, Instrument & Electronics Services.
- Transport Services
- Fire Fighting Services
- Reconditioning Services
- Fabrication & Water Supply
- To keep the machinery in operation by timely repair /maintenance.

Performance of Services Group during 201 3-14 is appended below:

ENERGY CONSERVATION:

With the help of management of production factories a number of energy conservation measures were taken resulting in downward trend of electric. Following measures were taken:

- Load daggering of high elect consuming machines/ plants and toad shedding in estate area for reduction in MD1 (Maximum Demand Indicator @ Rs. 38Q/KW)
- Minimized Utilization of Electric power during WAPDA peak hours by energy management.
- Most of the furnaces were operated at 80% charge & continuously running plants were operated at minimum 80% efficiency.
- Shop/office lights were not un-necessarily switched on.
- Optimum utilization of north lights in shops:
- Controlled leakages of steam, compressed air and water
- Space heating was controlled.
- Tuning of boilers was carried out periodically to run at optimum efficiency
- Operation of 2 boilers on wood scrap / saw dust during winter season.
- Govt Policy was followed regarding utilization of air conditioners.

POWER HOUSE:

➤ **Harnessing Renewable Energies:**

POF has planned for the installation of 05 MW Solar Power plants at POF SANJWAL. In this regard, following steps have been carried out.

- Letter of intent (LOI) issued by AEDB on 22-1-2013 on 17% cost + tariff basis.
- Technical Feasibility Report for IFE submitted to AEDB for 3rd party verification on 22-2-2013. The generation figures have been verified by 3rd party IFE, Germany through AEDB on 14-6-2013.
- Grid Study was sent to IESCO on 05-1-2013 and approved by IESCO on 19-7-2013.
- Environmental Study has been approved by EPA Punjab on 19-3-2013.
- Financial Feasibility is 90% completed.

- Conditional EPC contract has been signed on 28-6-2013 with M/s. HBKCS.
- License Proposed Modification (LPM) in generation license has been submitted to NEPRA on 29-1-2013. Award of generation license is awaited.
- Tariff has been awarded by Nepra on 28-3-2014.
- Issuance of letter of support (LOS) by AEDB.
- LOS will be issued before 15-7-2014.

➤ **JOINT VENTURE FOR 10Q.200MW GAS /COAL RRED POWER PLANT**
 ➤ **INSTALLATION OF 11KV SCADA SYSTEM**

In order to upgrade the electrical load management system of POF Wah, New 11 KV SCADA System is under procurement. Contract No: 0092-DS-LP-Capt-43,dt. 26-5-2014 has been placed with M/s Schneider Electric Pakistan. The project will be completed during current fiscal year.

TRANSPORT:

➤ **OVERHAULING/MAJORREPAIR/DENTINGPAINTING OF VEHICLE:**

- | | | |
|---|---|------|
| • No of vehicles attended for Engine overhauling | - | 27 |
| • No of vehicles attended for major repair work | - | 305 |
| • No of vehicles attended for minor repair work | - | 6928 |
| • No of vehicles attended for Denting/Painting work | - | 09 |
| • Schedule Maintenance of vehicles | - | 1156 |

➤ **Fuel Economy:**

- Combination of moves.
- Conversion & use of vehicles on CNG.
- Curtailment in payment duties.
- Control over misuse of Transport.
- Revision of monthly mileage limits and fixation of fuel limits for all units of POFs.

SAFETY & FIRE FIGHTING ACTIVITIES:

- Safety lectures on different topics were held in every month at FF Lecture Hall.
- Quarterly Accident Data of Services Group was collected.
- Mock exercise was held in every section of Services Group.

- Fire Services provided during the year 2013-14
Minor-117
Major-05
- Rescue Services during the year 2013-14
Minor-01
Major-NIL
- To provide training on Fire Fighting, Fire Prevention, passive Air Defence and Disaster Management to POF Employees.
- Training to POF Employees provided during the year 2013-14.
- First Aid Fire Equipment Training. – 4239

ACCIDENTS:

- Minor - Nil
- Major - Nil

RECONDITIONING SERVICES:

- Following machines were refurbished during 201-14:
 - Heavy Duty Washing Machine- POF Hospital (Qty:01)
 - Tapering Machine SAA (Qty:01)
 - Lathe Machines - Sanjwal& TA Fy (Qty:02)
 - Vertical Milling Machines - Weapons (Qty:02)
 - Hydro Machine - POF Hospital (Qty:01)

MAJOR FABRICATION JOBS CARRIED OUT DURING 2013-14:

- Mfg. of water jacket for Weapon Fy (Qty: 01)
- Repair/Renovation of Cabinet for Fiber optic ODF for Telephone Exchange (Qty: 02)
- Fab of Firing stand for R & D (Qty: 01)
- Fab of Steel gates for Bungalows of Estate Area : (Qty: 03)
- Fab. of main Gate & wicket Gates including hydraulic system for A-40 B.M. (Qty. 1+3 = 4)
- Mfg. of conveyor for HTA furnace for A-40 B.M (Qty: 01)
- Fab. Work of development of scrap management system at Wah Cantt.

- Fab. of Hood for improvement Of exhaust discharge system at Rolling C-03 Brass Mill (Qty: 02)
- Fab. / Installation of National Flag Pole 95' high at Barrier No. 1.
- Fab/Mfg. of steel benches (10 Nos) and dust bins (05 Nos) for POF Sanjwal.
- Fabrication of 50 steel benches for POFIT Hostel, Children Park & Hockey Ground.
- Fab. of mechanical foundation for Kiosk (Qty: 01)
- Fab. / installation of Parking sheds for 100 vehicles in Tpt. C-O6.
- M fg. of sheds 70' x 45' for transformer of E D substation.

Exports:

Due to the fact that global economy is still to recover from the recession of 2008 and overall economic growth remain sluggish throughout these years, the overall business environment for exports of defence products is not so encouraging. However, all out efforts have been made on the part of POF Exports Division to substantially increase the volume of exports. By the grace of Almighty Allah, during the FY 2013-2014, the volume of exports remained at reasonable level against all odds. Following is the breakdown:-

- **Total Value of Contracts = US \$ 22.03 Million**
- **Despatches Made = US \$ 13.355 Million**
- **Orders under Production= US \$ 8.679 Million**

The notable achievement on the part of POF Exports Division is the exploration of new Markets including Morocco, New Zealand, Switzerland and American Civil Market. POF Products have very successfully been promoted in these lucrative markets with great business prospects.

During the Financial year 2013-2014, POF participated as Trade Visitors in the following international defence exhibitions:-

- RAE, Russia

- BRIDEX, Brunei Darussalam
- Defence Fair China

During the Financial year 2013-2014, POF participated in the following international defence exhibitions as exhibitor:-

- DSA, Malaysia
- EUROSATORY, France.

Attendance of POF in these exhibitions remained fruitful in terms of establishment new contracts as well as revival of existing ones which ultimately yielded into number of new inquiries/confirmed orders.

During these exhibitions POF displayed their complete range of products which were appreciated by the visiting delegates especially our new products like Personal Load Carrying Equipment (PLCE) and G3S (short version of G3A3) Rifle and G3-M etc.

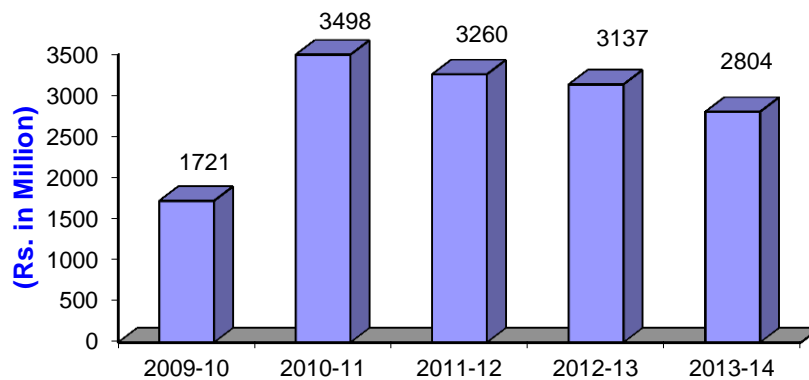
Commercial Production

POF's Subsidiaries:

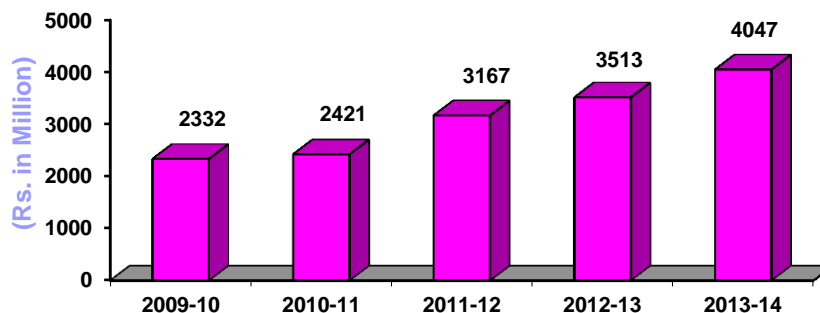
M/s Wah Industries Ltd., (WIL). During the year 2013-14, the country's energy crises, higher inflationary pressures and security situation have adversely affected the over all economy. Besides above, the following factors also adversely affected the sale:-

- Sales of Arms & Ammo to LEAs diverted to POF instead of WIL.
- Ban imposed by Punjab Govt on issuance of Transport Authority to WIL dealers selling 12 Bore Ctg& non-prohibited Bore Ammo.

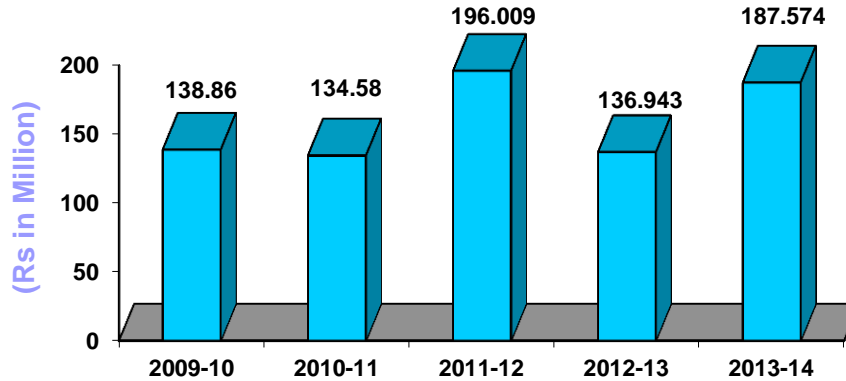
Item	2013-14 (Jul 1–Jun 30) Provisional	2012-13 (Jul 1– Jun 30)	%age Inc/Dec
12 Bore Ctgs	781.895	895.710	-13
Civil Product	1563.904	1666.931	- 6
Clothing Items (PLCE)	16.783	215.727	-92
Disposal	441.894	360.791	-23
Overall Sales	2804.476	3139.159	-11



M/S Wah Nobel (Pvt) Ltd. are a limited company in which M/S Wah Industries Limited (WIL) hold majority share with 51.75% while M/s SAAB of Sweden and Al-Misehal of Saudi Arabia are other shares holders with 27.23 % & 21.02 % shares respectively. Their sales during 2013-14 were Rs. 4047 Million. ***Their sales are 15.20% higher than the 2012-13 (i.e.3513 Million).***



M/S HI-Tech Plastics (Pvt) Ltd. Manufactures various packaging, Containers, Carriers for Ammo and plastic parts of ammos. It has injection, blow molding and extrusion facility. Its annual sales have been presented below in graphical bars. Sales during the financial year 2013-14 low because less order from the buyers were received. However, next year, it is expected the will rise considerably.



Quality Assurance:

QA Dte has the honour of conducting the external and internal audits for obtaining the certification of 21 x Factories / Groups and accreditation of 03 POF Labs as per following details:-

ISO 9001-2008	Pertains to International Quality Standards for Design, Development & Manufacture of Small Arms and Ammunitions etc.
ISO-14001-2004	International Certificate for maintaining ideal Environmental Standards.
OHSAAH-18001-2007	Pertains to occupational Health & Safety Management Systems.
ISO-17025 – 2005	Pertain to the accreditation to Metallurgical Lab, Explosive (Chemical) Lab and Dimensional Metrology Lab.

POF Institute of Technology (POFIT):

POFIT is imparting both Technical & Management Training to workers, Staff and Officers for Human Resource Development. Following training programs were completed during the year 2013-14 and **3679** trainees participated in under mentioned courses. Hence Rs**9.35** Million have been saved and transferred to Govt. treasury.

Sr.#	Training Programme	No. of beneficiaries
1	Orientation Training for newly inducted officer and staff	Officer 28 Staff 88
2	In house In-service Management course for officers with collaboration with PIM Karachi from POFIT earning.	184
3	In service short courses (POF Candidate)	124
4	Short Courses for Private candidate	100
5	Special course for special children (Nashaman)	Nil
6	Artisans Training	185
7	Internship of University Students	524
8	DAE Students	1334
9	Services to WEC Students	986
10	Coaching for & Evaluation of Officers, staff, and Workers for Departmental Promotion Examination. i) Technical = ii) Auxiliary =	HSM - 57 T.O. - 19 Admin - 50
Total:		3679
11.	Amount transfer to RD & R Head i.) DAE earning ii.) Short Courses Charges	Rs. 7.14 Million Rs. 2.21 Million
Total:		9.35 Million



Heavy Industries

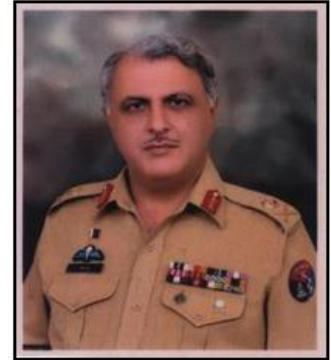
Taxila

(797)

HEAVY INDUSTRIES BOARD TAXILA

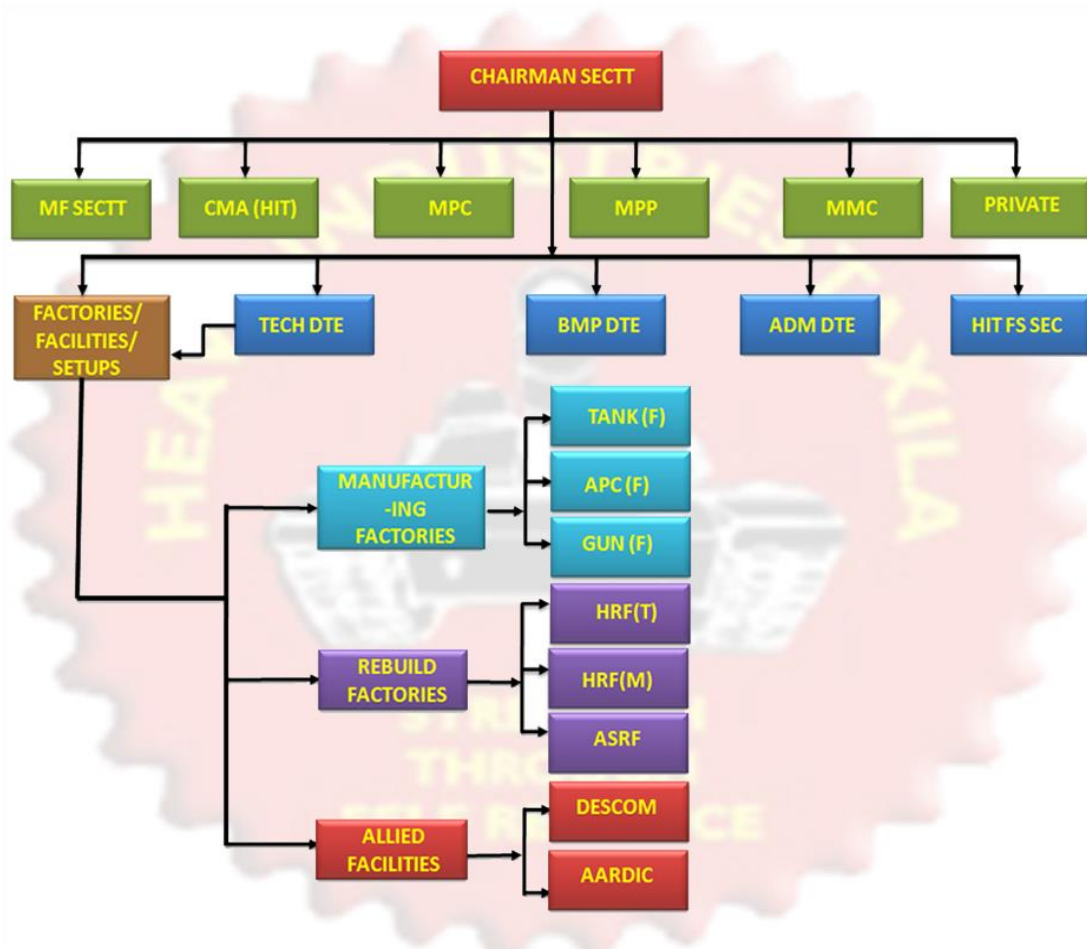
INTRODUCTION:

Heavy Rebuild Factories was initiated in 1971 as the first project. The main objective of the organization was to rebuild T-59 tanks of the Pakistan Army. HRF went into production in 1979 with a capacity to rebuild / base overhaul 200 tanks T-59 per annum and additional 250 engines as per its DP-1 Form. In early 1990s other projects namely, Heavy Rebuild Factory (M Series), Tank Manufacturing Factory, Armoured Personnel Carrier Manufacturing Factory and Gun Manufacturing Factory were established and HRF was renamed as Heavy Industries Taxila. HITB was established in 1994 through a Presidential Ordinance and same was enacted through Parliament as HIT Board Act No. XII of 1997.



**Lt Gen Syed Wajid
Hussain,
Chairman HIT
Board Taxila**

ORGANOGRAM:



ACHIEVEMENTS

DEFENCE

HIT, by the grace of Almighty Allah achieved not only the assigned tasks but also executed various new development concepts in the field of Tanks, Armoured Personnel Carriers (APCs) and Armoured Recovery Vehicles (ARVs), Security vehicles and equipment. All these projects have been accomplished within the stipulated time frame (The production progress during financial year 2013-2014 is as under:

a.	<u>Rebuild / Upgradation Projects</u>	<u>Quantity</u>
(1)	Rebuild/Upgradation of Al Zarrar Tanks	- 20
(2)	Rebuild of Tanks T-59M/ARV W653	- 04
(3)	Rebuild of Tank Engines	- 85
(4)	Rebuild of APCs /Engine	- 51
(6)	FCS/GCS Assemblies/Components	- 188
	Repair/Rebuild	
(7)	Rebuild of 125 mm Tank Gun of T-85IIAP	- 35
b.	<u>Manufacturing Projects</u>	
(1)	Tank Al Khalid	- 15
(2)	Under carriage Tank Al Khalid for AVLB	- 02
(3)	TI Sights Instl (T-69)	- 26
(4)	Tracked BaktarShikan Vehicle (TBSV) - Maaz-	05
(5)	125 mm Tank Gun Barrel	- 16
(6)	125 mm Tank Gun	- 11
(7)	APC M113 P/Talha	- 11

INDIGENIZATION:

All HIT projects are subjected to time based deletion plan through indigenization. This includes manufacture of in-house items and development of parts and components through down stream industry. The achievements for year 2013-14 are as under:-

Ser	Products	No of Varieties of Parts Manufactured	
		In house Manufacturing	Through down stream Industries
a.	Tank Al-Khalid	22	4
b.	Tank Al Zarrar	69	15
c.	Tank T -85IAP	55	59
d.	6-TD-1 Engine Tank T-80UD	2	12
e.	T 59/T69 IIMP	8	-
f.	APC Saad/APC MI13/Talha	105	49
g.	ARV W653/653A	15	4
h.	125 MM Gun	64	-
i.	Security Vehicle Mohafiz	65	-
j.	265/580 / 730 HP tank engines/6TD-1	76	39
k.	SP Gun 109/A2	-	1

COMMERCIAL ACTIVITIES:

HIT is pursuing commercial activities utilizing its surplus capacity for manufacturing of marketable products for export and domestic sales under HIT board Act. (Some of the commercial products manufactured in year 2013-14 are as under):-

<u>Ser</u>	<u>Products</u>	<u>Factory</u>	<u>Quantity</u>
a.	Security Vehicle Mohafiz	APCF/TMF	15
b.	Bullet Proof Jackets (BPJ)	DESCOM	142
c.	Bullet Proof Vests	DESCOM	300
d.	Discrete Armouring of Vehicles	TMF	02

Benefits of Commercial Activities. HIT has significantly contributed in government treasury through exports and domestic sale of APCs, Security equipment/ vehicles and discrete armouring of vehicle. Salient are as under:-

a.	Total sales in FY 2013/14	:	Rs. 659.00 Million
b.	Profit earned for Government	:	Rs. 189.10 Million
c.	Proportionate cost remitted to Government as per rules	:	Rs. 27.05 Million
d.	Remittance under process	:	Rs. 63.50 Million



*Pakistan Aeronautical
Complex Kamra
(PAC)*

PAKISTAN AERONAUTICAL COMPLEX KAMRA



Introduction:

Pakistan Aeronautical Complex Kamra was formed in mid-seventies to basically carry out major maintenance and inspections of various PAF weapon system mainly F-6, Mirage and Mushak Aircraft. Later, in the eighties the same set up was tasked to take care of repair and Rebuild activities. In the mid-nineties, PAC was required to take up the assembly of different aircraft and component repairs. In the beginning of 21st century, PAC has also been tasked to take up the project of JF-17 Thunder manufacturing. The PAC Kamra consist of following four factories:-



**Air Marshal Javid
Ahmed HI(M)
Chairman PAC
Board Kamra**

- Aircraft Rebuild Factory (ARF)
- Mirage Rebuild Factory (MRF)
- Aircraft Manufacturing Factory (AMF)
- Avionics Production Factory (APF)

➤ **Aircraft Rebuild Factory (ARF):**

The period under consideration i.e. FY 2013 - 14 remained quite eventful for ARF as the Factory has successfully undertaken the assigned General Overhaul as well as the

associated tasks to extend assured and sustained support for PAF operations. The details of task accomplishment are as under:-

- GOH aircraft production : 19
- GOH component production : 41,086
- C-130 aircraft propellers overhauled : 11
- Drop tanks repaired/overhauled : 40
- GOH parts manufactured : 2,19,242
- Calibrations/testing of PME/PMIs : 9,037 / 23,469
- Mirage AME Refurbished : 129
- On-site recovery of aircraft at Bases : 107

Indigenization Task Development: A significant number of indigenization tasks were accomplished at ARF. Details are as follows:-

- Development of entre line drop tank trolley JF-17 A/C : 02
- Development of tools GHE/GSE for JF-17 A/C, LPG, DC Generator
DC Generator stand, gun mounting tool : 06
- Development of maintenance plate form A/C ladder for JF-17 A/C : 01
- Modification of drop tank covering panel for JF-17 A/C : 03
- Dev of clearance measuring bars with different gauges for F-7 fleet : 01
- Repair of battery leads for IL-78 A/C : 04
- Serial Production of JF-17 A/C parts (02 sets) : 109
- Teflon seal for Mushshak A/C : 02
- Mod of Hydraulic pipe F-7PG A/C : 01
- Dual Hydraulic jack for F-7 fleet : 01
- Development of locally manufactured parts : 327

Mirage Rebuild Factory (MRF):

MRF was established in 1974 to support the Mirage Fleet of PAF. The aircraft group of MRF carries out overhauling



of Mirage III and V aircraft and their components. It also accomplishes upgrades and modifications on this weapon system. MRF has also accomplished avionics upgrade of Mirage aircraft in collaboration with M/s Sagem of France thus significantly enhancing precision weapons delivery capability of Pakistan Air Force. Similarly engine overhaul group of MRF undertakes overhaul of ATAR 09C of Mirage, F-100 of F-16 and T-56 engine of C-130 aircraft.

The production statistics of this factory for the Fiscal Year 2013 – 2014 are tabulated below:-

• ATAR 09C Engine / Accessories	:	8,687
• ATAR Jet Pipe / Junction Section	:	66
• F-100 Accessories Modules & Parts	:	463
• T-56 Engine / Engine Accessories/ Loose Modules:	:	100
• Mini GV of Mirage aircraft	:	13
• F-16, JF-17 & Misc A/c Painting	:	11
• JF-17 Components	:	681
• TFE 731 (P) Engine / Loose Parts	:	07
• J-69 Engines Parts	:	610
• JF-17 Components	:	681

Aircraft Manufacturing Factory (AMF):



The following achievements were made by AMF during the period under review:-

- **JF-17 Airframe Co-Production Project.** Activities related to JF-17 airframe co-production project at AMF, PAC Kamra continued at a rapid pace in the Year 2013-14. The project reached a major milestone during the period with the completion of production work for Block-I aircraft. This occasion was celebrated with a ceremony in December, 2013 which was graced by the Prime Minister of Pakistan.
- **UAV Co-production Project.** PAC Kamra is qualified on European / Italian Quality Standards for composite parts and sub-assembly manufacturing of FALCO UAV. Final Assembly of the 3rd System was completed by M/s Selex ES in September, 2012. Ground Acceptance Test (GAT) of the 3rd system resumed after provisioning of 08 Tail Booms by M/s Selex ES in Apr 2013. Flight testing of 3rd FALCO UAV system was completed successfully by Selex team at PAC during June, 2013 on three FALCO UAVs. 3rd Falco UAV System comprising 50 % AMF manufactured airframe share was handed over to PAF in February 2014 after completing final assembly and flight test by Selex. ToT for second 50 % airframe composite and metal parts was completed during 2013. First Article manufacturing of Sub-assemblies (Wing and Fuselage) was completed in February, 2014 after qualification of destructive tests at Selex ES, Italy. Manufacturing of 100 % airframe parts and sub-assemblies for 4th Falco UAV System is currently under progress and activities are planned to be completed by end 2014. Final assembly and flight test will be undertaken by Selex.
- **On-Site Repair of Aircraft.** A total 20 SMK aircraft of PAF, 11 MSK aircraft of Pak Army were repaired on-site during the Year 2013-14.
- **Major Repair of Aircraft.** 03 MSK aircraft of Pak Army and 03 SMK aircraft of PAF were repaired during the Year 2013-14.
- **Major Repair of Assemblies.** 26 Wings and 03 Fuselages of PAF while 10 Wings and 03 Fuselages of Pak Army were repaired during Year 2013 - 14.
- **Support to Foreign Customer.** Subsequent to the sales of Super Mushshak to Royal Saudi Air Force, the Third Follow-on Contract for

provisioning of spares and services support was signed in January, 2014 and its execution is in progress. The contract is valid till January 2017.

Avionics Production Factory (APF):

APF is working with the vision “To provide the most cost effective engineering solutions and thereby increase indigenous support to Pakistan Air Force and friendly countries”.

Production Data during Financial Year 2013 – 14: The pertinent details are enumerated below:-

S No	Production Heads	Qty
(a)	Rebuild of Mobile Pulse Doppler Radars	05
(b)	Refurbishment of Radio Relay Vehicles	04
(c)	Refurbishment of Air Conditioners	31
(d)	Life Cycle Maintenance of Avionics LRUs & SRUs	769
(e)	Life Cycle Maintenance of LRUs of E & I Systems	142
(f)	Indigenous Repair of `D` level SRUs	110
(g)	PME Calibration & Repair	2211
(h)	Production of JF-17 Avionics Systems	104
(j)	Life Cycle Maintenance of JF-17 Avionics Systems	80

Salient achievements during 2013-14:

10 February 2014 was an historic day for Pakistan Aeronautical Complex Kamra when signing ceremony of contract for export of Super Mushshak Aircraft between Pakistan Aeronautical Complex (PAC) and Iraq Air Force was held at the Prime Minister House, Islamabad.

The sale of Super Mushshak Aircraft to Iraqi Air Force is a major milestone in the export of aviation products of Pakistan. The sale of Super Mushshak Aircraft will also be supported by Pakistan Aeronautical Complex, Kamra in terms of technical and logistics

support. The export of Super Mushshak aircraft would further open new avenue for export of other aviation product to foreign countries.



Signing Ceremony of Sale of Super Mushshak to Iraq

➤ **Avionics Indigenization Activities.** The salient avionics activities conducted are mentioned in the following paragraphs:-

- Local Development of X-96 Multiplier Assembly (Grifo PG Radar).
- Indigenous Repair of EHT Power Supply (Grifo M-3 Radar).
- Indigenous Repair of X Band STC Limiter (Grifo-7 Radar).

Facilities for Co-production of JF-17 Avionics Systems. Following salient activities were undertaken in respect of production and testing group:-

- Co-production of CATIC Avionics Systems.
- Production of Global Attitude Heading Reference System (GAHRS).
- Production of KLJ-7 Radar.
- Production of Radar Altimeter.
- Production of Indigenous Avionics Systems.
- Development of Production Management System (PMS) for Paperless Production Documentation.

Integration Activities: Following activities were executed by integration group:-

- **EW Suite Controller (EWSC):** M/s Indra's EW Suite Controller (EWSC) pre-integration was successfully accomplished in DSI Lab. Chaff & Flare Dispenser (CFD) made by Air Weapons Complex (AWC) has also been interfaced with EWSC, and pre-integration has been verified in DSI lab.

- **Design, Development and Deletion (DDD):** The following indigenous design / development activities were undertaken at DDD:
 - Audio Control Panel (ACP) & RF Reverser Unit (RRU).
 - IFF Transponder.
 - Avionics Activation Panel (AAP).
 - IFF Conversion Box (ICB).
 - Smart Multi-Function color Display (SMFCD).
 - Up Front Control Panel (UFCP).
 - Missile Tone Circuit (MTC).
 - Secure Mode Unit (SMU).
 - Back up Acquisition Computer (BAC).
 - Black Rose NVIS Compatibility.
 - Independent Volume Control of RWR (JF-17).
 - Rheostat Box.
 - Warning Control Box (WCB).
 - JF-17 Maintenance Simulator Panels.
 - JF-17 Full Mission Simulator Panels.

Simulator Training & Indigenous Development Activities:

- About 612 simulator hours were utilized for training of aircrew.
- 1st FMS Maintenance Course was conducted w.e.f 9 - 20 June, 2014.



- Qty 08 projectors were indigenously recovered without any OEM support.
- Indigenous efforts were undertaken to recover display issues of JF-17 aircraft maintenance simulator held at JF-17 FTC, PAF Base Minhas.

Certifications: All PAC factories are ISO 9001: 2000 and aerospace standard 9100 revision 'C' certified. We have also been awarded Boeing quality management system status. Additionally, our precision measuring equipment labs are accredited for



ISO 17025 standards and heat treatment and surface enhancements are accredited by NADCAP PRI USA.

Commercialization: Over the years PAC Kamra has grown into an international aviation standard industry. It has state-of-the-art equipment, machinery and expertise which are as competent as any aviation industry has in the world.

Due to the standards and certifications that PAC has acquired, commercial workload in the following areas is being offered for downloading to PAC:-

- Aircraft Sales
 - Mushshak & Super Mushshak
 - K-8 aircraft
- Aircraft MRO for Mirage & selected Chinese Origin aircraft
- MRO of selected aircraft engines
- Life Cycle Support & Maintenance for Air Defence systems including radars
- Printed Circuit Board (PCB) stuffing
- Aircraft Painting
- Precision Measuring Equipment (PME) calibration
- Environmental Stress Screening (ESS)
- Generic Engineering design and manufacturing

PAC is devoted to provide the highest quality services primarily to PAF and its sister services then, and extend these services commercially to friendly countries and other organizations.

In this context of services provision, PAC has earned a considerable amount of foreign exchange and is continuing to extent its services on commercial footings. Saudi Arabian, UAE, Oman, Sri Lanka and USA are some big names of countries included in the customers list of PAC.



*Directorate General
Defence Purchase
(DQDP)*

DIRECTORATE GENERAL DEFENCE PURCHASE

Financial year 2013-14 like previous fiscal year was eventful and rewarding from procurement point of view. In depth analysis of entire procurement activities has been undertaken and a substantial improvement has been observed in all facets. During the preceding financial year procurement to the tune of Rs. 142,565.207 Mn has been made for the Armed Forces.



**Avm Asad Lodhi
DGDP**

Procurement Activities:

The summary of procurement activities for financial year 2013-14 in respect of DGDP, DPs and AsDP is as under:-

PROC ACTIVITIES FY 2013-2014

DGDP:

AGAINST DEVELOPMENT PACKAGES:

Indents Received	Cross mandated	Cancelled/Not Concluded	Contracts Concluded
02	-	-	02

AGAINST SERVICE BUDGET:

Indents Received	Cross mandated	Cancelled/Not Concluded	Contracts Concluded
02	-	-	02

**PROCUREMENT ACTIVITIES FINANCIAL YEAR 2013-2014
DIRECTORATES OF PROCUREMENT (DPs)**

AGAINST DEVELOPMENT PACKAGES:

S/No	Org	Indents Received	Crossmandated	Cancelled/ Not Concluded	Contracts Concluded
1.	DGP (Army)	36	-	07	*36
2.	DP (Navy)	-	-	-	-
3.	DP (Air)	15	-	-	15
Total:		51	-	07	51

* In few cases against 01 x indent two or more contracts have been concluded.

AGAINST SERVICE BUDGET:

S/No	Org	Indents Received	Cross mandated	Cancelled/ Not Concluded	Contracts Concluded
1.	DGP (Army)	365	12	64	*344
2.	DP (Navy)	1163	449	340	374
3.	DP (Air)	367	30	39	328
Total:		1895	491	443	1046

*In few cases against 01 x indent two or more contracts have been concluded.

**PROCUREMENT ACTIVITIES FY 2013-14
ATTACHES DEFENCE PROCUREMENT (AsDP)**

AGAINST DEVELOPMENT PACKAGES:

No contract has been concluded by AsDP against Development Packages.

AGAINST SERVICE BUDGET:

S/No	Organization	Indents Received	Cancelled/ Not Concluded	Contracts Concluded
1.	ADP Washington	131	27	106
2.	ADP London	195	49	*152
3.	ADP Paris	158	81	77
4.	ADP Beijing	81	65	16
Total:		565	222	351

* Including partially contracts

Procurement of Major Defence Equipment:

Major equipment procured during last financial year 2013-14 by DGDP and DPs is as under:-

AGAINST DEVELOPMENT PACKAGES:

S/No	Description of Stores	Qty	Contract Value	
			FE	LC
DGDP				
1.	LY-80 LOMADS	03	US\$ 225.770 M	Rs.3371.645 M (Allied Charges)
2.	IBIS-150 AD Sur Radar	08	US\$ 40.000M	Rs. 3940.000M
DGP (Army)				
1.	Ribbon Bridge 79-A 100 M with complete accessories	02	US\$ 13.250	Rs. 1302.475 M
2.	HSD-20 Pour K-II Oil AVTUR JP-1	11.2190 2.238 1.715	-	Rs. 1678.527 M
3.	HSD-20 Pour MS-87 K-II Oil	4.260 3.300 .800	-	Rs. 926.348 M
4.	Trk 1 Ton 4x4 Toyota Hilux Double Cabin	195	-	Rs. 681.525 M

AGAINST SERVICE BUDGET:

S/No	Description of Stores	Qty	Contract Value	
			FE	LC
<u>DGDP</u>				
1.	a. Skygd Radar b. 35mm Oerlikon Gun c. SkysimSml	06 12 01	CHF 42.500	Rs 839.111 M (Allied Charges)
2.	Procurement of F-16 A/C	13	US\$ 75.00 M	Rs. 7425.00 M
<u>DGP (Army)</u>				
1.	122 mm How D-30 A-Gun incl Braking Sys	36	US\$ 5.476 M	-
2.	Spares for Tk Al-Khalid	46	US\$ 1.189 M	Rs. 124.676 M
3.	Spares for Tk T-59/69	104	US\$ 0.828 M	Rs.87.103 M
4.	Tool & Test Eqpt of TK T-59/69	Various	US\$ 0.786 M	Rs.78.527 M
5.	Tool & Test Eqpt for APCs	03	US\$ 1.641 M	Rs. 163.812 M
6..	Trk ¼ Ton 4x4 Toyota Land Cruiser HZJ71R- KJMRS	34	US\$ 2.026 M	-
7.	Hand Held Radio SK-2	1874	-	Rs. 217.773 M
<u>DP (Air)</u>				
1.	Spares for JF-17 Aircraft	65 L/items	US\$ 13.620 M	-
2.	O Level Spares of Airborne Radar for ZDK- 3 AWACS	26 L/items	US\$ 7.992 M	-
3.	O Level Spares of Electric Mission System for ZDK-3 AWACS	34 L/items	US\$ 7.977 M	-
4.	WP-7B(IV) Engines	04	US\$ 4.601 M	-
5.	GHE/GSE/GTE for 4 th JF-17 Sqn	54 L/items	US\$ 4.065 M	-
6.	Ground Tactical Air Navigation System	06 L/items	US\$ 2.760 M	-
7.	Radar Altimeter CKD Kit and NON Recurring technology Requirements	02 L/items	US\$ 2.624 M	-
8.	UFCP Sub-System for JF-17 Aircraft	197 L/items	-	Rs.55.102 M
9.	Turbine Fuel Aviation Kerosene Type (JP-8)	150,000,000 ltr	-	Rs.16,819.200M

SUMMARY OF TOTAL SAVINGS OF CONTRACTS:**CONCLUDED DURING FINANCIAL YEAR 2013-14****AGAINST DEVELOPMENT PACKAGES:**

Organization	Saving Against Assessed Rates	Saving Against User Est/LPRs	Saving Against Quoted/ Offered Rates
DGDP	-	-	Rs. 416.655 M
DGP (Army)	Rs. 63.307 M	Rs.183.225 M	Rs.83.610 M
DP (Navy)	-	-	-
DP (Air)	-	Rs.8.217	-
ADP (Washington)	No Contract has been concluded by AsDP against Development Packages.		
ADP (London)			
ADP (Paris)			
ADP (Beijing)			
Total	Rs. 63.307 M	Rs. 1,91.442 M	Rs. 500.265 M

AGAINST SERVICE BUDGET:

Organization	Saving Against Assessed Rates	Saving Against User Est/LPRs	Saving Against Quoted/ Offered Rates
DGDP	-	-	Rs. 3352.087M
DGP (Army)	Rs. 153.330 M	Rs. 366.354 M	Rs. 132.953 M
DP (Navy)	-	-	-
DP (Air)	Rs. 380.684 M	Rs. 162.696 M	Rs. 505.410 M
ADP (Washington)	Rs. 23.354 M	Rs.8.567 M	Rs.1.487 M
ADP (London)	-	Rs. 17.306 M	-
ADP (Paris)	Rs. 43.665 M	Rs. 3.174 M	-
ADP (Beijing)	Rs. 1.702	Rs. 7.054 M	-
Total	Rs.602.735 M	Rs. 565.151 M	Rs. 3,991.937 M

***All figures converted into Pak currency.**

**SUMMARY OF CONTRACTS
CONCLUDED DURING FIN YEAR 2013-14**

AGAINST DEV PACKAGES:

Organization	No. of Contracts Concluded		Value of Concluded Contracts-	
	FE	LC	FE	LC
DGDP	02	-	US\$ 265.770 M	Rs. 6611.589 M
DGP (Army)	01	36	US\$ 0.647 M	Rs. 11,261.485 M
DP (Navy)	-	-	-	-
DP (Air)	02	13	US\$ 0.769 M	Rs.95.904 M
ADP (Washington)	No contract concluded by AsDP during Fin Year 2013-14.			
ADP (London)				
ADP (Paris)				
ADP (Beijing)				
Total	05	49	US\$. 267.186 M	Rs. 17,968.978 M

AGAINST SERVICE BUDGET:

Organization	No. of Contracts Concluded		Value of Concluded Contracts	
	FE	LC	FE	LC
DGDP	02	-	US\$ 75.000 M CHF 42.500	-
DGP (Army)	76	267	US\$ 89.573 M	Rs. 29,374.485 M
DP (Navy)	127	247	US\$ 91.850 M	Rs.1680.499 M
DP (Air)	56	272	US\$ 83.379 M	Rs. 31,119.006 M
ADP (Washington)	106	-	US\$ 5.489 M	-
ADP (London)	152	-	US\$ 0.123 M € 2.850 M £ 2.060 M	-
ADP (Paris)	76	-	€ 7.713 M	-
ADP (Beijing)	16	-	US\$ 0.942 M	-
Total	611	786	US\$ 346.363 M € 10.563 M £ 2.060 M CHF 42.500 M	Rs. 62,173.990 M

Outstanding Contracts:

DETAILS OF OUTSTANDING CONTRACTS

Organization	Total No. of Outstanding Contracts	Total Amount Involved
DGDP	08	Rs 18.784 M
DGP (Army)	367	Rs. 23,710.829 M
DP (Navy)	340	-
DP (Air)	223	Rs. 11,619.025 M
ADP (Washington)	-	-
ADP (London)	-	-
ADP (Paris)	-	-
ADP (Beijing)	02	Rs. 0.849
Total:	940	Rs. 35,349.487 M

Recovery of Risk & Expense Money:

AMOUNT RECOVERED AGAINST RISK & EXPENSE

DURING FINANCIAL YEAR 2013-14

Organization	Total No. of Contracts	Total RE Amount Involved (In Rs. Million)	Total Recovery Carried Out (In Rs. Million)
DGDP	-	-	-
DGP (Army)	1532	1992.026	154.374
DP (Navy)	-	-	-
DP (Air)	104	29.091	-
Total	1636	2,021.117	154.374

REGISTRATION OF FIRMS

The results of registration activities during the last financial year are tabulated as under:-

- New firms registered - 82
- Renewal of registered - 266
- Additional indexation of firms - 143
- Total Number of defaulting firms - -



Directorate General Munitions Production
(DGMP)

DIRECTORATE GENERAL MUNITIONS PRODUCTION



Mandate and Function of DGMP is as under:

- To maximize indigenous production of def stores in public and private sector with the ultimate aim of attaining self-sufficiency.
- To assist Ministry of Defence Production in formulating plans for giving a defence bias to future industrial planning.
- Acquisition of technical know-how, rights of mfr and enter into collaboration arrangements whenever sizeable import of an item is made.
- Utilization of available research facilities within the country to maximize indigenous defence capability.



**Rear Admiral
Adnan Nazir SI(M),
DGMP**

New Contracts Signed During 2013-14 by DGMP:

Number of contracts with their total signed during FY 2013-14 (incl u/c Estbs) are:-

- | | | |
|------------------------------------|---|----------------|
| ➤ Total number of contracts signed | - | 25 |
| ➤ Value in LC | - | Rs 1001.453 Mn |
| ➤ Value in FE | - | US\$ 35.092 Mn |
| | - | EURO 5.882 Mn |
| | - | £ 55783 |

Major Achievements:

Achievements of DGMP during the year are as under:

- Delivery of 3300 x Software Defined Radio (SDRs) to Army.
- Development /Fabrication of Military Equipments.
- 4th PMR on MLRs A-100 in Beijing China – Sep 2013.
- Clearing of Liabilities of contracts concluded in FY 12/13.
- Concluding of work order for Indigenous Development of Ground Surveillance Radar NR-V3 with college of EME – NUST.
- Following project successfully completed by Dte MP (Army):-
 - 1500 x Trucks 5 Ton 4x4
 - 525 x Land Rover Defender Vehicles
 - 34 x PATCOM Shelters.
 - 4 x Gun Cleaning Machines..
 - Night Vision Goggles through IOP.
 - 122MM MBRL Rkts for Range Enhancement (40 Km) YARMUK.
 - 1 x contract of SDR qty-1000 concluded in FY11-13 is near to completion as 820 x SDRs delivered to Pak Army, however, 180 SDRs in under inspection of IE&I.

As per Agosta 90B contract, MESAM 3 section has been delivered and the associated milestone payment has been released. DCNS have assured that the defect rectification work performed on MEDMA-3 is adequately satisfactory to ensure no similar defect occurs on the same location in future. DCNS, also assured that there will be no affect on the performance of MESMA due to the defect rectification work on MESMA. DCNS assured that the refit schedule related to PNS/M KHALID will be respected, which will begin by end Jan 2016 and completed by end Jan 2019.

A contract for the construction of 2 Fast Attack Craft (Missile) FAC(M) was signed with M/s CSOC China. As per contract FAC (M) No. 2 has been constructed at KS&EW and delivered to PN on 3 Jun 2014. This is first

indigenously constructed FAC (M). Presently 2 more FAC(M)s are being constructed at KS&EW.

	<u>Project</u>		<u>Qty</u>
(1)	Impulse Carts PF-20 JF-17 Aircraft	-	210
(2)	Window GlassFlir System of Mirage Aircraft	-	15
(3)	Transmitter Receiver of YLC-6MS Sensors	-	11
(4)	Fiber Mast Antenna System	-	21
(5)	8:1 Power Combiner of YLC-6MS Sensor	-	06
(6)	Ni-Cad Battery for JF-17 Aircraft	-	42
(7)	GPU Carrier	-	09
(8)	Vehicle Mounted GPU Spares	-	05
(9)	Tow Bar IL-78 Aircraft	-	04
(10)	HTS Engine Driver	-	07
(11)	Universal Battery Charger	-	10
(12)	Ni-Cad Battery for CN-235 Aircraft	-	10
(13)	Trilelectron GPU Spares	-	13
(14)	Mechanical Sweeper Assy (FOD Boss)	-	11

Projects Completed by MVRDE:

	<u>Projects</u>		<u>Qty</u>
➤	Rapid Infantry Bridge	-	02
➤	APU for Tank Al-Zarrar	-	15
➤	Water Bowzer 4500 Lits	-	12
➤	Aviation Fuel Bowzer	-	11
➤	Gun Tower for modified 37mm AA Gun	-	01
➤	Service Trailer	-	15
➤	DITS AZ (Series-II)	-	02
➤	DITS T-80 UD	-	02

Projects Completed by ARDE:

- Indigenous Development of Alligator Switch (Mutli Purpose)
- Indigenous Development of All Weather Electronic Anti Lifting Device

Projects Completed by IOP:

<u>Projects</u>		<u>Qty</u>
➤ Driver's Night Vision Periscope (DNVP)	-	57
➤ Single Tube Goggle (AN/PVS-7D)	-	14624
➤ Weapon Sight (NS-685C)	-	1017



*National Radio Telecommunication
Corporation
(NRTC)*

NATIONAL RADIO TELECOMMUNICATION CORPORATION

HISTORY:

National Radio and Telecommunication Corporation (NRTC) is engaged in design, development and manufacture of telecommunication equipment in Pakistan. NRTC is the pioneer in Telecommunication Equipment and leader in the field of communication in Pakistan for the last four decades. NRTC is producing high quality products for Defense services, Pakistan Telecommunication Corporation Ltd (PTCL) and other civil / military Organizations since 1965-66.



**Brig. Iftikhar Ahmed,
MD NRTC**

By virtue of long experience in the field of telecommunication, NRTC has attained excellent technical backed-up knowledge and support with a modern infrastructure and standard expertise required to produce telecommunication equipment to the entire satisfaction of the users. We are ISO-9001-2008, ISO 14001:2004, IPC and Mil Std 810 Certified as well.

LOCATION:

It is situated in T&T Complex Haripur - Pakistan, which is 80 Km North West of Islamabad.

QUALITY POLICY:

- To provide our customers world class quality Radio and telecommunication equipment which meets all their operational requirements, in time, at affordable costs.
- User's satisfaction must be given top priority by each employee in the process chain, from receipt of raw material, through manufacture and delivery, till final acceptance.
- Employees performance must achieve the aim and delight the customers through continual improvement by supplying quality product.
- Each product must qualify the user's inspection and test, the first time, every time

LIST OF PRODUCTS MANUFACTURED BY NRTC

EXCHANGES	
a.	Digital Electronic Field Exchange PFX-6416
b.	Digital Electronic Field Exchange PFX-3208
c.	Digital Electronic Field Exchange PFX-1604
d.	Automag Field Exchange (4+12)
e.	Electronic Field Telephone (EFT-101) with/without Keypad Dialer

RADIO SETS	
a.	HF Radio Series 9800
b.	V/UHF Software Defined Radios
c.	VHF/FM Freq Hopping Radio Series 9600
d.	Land Mobile Radios (SK-2 System)
e.	Digital Intercom for Military Vehicles
f.	PRC-77 Radio Series Up gradation
g.	TETRA (Terrestrial Trunked Radio) Systems
h.	PRR (Personal Role Radios)

ENCRYPTION PRODUCTS	
a.	Bulk Encryptor
b.	IP Encryptor

c.	Secure Mobile Phone
d.	Desktop Encryptor
e.	Secure VOIP Application
f.	Secure VOIP Encryption Device
g.	Vehicle and Personal Tracking Solutions
h.	Secure Telephone and Fax

RCIED JAMMERS AND INTERCEPTORS

a.	GSM Interceptor
b.	GSM PK-100 Jammer
c.	PK-UV-50 RCIED Jammer
d.	PK WB-300 RCIED Jammer
e.	Software Defined RCIED Jammer
f.	Man-Pack RCIED Jammer

COMMNET, COMMUNICATION & NETWORKING

a.	Tactical Radio Gateway
b.	Tactical Media Gateway
c.	Graphical User Interface
d.	Network Management System based on SNMP

MAJOR ANTENNAS

a.	GSM Antennas 900 MHz, 1800 MHz & 2100 MHz
b.	VHF Antennas 30 to 88 MHz for PRC 77 and PRC 9600
c.	VHF Antennas 136 to 174 MHz for LMR
d.	VHF Antennas 20 to 200 MHz for WB Jammers
e.	UHF Antennas 20 to 175 MHz for Manpack Jammer
f.	UHF Antennas 200 to 500 MHz for WB Jammers
g.	UHF Antennas 100 to 500 MHz for WB Jammers
h.	UHF Antennas 20 to 500 MHz for WB Jammers 3 GHz & 6 GHz
j.	UHF Antennas 30 to 572 MHz for WB Jammers

POWER SUPPLIES AND BATTERY CHARGERS

a.	Single Battery Solar Charger
b.	Universal Dual Battery Charger
c.	Power Supply 13 Volts 5 Amps
d.	Power Supply 13 Volts 10 Amps
e.	Power Supply 13 Volts 20 Amps
f.	Power Supply 24 Volts 10 Amps
g.	Power Supply 24 Volts 20 Amps
h.	Power Supply 24 Volts 30 Amps
j.	Power Supply 24 Volts 50 Amps
k.	Power Supply 48 Volts 10 Amps
l.	Power Supply 48 Volts 20 Amps
m.	Power Supply 48 Volts 30 Amps
n.	Un Interruptible Power Supplies (UPS)

Technical Performance / Capabilities:

NRTC has the following technical facilities/capabilities for the Manufacture, Assembly, Testing and Measuring of following equipment/tasks:-

- HF and VHF Military Version Radios.
- VHF and UHF Commercial Mobile Radios.
- VHF and UHF Single/Dual/Multi Channel Extend Radios.
- Military Version Switches/EPABXs 16 lines, 20 lines, 40 lines and 96 lines.
- Commercial Version Switches/EPABXs 50 lines to 1024 lines.
- Digital Field Telephone and Ruggedized Auto Field Telephone.
- Linear, Regulated Power Supplies.
- Printed Circuit Boards for all type of Telecommunication equipment.
- DP Boxes, Cabinets and other accessories of out side plants.
- VHF/UHF Antennae for Military/Commercial Radios including Extend Radios.
- Environmental Test facilities as per MIL-STD-810E
- Mechanical and Surface treatment workshops
- PCB stuffing upto 16-layers

Major Projects 2004-2014

Following are major projects for the last nine years:-

- Local Manufacturing of VHF Frequency Hopping Radios (9600 Series)
- Up-graded PRC-77 Radios
- Automag 4+12 lines
- Digital Electronic Field Telephone Exchange PFX-6416
- Digital Electronic Field Telephone Exchange PFX-3208
- Field Auto Telephone Exchange PFX-1604
- Electronic Field Telephone (EFT-101) with and without keypad 65ialer
- Ruggedized Auto Field Telephone (RAFT-786)
- DP Boxes
- Cross-Connection Cabinets
- Power Supplies

- Walkie Talkies
- Dual Battery Charger
- Inter Trench Communication (ITC 2000)
- Antenna RC-292
- Land Mobile Radios (SK-2 System)
- Software Defined Radios (SDR)
- Solar Solutions
- RCIED Jammers
- Home Land Security System
- COMMNET, Communication & Networking

FINANCIAL PERFORMANCE

Financial performance/Sales turnover of NRTC is as under:-

<i>(Rs in Million)</i>				
YEAR	DEFENCE	EXPORT	PTCL / OTHER	TOTAL
2001-02	113.807	-	47.508	161.315
2002-03	112.988	-	31.546	144.534
2003-04	474.003	-	94.869	568.872
2004-05	649.404	-	77.009	726.413
2005-06	867.582	471.475	45.227	1,384.284
2006-07	1199.292	129.397	15.62	1,344.309
2007-08	944.919	77.609	10.337	1,032.865
2008-09	461.417	236.291	1.012	698.720
2009-10	463.729	50.004	46.635	560.368
2010-11	573.017	362.928	29.042	964.987
2011-12	1,472.776	259.221	0.912	1,732.909
2012-13	6,103.007	671.249	43.188	6,817.444
2013-14	5,261.534	683.427	104.194	6,049.155

FUTURE PROJECTS AND TARGETS

Following are the future manufacturing potential projects:-

- Broadband Jammer up to 3 and 6 GHz
- Antennas Broadband Jammer 6 GHz
- Software Defined RCIED Jammer
- Services for telecom sector organizations
- Alternate energy solutions
- Surveillance and Security for military and civil organization
- GSM Intercept System
- EW Direction Finder
- VHF Frequency Hopping Radio
- HF and UHF Radios developments

NRTC is also planning to get access to the other segments on telecommunication market both for Defence and Commercial Sectors.



*Karachi Shipyard and
Engineering Works
(KS&EW)*

KARACHI SHIPYARD & ENGINEERING WORKS LIMITED

The Karachi Shipyard & Engineering Works Limited (KS&EW) is public limited company, with all shares owned by the Government of Pakistan / Pakistan Navy. It is an autonomous body under administrative control of Ministry of Defence Production. The KS&EW is situated geographically within the boundaries of Karachi Port, covering an area of 65 acres (approx). The set up has been designed and built to undertake construction & repair of small to medium size ships and heavy engineering activities. It was built with the technical assistance of H.C StulckenSchon of Germany, in 1956.



**Rear Admiral Syed
Hasan Nisar Shah
KS & EW**

MAIN FUNCTIONS:

PAKISTAN NAVY'S REQUIREMENT:

As per Government's mandate KS&EW caters for Pakistan Navy's requirements.

Additionally, KS&EW undertakes commercial activities mainly shipbuilding, Ship repair and General Engineering.

SHIPBUILDING:

Commercial Activities:

KSEW is equipped to build all types of Marine crafts, cargo vessels, containerships, oil tanker, bulk carrier up to 26000 TDW, Harbour tugs, Pilot boats, Hopper barges, Dredgers and Launcher etc.

Defence Related Activities:

KSEW has the capability of indigenous construction of Naval vessels such as Fast attack craft, Patrol boats, Gun boats, Missile craft, Submarine and F22P Frigate etc.

Infrastructure:

To carryout the shipbuilding activities KSEW has three shipbuilding berths with following sizes and capacities.

<u>Berth No.</u>	<u>Size</u>	<u>Max TDW</u>
1	169 x 23 M	15000
2	118 x 23 M	6000
3	213 x 31 M	26000

MAJOR DEFENCE PRODUCTS MANUFACTURED BY KSEW:

F22P FRIGATE:

A multi mission conventionally powered Frigate having displacement of 2800 tons and designed for maximum speed of 29 knots. Its main role include Air defence at sea, interdiction of hostile surface combats, patrolling protection of EEZ, radiate combat power in the area of interest and undertake heliborn operation.

FAST ATTACK CRAFT (MISSILE):

Fast Attack Craft (Missile) is a latest missile craft built in collaboration with CSOC of China. This craft is fitted with 08 x C-802 A missile system, CIWS, AAW gun, Chaff launchers and surface/air surveillance radars. The craft can achieve a maximum speed of 30 knots and maximum displacement of 560 tons.

MULTIPURPOSE AUXILIARY CRAFT (MISSILE):

Multipurpose Auxiliary Craft (MPAC) fitted with the most modern missile system. The craft has designed speed of 32 knots and maximum displacement of 250 tons. Fitted with C802 surface to surface Missile, the boat makes a lethal platform at sea.

FAST PATROL BOAT:

A-180 tons Fast patrol boat which has been indigenously built for Pakistan Navy. The craft has capable of doing max speed of 23 Knots. Its main function are salvage, shallow water operation as well as self defence, search & Rescue operation.

FLOATING DOCKS:

State of Art Floating Docks indigenously constructed at KSEW for Pak Navy. Built in various sizes ranging from 1000-4000 tons lifting capacity, these docks provide extremely sophisticated mini dockyard facilities at point of choice. This facility is extremely useful for ports having no dry docks can be towed & parked at small ports for use as required.

500 tons FAST ATTACK CRAFT (MISSILE) FOR PN:

Vessel completed and delivered to Pak Navy on 12 Jun 2014.

MULTIPURPOSE BARGE FOR PN (01 NO):

The Barge completed and delivered to Pak Navy on 09 Sep 2013.

32 TONS BOLLARD PULL TUG FOR PAK NAVY (01 NO):

The vessel completed and delivered to Pak Navy on 10 Feb 2014.

SIGNING OF NEW ORDERS:

Contract for 02 x landing craft for DGMP signed on 27 Jun 14. The vessels will be delivered within 16 months from contract effective date.

Contract for 4th x Fast Attack Craft (Missile) for DGMP signed on 13 Jun 14. The vessel will be delivered within 39 months from contract effective date.

PROGRESS OF ON GOING ORDERS:

➤ **01 x Fleet Tanker for Pakistan Navy:**

- Keel laying was performed on 07 Mar 2014.
- 38 x blocks have been placed on berth.
- 15 x blocks are under painting.
- Outfit items are also under installation progressively.

➤ **01 x 12 Ton Pusher Tug for Pakistan Navy:**

- Hull fabrication completed.
- Launching event is scheduled on 19 Aug 14.

➤ **ALUMINUM BOATS FOR BRIDGE ERECTION FOR MVRDE (22 Nos):**

- 06 completed.
- 01 No. is under acceptance trial.

SHIP REPAIRS

This is one of the most hectic activities at the yard. Until now, KS&EW has repaired over 5000 Ships with an average about 22-25 vessels per year. Pakistan Navy, Port Authorities (KPT & PQA), Maritime Security Agency and many renowned Navies of the world and shipping lines are KSEW's regular customers. Both dry docks remain occupied throughout the year. In fact a number of ships remain in queue for docking.

Modern and well-planned facilities exist in KS&EW for undertaking above water & under water repairs of ships and off shore drilling rigs. The ancillary facilities include shore electricity supply of 110/220 V DC 220/380/400 V AC cycles, compressed air, oxygen, acetylene gas and natural gas in pipelines and cylinders as well as fresh and salt water firefighting equipment. A well equipped machine shop is in attendance besides other

facilities. For under water repairs, KS&EW has two dry docks with the following specifications

<u>Dry</u>	<u>Length x Width</u>	<u>Crane</u>	<u>Maximum TDW</u>
1.	189 x 26m	30 & 10 tons	26,000
2.	171 x 24m	15 & 10 tons	18,000

For above water repairs, quay walls of 500 meter on the northern side and 165 meter on the southern side are available. Above water repairs for vessel of any size and dead weight can be undertaken not only at KS&EW premises but also in Karachi harbor and even at the outer anchorage, KSEW carried out emergency repairs on a 250,000 TDW vessel at outer anchorage, as the vessel because of the size could not enter Karachi Harbor. Similarly any alternation / conversion on hull / super structure can be undertaken. For boilers, insulation, lagging, flooring & brick work can be carried out at the yard.

Facilities exist for repairs to steam and motor vessels both main and auxiliary machinery and all types of marine and stationary boilers.

QUALITY OF WORKMANSHIP:

KSEW is integrated management system certified (i.e ISO 9001 2008, ISO 14001 2004 and OHSAS 18001 2007) and maintains comprehensive policies and procedures designed to ensure high quality results every time on every project. Further repair work is carried out upto entire satisfaction of 3rd party inspection i.e Lloyds, BV etc surveyors.

SHIPREPAIR DIVISION CAPABILITIES:

Ship repair division is capable to undertake following ship repair works as pr international marine standards:

- Overhauling & repair of all types of engines, generators, hydraulic equipment, ship auxiliaries, pumps, valves, compressors, etc.
- Shafting work which includes repairing of rudders, propellers, VSP system bow thruster system and Z pillar system etc.
- Installation, servicing & repairing all type of piping system.
- Installation & repairing of AC & refrigeration system.
- Grit (Abrasive) blasting hydro blasting
- Airless & conventional spray painting.
- Ship hull & deck repair.
- Construction of tanks, stairs foundation trunkings.
- Repair / renewal of ships fenders.
- Installation of Zinc Anodes.

SHIP REPAIR WORK SHOPS:

Ship repair division is facilitated with well-equipped machine shop, light fabrication shop, fitting shop, pipe shop, electric shop and carpentry shop.

REPAIRING OF FOREIGN VESSELS (DURING LAST 6 YEARS):

KSEW has successfully repaired a number of foreign vessels of various countries and some of them are listed below:

- | | |
|-----------------------|---------------------------|
| • FAIR JULY | (UAE) |
| • HANGJUN 1007 | Peoples republic of china |
| • HANGJUN 1006 | Peoples republic of china |
| • MV ZARA | Panama |
| • MV NYZDAN | Korea |
| • MT AYFERKA | Turkey |
| • MV MUSTAFA BAY | Turkey |
| • MV CAPTAIN MARKUS | Turkey |
| • ZHONG GUO SHUI DIAN | Peoples republic of china |

- LST BILQUIS Yemen
- TUG SMIT LOIRE Holland
- CHINESE DREDGER J06 Peoples republic of china
- KARINA DANICA Holland
- CHINESE DREDGER J05 Peoples republic of china
- MV SHARIEF VERVE UAE
- MV BATANG ANAI Peoples republic of China
- ANCHOR BOAT Peoples republic of China
- MV SHRIEF PILOT UAE

GENERAL ENGINEERING:

The Engineering Division undertakes construction of Package Type Fire-tube Boilers of upto 600 HP - 250 PSI, Water Tube Boilers upto 80 tons/ hour, Pressure Vessels, LPG Tanks, Heat Exchangers, Storage Tanks of all kinds, Gates for Dams, Barrages, Conveyors and Elevators for Chemical, Petroleum and Cement Industries, complete Sugar Plants ranging from 4000 – 5000 TCD capacity, Sugar Mill Machinery, all types of Cranes, Steel Structures and Towers, Caravans, Overhead Steel Bridges and Sewage Treatment Plants etc.

ORDERS COMPLETED DURING (FY) 2013-2014:

- Fabrication of Ballast Panels (Port & Stbd) for PNS / M- HURMAT (PN Dockyard)
- Re-habilitation / Improvement and Overhauling of Passenger Boarding Bridge No. 24 for Civil Aviation Authority
- Repair of Mill Head Stock for Matiari Sugar Mills Ltd
- Machinig of Rotor Shafts for Siemens Pakistan
- Kiln Shell Piece for Thatta Cement Co.Ltd
- Re-building and Machining of Grinding Roller for M/S Power Cement Ltd
- Fabrication of Buckets, Gangways for Ship Repair Division
- Manufacturing of Safety Grill for KS&EW Outer Boundry Wall.

- Dismantling of complete 15 Tons Luffing Crane of North Quaywall (KS&EW).
- Fab. & Installation of Steel Roof Trusses for SBH & Machine Shop
- Manufacturing. and Installation of 02 Nos. 16 M. High Flood Light Tower at North Quaywall (KS&EW).

ORDERS IN HAND:

- Manufacture & installation of the components, associated fittings & fixture of Ship Lift & Ship Transfer System at KSEW.for TPK Co. Ltd (Korea)
- Preservation of Steel Plates & Trestles for SL & TS of KS&EW
- Manufacture,supply,erection& commissioning of 2x40/5 Tons Capacity Electric Overhead Cranes for Pakistan Railways Moghalpura Lahore.
- Manufacture & supply of Klin Shell Pieces for Thatta Cement Co. Ltd
- Refurbishment / Shifting of 1x30 Tons Luffing crane No.- 3 for S.R Div .
- Refurbishment of old Caisson of DD-1 for S R. Div.
- Fabrication of Fixed Staging for SR. Division.
- Manufacturing and Installation of Steel Trusses for Electric Shop of S.B.Div.
- Fabrication of Steel Frames for SR. Div .

KSEW rightly be called the pioneer of manufacturing Sugar Mills. In past, projects for 10 complete sugar mills have been undertaken out of which 07 are in Sindh. Last Sugar Mill was delivered in 1997. Since then the focus was towards shipbuilding only. Presently the size of vendor industry is Rs.22 B. Accordingly; serious efforts have been made to secure this business and recent delivery Bandhi Sugar Mills project is an example.

Management is keen to utilize full potential of GE. In this regard establishment of Foundry was initiated in April 2013, which has almost completed and a considerable

business is anticipated in future. Moreover an MoU with M/s Liebherr-Industrieanlagen AG (LIA) Germany to undertake collaborative manufacturing of Earth moving and Road Construction Equipment has been signed in Sept 2013. As a first step to initiate process for construction of bulldozers.

SHIP LIFT & TRANSFER SYSTEM (SL&TS) PROJECT

The revised project envisages enhancement and modernization of existing capacity of ship repair of Karachi shipyard and engineering works through installation of ship lift and transfer system replacing old and obsolete machines with state-of-the-art new machines and acquiring additional land (5 acres) of Pak Navy adjacent to KS&EW. The system will be capable of lifting vessels up to 7781 tons and capability of repair and maintenance of more than 13 ships/vessels at a time.

At present KS&EW has two dry docks of capacity 26000 DWT tons and 18000DWT tons constructed in 1966/70-71 having average capacity to repair 16 ships per annum. After completion of the project the repair capacity of KSEW will be enhanced to 39 ships per annum in addition to the existing capacity of 16 vessels. As a result business volume will increase by many folds.

The scope of works comprises installation of a new ship lift and transfer system in KS&EW, marine and general civil works and procurement of equipments/machines etc.

Project progress was stalled earlier due to filling of litigation case in high court and Supreme Court by unsuccessful bidder. After receipt of Supreme Court verdict in KSEW favor the project progress has recommenced and contract for civil works has been awarded on 10 Jan 2014. EPC retendering is also in process. The project is planned to be completed on fast track basis i.e. by Dec 2016.

Financial Health:

During 1990s, due to slump in the global shipbuilding market and withdrawal of subsidy on shipbuilding, adversely affected the financial health. Al-hamdulillah, the financial condition of KSEW has improved and it is back on path of growth and earning

profit over the last 6 years. Moreover there are promising opportunities envisaged in near future.

The present Management is vigorously pursuing to maintain/enhance the up going trend to make it more profitable. In this regard the main focus of the management is to deliver the current orders on time, preferably before scheduled delivery date to increase the credibility of KSEW in the market. Timely deliveries of KPT and PN project especially F 22P Frigate, ahead of schedule, are recent examples. Hectic efforts are also being made by the Management to materialize the worthwhile orders, which are in pipeline.



Defence Export Promotion Organization
(DEPO)

DEFENCE EXPORT PROMOTION ORGANIZATION (DEPO)

DEPO was envisioned to be raised as an Autonomous Marketing and Sales Organization, under the MoD (DP Div), which could organize International Defence Exhibition and Seminar (IDEAS), biennially. However, in March 2002, DEPO was raised as an adhoc organization and the posts were created for one year.



**Maj Gen Agha
Masood Akram HI(M)
DG DEPO**

Mission and Functions: To facilitate and promote export of defence related quality products and coordinate marketing efforts with manufacturing sector in land and abroad.

- Provide a platform for facilitation, promotion and development of the defence export (products and services) in public and private sectors.
- Conduct seminars, workshops, exhibitions and conferences connected with defence export and facilitate / coordinate participation in foreign exhibitions.
- Establish and maintain a Display Centre for products of private and public sector defence manufacturers.

Achievements and Activities:

➤ **Participation in Foreign Defence Exhibitions (01 Jul 2013 to 30 Jun 2014):** Pakistan Pavilions were established in the following international exhibitions to promote export of defence related equipment / products and to market International Defence Exhibition and Seminar (IDEAS)-2014, scheduled from 1-4 December 2014 at Expo Centre, Karachi:-

- Doha International Maritime Defence Exhibition & Conference (DIMDEX) Doha, Qatar 25 – 27 March 2014 (Karachi Shipyard & Engineering Works only).
- Defence Services Asia (DSA) Kuala Lumpur, Malaysia 14-17 April 2014.
- Eurosatory-2014 Paris, France 16 – 20 June 2014.

- Various DPEs and private sector firm established stalls in above mentioned exhibitions. The breakdown of space which was booked by DEPO for various DPEs is as under:-

S.No	Name of DPEs	DIMDEA-2014 (25-27 Mar 14)	DSA-2014 (14-17 Apr 14)	Eurosatory- 2014 (16-20 Jun 14)
(a)	POF	-	48 Sqm	48 Sqm
(b)	GIDS	-	118 Sqm	-
(c)	HIT	-	50 Sqm	-
(d)	NRTC	-	52 Sqm	33 Sqm
(e)	KS & EW	36 Sqm	-	-
(f)	DEPO	-	12 Sqm	09 Sqm
(g)	H.Nizam Din & Sons	-	20 Sqm	
Total		36 Sqm	300 Sqm	90 Sqm

➤ **Expected Participation in Foreign Defence Exhibition (01 Jul 2014 to 30 June 2015):** DEPO has planned to attend following exhibitions in year 2014-2015:-

- (1) Aerospace & Defense Exhibition (AAD) Cape Town (South Africa) 17-21 Sep 2014.
- (2) International Defence Exhibition and Conference (IDEX) Abu Dhabi, UAE 22-26 Feb 2015
- (3) IDEF, International Defence Exhibition and Fair, Istanbul, Turkey (Obligatory) 05-08- May 2015.

➤ **Agreement between DEPO and CISS:** An agreement was signed with Center for International Strategic Studies (CISS) for the conduct of Seminar during IDEAS-2014.

➤ **Documentary Movie “Defence Industry of Pakistan”:** A 36 minutes Documentary Movie, covering the products of all Defence Production Establishments from Public Sector, has been prepared in four languages i.e English

Russian, French and Arabic and distributed to concerned departments. The same has been forwarded to Pakistan Missions in respective languages. The movie has also been uploaded on DEPO website "www.depo.org.pk".

- **Brochure IDEAS-2014:** New brochures of IDEAS-2014 with incorporation of President of Pakistan, Mr Mamnoon Hussain's message were prepared and forwarded to all concerned for promotional purpose.

- **1ST Steering Committee Meeting.** Subject meeting was held on 2 April 2014 at Karachi. Maj Gen Tahir Ashraf Khan HI(M), DG DEPO chaired the meeting. The representatives of concerned Ministries, Armed Forces, Law Enforcement Agencies etc responsible for the conduct of various activities related to IDEAS-2014 were briefed about the requirements for forthcoming IDEAS.

Preparations of IDEAS-2014. Following progress has been made in connection with the IDEAS-2014: -

- **Invitation to Foreign Delegations for IDEAS – 2014** 396 x foreign delegations from 112 countries have been invited for IDEAS-2014 by the following: -
 - Minister of Defence Production
 - Chairman Joint Chiefs of Staff Committee
 - Chief of Army Staff
 - Chief of Naval Staff
 - Chief of Air Staff
 - Secretary Defence Production

- **Inland Invitation for IDEAS-2014:** Names of guests from respective Secretariat, Ministries, Headquarters and Departments have been asked for extending formal invitations of the IDEAS-2014. Allocation is given at Annex A. MoFA and HQ ISI have been approached to provide the lists of recommended Ambassadors / High Commissioners (at Islamabad), Consul Generals (at

Karachi) and Foreign / Pakistani Defence, Army, Navy and Air Attaches respectively.

Targets: Targets were set to invite more delegations and exhibitors in forthcoming IDEAS-2014 than IDEAS-2012. Accordingly, more invitations have been extended and all out efforts are being made to promote and publicize IDEAS at appropriate forums like Foreign Defence Exhibitions and International Defence Journals etc.

Conclusion. DEPO is committed towards successful conduct of IDEAS-2014 and also to assist in promoting the products of defence industries of Pakistan through participation in International Defence Exhibitions, conducting visits of foreign / local delegations to DEPO and addressing all Defence exports related inquires forwarded by DAs or foreign DAs at Islamabad.