Report of the
Comptroller and Auditor General of India

for the year ended March 2014

Presented in Lok Sabha on:

Laid in Rajya Sabha on:

Union Government (Defence Services)
Navy and Coast Guard
No. 37 of 2015

CONTENTS

	Paragraph	Page
Preface		**iii**
Overview		**iv**
CHAPTER I: INTRODUCTION		
About the Report	1.1	1
Authority for audit	1.2	2
Planning and conduct of audit	1.3	2
Profile of the audited entities	1.4	3
Defence Budget	1.5	5
Budget and Expenditure of Navy	1.6	5
Budget and Expenditure of Coast Guard	1.7	9
Receipts of the Navy and Coast Guard	1.8	11
Response to Audit	1.9	12
CHAPTER II: MINISTRY OF DEFENCE		
Medium Refit cum Upgradation of INS Sindhukirti	2.1	13
CHAPTER III: INDIAN NAVY		
Avoidable expenditure of ₹20.80 crore on Medium Refit cum Cadet Training Ship conversion of INS Sujata due to improper evaluation of bids	3.1	37
Over provisioning of Roller Steel	3.2	40
Extra expenditure of ₹2.43 crore incurred on procurement of spares from a foreign firm	3.3	44
Unfruitful expenditure of ₹2.17 crore due to improper planning and consequent offloading of nickel and chrome plating work	3.4	47

Excess procurement of naval stores worth ₹1.03 crore	3.5	50
Non-exercise of Tolerance clause resulting in avoidable extra expenditure of ₹1.44 crore	3.6	53
Avoidable payment of interest amounting to ₹1.15 crore	3.7	55
Unwarranted procurement of Electric Tachometers	3.8	57
CHAPTER IV: INDIAN COAST GUARD		
Delay in acquisition of Inshore Patrol Vessels	4.1	61
CHAPTER V: DPSU SHIPYARDS		
Utilisation of facilities created by Shipyards	5.1	65
Non-recovery of Liquidated Damages-Mazagon Dock Limited	5.2	68
Diversion of funds by Hindustan Shipyard Limited	5.3	68
ANNEXURES & GLOSSARY OF TERMS		
Annexure-I		71
Annexure-II		72
Glossary of Terms		73

PREFACE

This Report for the year ended March 2014 has been prepared for submission to the President of India under Article 151 of the Constitution of India.

The Report contains significant results of the Audit of the Union Government (Defence Services)- Navy, Coast Guard, Military Engineer Services and Defence Public Sector Shipyards.

The instances mentioned in this Report are those, which came to notice in the course of test audit for the period 2013-14 as well as those which came to notice in earlier years, but could not be reported in the previous Audit Reports; instances relating to the period subsequent to 2013-14 have also been included, wherever necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

OVERVIEW

The total expenditure of the Defence Services during the year 2013-14 was ₹2,09,789 crore. Of this, the Navy spent ₹33,831 crore, which constituted approximately 16.13 *per cent* of the total Defence Expenditure. The major portion of the expenditure of the Navy is capital in nature, constituting almost 60.18 *per cent* of the total expenditure.

This report contains major findings arising from the test audit of transactions of the Navy, the Coast Guard, the Military Engineer Services and four Defence Public Sector Shipyards *viz.*, Mazagon Dock Limited, Mumbai, Garden Reach Shipbuilders & Engineers Limited, Kolkata, Goa Shipyard Limited, Goa, and Hindustan Shipyard Limited, Visakhapatnam. Some of the major findings included in the Report are discussed below.

I Medium Refit cum Upgradation of INS Sindhukirti

The Medium Refit (MR) of an EKM submarine was due for commencement in 2001, but was carried out from January 2006, by which time the material state of the submarine witnessed extensive deterioration. The MR was scheduled to be completed by January 2009, however, due to deficiency in manpower deployment by the yard, lack of protection to main line cables, delayed supply of yard materials and modernization of equipment, the submarine was delivered by the shipyard to the Navy in June 2015, with its Sea Acceptance Trials to follow. As a result, the Navy is unable to operate one of their lethal platforms since June 2004.

(Paragraph 2.1)

II Avoidable expenditure of ₹20.80 crore on Medium Refit cum Cadet training ship conversion of INS Sujata due to improper evaluation of bids

Navy accepted (February 2009) the unsolicited bids of M/s WISL, Mumbai (i.e. a shipyard) for conversion of Indian Naval Ship (INS) Sujata as Cadet Training Ship, on the assumption that it was a merged entity of M/s ABG,

Gujarat (another shipyard) to whom Request for Proposal (RFP) was issued (November 2008). Further, rejection (October 2009) of the bid of M/s WISL in spite of provisions for consideration of unsolicited bids in the Defence Procurement Manual and consequent re-issue (January 2010) of RFP led to a delay of 18 months in conclusion of contract and avoidable expenditure of ₹20.80 crore.

(Paragraph 3.1)

III Over provisioning of Roller Steel

Failure of the Indian Navy to follow the extant system driven Review Programme to determine the Procurement Quantities of Roller Steel coupled with the fact that there was reduction in the holding of Sea Harrier aircraft, during the last decade led to the over provisioning and an avoidable expenditure of ₹2.54 crore. Further, due to imminent scheduled decommissioning of aircraft fleet in December 2015, the prospect of utilisation of this over-provisioned quantity of Roller Steel lying in stocks is unlikely.

(Paragraph 3.2)

IV Extra expenditure of ₹2.43 crore incurred on procurement of spares from a foreign firm

Material Organisation, Mumbai procured spares from a foreign firm on Proprietary Article Certificate basis even though the spares were available indigenously at a much lesser cost resulting in extra expenditure of ₹2.43 crore.

(Paragraph 3.3)

V Unfruitful expenditure of ₹2.17 crore due to improper planning and consequent offloading of nickel and chrome plating work

A project sanctioned at a cost of ₹4.58 crore was short-closed after incurring an expenditure of ₹2.17 crore, due to the unilateral action of Director General Naval Projects (Visakhapatnam) in reducing the scope of work by deleting critical items. As a result, the user, Naval Dockyard, Visakhapatnam [ND (V)] was deprived of the intended facility and had to off-load Nickel/ Chrome plating jobs to private trade.

(Paragraph 3.4)

VI Excess procurement of naval stores worth ₹1.03 crore

Lack of due diligence on the part of Material Organisation, Visakhapatnam {MO (V)} in analysing the specification while placing the purchase order led to excess procurement of cables and resultant avoidable expenditure of ₹1.03 crore.

(Paragraph 3.5)

VII Non exercise of Tolerance clause resulting in avoidable extra expenditure of ₹1.44 crore

Lack of due diligence by Navy in consolidating the requirement before issuing the Request for Proposal (RFP) led to issue of two separate RFPs for same type of equipment within eight months. Further, it did not invoke the provision of Tolerance clause included in the RFP which resulted in procurement of the same item from the same firm at a much higher rate thus incurring an extra expenditure of ₹1.44 crore.

(Paragraph 3.6)

VIII Avoidable payment of interest amounting to ₹1.15 crore

Undue delay by the Engineer-in-Chief Branch in taking up an Arbitration Award for seeking advice of the Legal Advisor (Defence) resulted in an avoidable payment of penal interest of ₹1.15 crore. Moreover, a Project sanctioned in 2003 is still languishing even after a lapse of 12 years with a 42 *per cent* increase in Project cost so far.

(Paragraph 3.7)

IX Unwarranted procurement of Electric Tachometers

Material Organisation, Mumbai{MO (MB)} concluded a contract in May 2009 for purchase of 14 Tachometers at a cost which was about 15 times higher than the Last Purchase Price of another contract concluded just two months before, in March 2009, for purchase of 24 Tachometers resulting in extra expenditure of ₹76.44 lakh. Further, in gross violation of Defence Procurement Manual, MO (MB) raised the indents for procurement of Tachometers without assessing the requirement which led to 23 Tachometers worth ₹85.74 lakh lying in stock for the last four years without any demand.

(Paragraph 3.8)

X Delay in acquisition of Inshore Patrol Vessels

Acquisition of Inshore Patrol Vessels (IPVs) for Coast Guard on nomination basis for timely replacement of existing 13 IPVs did not fructify due to procedural delays. Resultantly, eight of the thirteen IPVs decommissioned between December 2008 and July 2013 could be replaced after a delay of four to sixty months, while replacement of the remaining five IPVs had not been received, thereby resulting in restricted operational effectiveness of the Coast Guard.

(Paragraph 4.1)

XI Utilisation of facilities created by Shipyards

Garden Reach Shipbuilders and Engineers Limited created facilities without ensuring orders commensurate with the facilities created resulting in under utilisation of facilities created. The facilities created in Goa Shipyard Limited remained underutilised due to non-finalisation of collaborator for Mine Counter Measure Vessels project and non-receipt of orders for Offshore Patrol Vessels.

(Paragraph 5.1)

XII Non-recovery of Liquidated Damages – Mazagon Dock Limited

Non-recovery of liquidated damages amounting to ₹2.75 crore by Mazagon Dock Limited for delay in completion of the works was an undue favour to the contractor.

(Paragraph 5.2)

XIII Diversion of funds by Hindustan Shipyard Limited

Hindustan Shipyard Limited, despite receiving funds from Ministry of Defence (MoD), did not commence the work of Repair and Refurbishment of Machinery and Infrastructure due to absence of orders from MoD. The funds received were kept in fixed deposits and also temporarily diverted to meet the working capital requirements contrary to the terms of sanction.

(Paragraph 5.3)

CHAPTER I: INTRODUCTION

1.1 About the Report

The report relates to matters arising from audit of the financial transactions of Ministry of Defence and its following organisations:

- Indian Navy (IN)
- Indian Coast Guard (ICG)
- Defence Research and Development (R & D) Organisation of Ministry of Defence and its laboratories dedicated primarily to IN
- Mazagon Dock Limited, Mumbai (MDL)
- Garden Reach Shipbuilders & Engineers Limited, Kolkata (GRSE)
- Goa Shipyard Limited, Goa (GSL)
- Hindustan Shipyard Limited, Visakhapatnam (HSL)
- Defence Accounts Department dealing with IN
- Military Engineer Services (MES) dealing with IN

Office of the Principal Director of Audit, Navy [PDA (N)][1], New Delhi, along with its three branch offices at Mumbai, Vishakhapatnam and Kochi is responsible for audit of Indian Navy, Coast Guard and other related organisations. MDL, GRSE, GSL and HSL are audited by the Principal Director of Commercial Audit & Ex-officio Member Audit Board IV, Bengaluru.

There are broadly three distinct types of audit: Financial Audit, Compliance Audit and Performance Audit.

[1] Previously in Mumbai.

Financial Audit is the review of financial statements of an entity that seeks to obtain an assurance that the financial statements are free from material misstatements and present a true and fair picture.

Compliance Audit scrutinises transactions relating to expenditure, receipts, assets and liabilities of the audited entities to ascertain whether the provisions of the Constitution of India, applicable laws, rules, regulations and various orders and instructions issued by the competent authorities are being complied with.

Performance Audit is an in-depth examination of a programme, function, operation or the management system of entity to assess whether the entity is achieving economy, efficiency and effectiveness in the employment of available resources.

1.2 Authority for audit

Article 149 of the Constitution of India and the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act 1971 and Regulations of Audit and Accounts 2007, give authority for audit and detailed methodology of audit and its reporting.

1.3 Planning and conduct of audit

Audit is prioritised through an analysis and evaluation of risks so as to assess their criticality in key operating units. Expenditure incurred, operational significance, past audit results and strength of internal control are amongst the main factors which determine the severity of the risks.

Audit findings of an entity/unit are communicated through Local Test Audit Reports/Statement of Cases. The response from the audited entity is considered which may result in either settlement of the audit observation or referral to the next audit cycle for compliance. Serious irregularities are processed as draft paragraphs for inclusion in the Audit Reports which are submitted to the President of India under Article 151 of the Constitution of India, for laying them before each House of Parliament. Performance Audits are done through structured exercise by defining scope of audit, holding entry conference, sampling of units, exit conference, inclusion of feedback on draft report and issuance of final report.

1.4 Profile of the audited entities

The Indian Navy is headed by the Chief of Naval Staff. Naval Headquarters (NHQ) is the apex body and chief management organisation and is responsible for command, control and administration of the Indian Navy. Operational and maintenance units of Indian Navy consist of warships and submarines, dockyards, naval ship repair yards, armament and weapon equipment depots and material organisations. Indian Navy has an Aviation wing with air stations and allied repair facilities under them. Indian Navy also has overseeing teams which monitor the construction of ships and submarines at the concerned shipyards.

The Indian Coast Guard was created to protect the country's vast coastline and offshore wealth. The Director General, Coast Guard exercises general superintendence, direction and control of the Coast Guard. The Coast Guard has various types of patrol vessels for patrolling the coastline for illegal activities like smuggling, trespassing into Indian Maritime zones etc. Coast Guard also has an aviation wing to patrol the coastal areas and carry out Search and Rescue Mission at sea with fixed and rotary wing. The aviation wing has Coast Guard Air stations and Air Enclaves for effectively carrying out its duties in all the coastal areas.

Defence Public Sector Undertakings: There are four Defence Public Sector Shipyards (DPSS) *viz.*, Mazagon Dock Limited (MDL), Garden Reach Shipbuilders & Engineers Limited (GRSE), Goa Shipyard Limited (GSL) and Hindustan Shipyard Limited (HSL) under the administrative control of the Ministry of Defence. The four shipyards are engaged in building warships and vessels of various sizes for the maritime forces of the country. The management of shipyards is vested in the Board of Directors headed by a Chairman & Managing Director who is assisted by Functional Directors. The product line of the shipyards include Inshore Patrol Vessel, Fast Patrol Vessels and Offshore Patrol Vessels besides Frigates and Anti Submarine Warfare (ASW) Corvettes (GRSE), Passenger cum Cargo Vessel, Submarines, Tugs, Corvettes and Missile Boats (MDL), Pontoons (GSL) and Tugs, Dredger and Passenger Ferry/Ships (HSL). While MDL, GRSE and GSL are under the administrative control of Ministry of Defence, the administrative control of HSL was transferred from Ministry of Shipping to Ministry of Defence in February 2010.

i. Mazagon Dock Limited, Mumbai (MDL) is a fully owned Government of India undertaking under the administrative control of the Ministry of Defence. It is engaged in the construction of warships for the Navy and offshore structures for the ONGC. The paid up capital of MDL as on 31 March 2014 was ₹199 crore. The turnover of MDL increased from ₹2291 crore in 2012-13 to ₹2866 crore in 2013-14 *i.e.* 25 *per cent*.

ii. Garden Reach Shipbuilders & Engineers Limited, Kolkata (GRSE) is a fully owned Government of India undertaking under the administrative control of the Ministry of Defence. It is engaged in ship building and ship repair. The paid up capital of GRSE as on 31 March 2014 was ₹124 crore. The turnover of GRSE increased from ₹1527 crore in 2012-13 to ₹1611 crore in 2013-14 *i.e.* 6 *per cent*.

iii. Goa Shipyard Limited (GSL) is a Government of India undertaking under the administrative control of the Ministry of Defence. The major shareholders of GSL are Government of India (51 *per cent*) and MDL (47 *per cent*). It is engaged in designing and building of various classes of ships for the defence as well as the commercial sectors. The paid up capital of GSL as on 31 March 2014 was ₹29 crore. The turnover of GSL increased from ₹507 crore in 2012-13 to ₹509 crore in 2013-14.

iv. Hindustan Shipyard Ltd, Visakhapatnam (HSL) is a fully owned Government of India undertaking under the administrative control of the Ministry of Defence. It is engaged in shipbuilding, ship repairs and submarine repairs. The paid up capital of HSL as on 31 March 2014 was ₹302 crore. The turnover of HSL decreased from ₹484 crore in 2012-13 to ₹453 crore in 2013-14 *i.e.* 7 *per cent*

The Military Engineer Services (MES) is one of the largest Government construction agencies and is headed by Engineer-in-Chief. The MES is responsible for conclusion of contracts, execution of work services and maintenance of existing buildings of the Armed Forces. It works under the Engineer-in-Chief Branch of Army Headquarters.

The Defence Research and Development Organisation undertakes design and development of weapon systems and equipment in accordance with the

expressed needs and qualitative requirements laid down by the services. Certain laboratories are dedicated exclusively to Navy like the Naval Science and Technological Laboratory (NSTL), Naval Physical and Oceanographic Laboratory (NPOL) and Naval Materials Research Laboratory (NMRL). These organisations also render scientific advice to the Service Headquarters. They work under the Department of Defence Research and Development of the Ministry of Defence.

The Defence Accounts Department headed by the Controller General of Defence Accounts is responsible for accounting of defence services receipts and expenditure as well as defence pensions and also provides services in terms of financial advice.

1.5 Defence Budget

The Defence budget is broadly categorised under Revenue and Capital expenditure. While Revenue expenditure includes pay and allowances, stores, transportation and work services etc., Capital expenditure covers expenditure on acquisition of new ships, submarines, weapons, ammunition and replacement of obsolete stores, construction work.

The Defence expenditure increased from ₹1,87,469 crore in 2012-13 to ₹2,09,789 crore in 2013-14 *i.e.* by 11.91 *per cent*. The share of Indian Navy in the total expenditure on Defence Services in 2013-14 was ₹33,831 crore *i.e.* 16.13 *per cent.*

1.6 Budget and Expenditure of Navy

The summarised position of appropriation and expenditure during 2009-10 to 2013-14 in respect of Indian Navy is reflected in the Table below:

Table 1.1: Appropriation and Expenditure

(₹ in crore)

Year	Description	Capital		Revenue	
		Voted	Charged	Voted	Charged
2009-10	Final Grant	13,284.33	74.87	9,435.70	4.23
	Actual Expenditure	13,272.36	75.45	9,586.21	0.88
	Total Excess /Savings(+)/(-)	(-) 11.37	(+) 0.58	(+)150.51	(-)3.35
2010-11	Final Grant	16,898.32	6.95	10,002.52	7.45
	Actual Expenditure	17,136.09	4.08	10,141.36	3.33
	Total Excess/Savings(+)/(-)	(+)237.77	(-)2.87	(+)138.84	(-)4.12
2011-12	Final Grant	17,920.69	1.45	12,335.02	11.91
	Actual Expenditure	19,210.86	0.66	12,057.82	0.91
	Total Excess/Savings(+)/(-)	(+)1,290.17	(-)0.79	(-)277.20	(-)11.00
2012-13	Final Grant	17,057.74	8.68	12,741.82	13.20
	Actual Expenditure	17,753.62	6.26	12,095.95	22.77
	Total Excess/Savings(+)/(-)	(+)695.88	(-)2.42	(-)645.87	(+)9.57
2013-14	Final Grant	19,378.62	7.00	13,331.12	32.82
	Actual Expenditure	20,351.20	7.65	13,451.52	20.73
	Total Excess/Savings (+)/(-)	**(+)**972.58	(+)0.65	(+)120.40	(-)12.09

Source: Year-wise Appropriation Accounts of Defence Services.

An analysis of the Appropriation Accounts, Defence Services for each of the five years had been included in the Report of the Comptroller and Auditor General of India for the relevant years, Union Government – Accounts of the Union Government.

1.6.1 Navy Expenditure

The total expenditure incurred by the Indian Navy during 2009-2014 ranged between 15.73 and 17.78 *per cent* of the total Defence expenditure. In the year 2013-14, the expenditure of Indian Navy rose by 13.23 *per cent* from ₹29,879 crore to ₹33,831 crore as compared to the previous year.

A broad summary of expenditure of Indian Navy is given in the Table below:

Table 1.2: Expenditure of Indian Navy

(₹ in crore)

Year	Total	Percentage change over previous year	As a percentage of total Defence Expenditure	Revenue Expenditure	Capital Expenditure
2009-10	22,935	(+)31.76	15.73	9,587	13,348
2010-11	27,285	(+)18.96	17.19	10,145	17,140
2011-12	31,270	(+)14.60	17.78	12,059	19,211
2012-13	29,879	(-) 4.45	15.94	12,119	17,760
2013-14	33,831	(+)13.23	16.13	13,472	20,359

Source: Year-wise Appropriation Accounts of Defence Services

1.6.2 Capital Expenditure

The Capital expenditure of the Indian Navy rose by 14.63 *per cent* during five year period from 2009-10 to 2013-14. In absolute terms, Capital expenditure increased from ₹13,348 crore in 2009-10 to ₹20,359 crore in 2013-14.

The Capital Expenditure of Indian Navy was mainly incurred on acquisition of naval fleet and aircraft and aero engines. The average annual distribution of expenditure over different categories for the last five years (2009-10 to 2013-14) for Indian Navy is depicted in the Table below:

Table 1.3: Capital Expenditure of Indian Navy

(₹ in crore)

Year	Naval Fleet	Naval Dockyard	Aircraft and Aero-Engine	Const-ruction Works	Other Equipments[2]	Others	Total
2009-10	7,460 (56%)	720 (5%)	3,603 (27%)	308 (2%)	868 (7%)	389 (3%)	**13,348**
2010-11	10,620 (62%)	720 (4%)	3,187 (19%)	637 (4%)	1,578 (9%)	398 (2%)	**17,140**
2011-12	10,320 (54%)	648 (3%)	4,336 (23%)	515 (3%)	2,583 (13%)	809 (4%)	**19,211**
2012-13	11,074 (62%)	752 (4%)	1,695 (10%)	527 (3%)	2,773 (16%)	939 (5%)	**17,760**
2013-14	8,151 (40%)	633 (3%)	7,746 (38%)	516 (3%)	2,630 (13%)	683 (3%)	**20,359**

Source: Year- wise Appropriation Accounts of Defence Services.

[2] Other equipments include Electrical/Electronics, Weapon Equipments, Space and Satellite equipments, Electronic Warfare equipments etc.

During the year 2013-14, a significant portion (78.08 *per cent)* of Capital expenditure was incurred on procurement of aircraft and aero engine and naval fleet. About 12.92 *per cent* was spent on other equipment and 2.54 *per cent* was spent on construction activities.

1.6.3 Revenue Expenditure

During 2009-10 to 2013-14, Revenue expenditure of the Indian Navy increased by 40.52 *per cent* from ₹9,587 crore in 2009-10 to ₹13,472 crore in 2013-14. The Revenue expenditure of the Indian Navy was mainly incurred on pay and allowances and stores. The distribution of expenditure over different categories of Revenue expenditure for the last five years is depicted below:

Table 1.4: Revenue Expenditure of Indian Navy

(₹ in crore)

Year	Pay and allow-Ances	Stores	Works	Trans-port	Repair/ Refit	Others	Total
2009-10	3,971 (41%)	2,957 (31%)	645 (7%)	233 (2%)	572 (6%)	1,209 (13%)	**9,587**
2010-11	3,731 (37%)	3,437 (34%)	701 (7%)	288 (2%)	606 (6%)	1,382 (14%)	**10,145**
2011-12	4,508 (37%)	4,173 (35%)	763 (6%)	353 (3%)	768 (6%)	1,494 (12%)	**12,059**
2012-13	4,697 (39%)	3,982 (33%)	760 (6%)	380 (3%)	654 (5%)	1,646 (14%)	**12,119**
2013-14	5,085 (38%)	4,619 (34%)	1,031 (8%)	347 (3%)	593 (4%)	1,797 (13%)	**13,472**

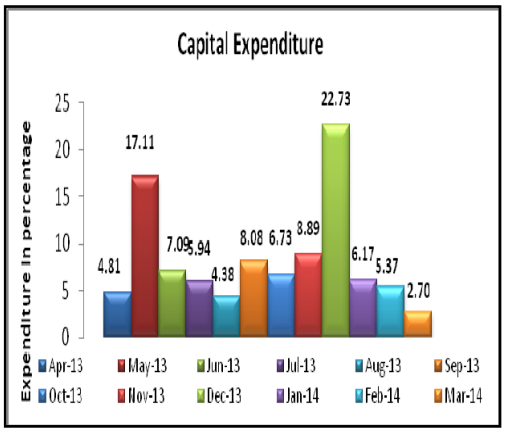
Source: Year-wise Appropriation Accounts of Defence Services

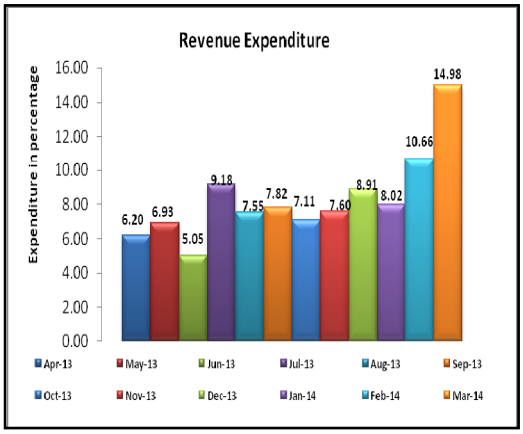
1.6.4 Flow of Expenditure of Indian Navy during the year

The flow of Capital and Revenue[3] expenditure during 2013-14 is indicated as below:

[3] The total Revenue Expenditure is exclusive of ₹24.99 crore, which has been expended by Ministry of Information and Broadcasting, on behalf of Indian Navy and the monthly break up was not furnished to audit.

Figure: 1.1 Flow of Expenditure of Indian Navy during 2013-14





Source: Information provided by Controller General of Defence Accounts

Scrutiny of flow of expenditure revealed that the Revenue expenditure of Indian Navy in March 2014 was 14.98 *per cent* which was within the limit of 15 *per cent* prescribed by the Ministry of Finance.

1.7 Budget and Expenditure of Coast Guard

The budget of the Coast Guard forms part of the Grant of the Ministry of Defence. The amount provided for revenue and capital are under the Major Head 2037- 'Customs (Preventive and other functions- Coast Guard Organisations)' and 4047- 'Capital Outlay of Fiscal Services, Customs (Coast Guard Organisation)' respectively. Separate Major heads for Coast Guard expenditure under Ministry of Defence have not been opened.

1.7.1 Expenditure of Coast Guard

The total expenditure of Coast Guard ranged between ₹1,529.15 crore and ₹2,510.06 crore from 2009-10 to 2013-14. The expenditure dropped by 15.70 *per cent* in 2013-14 as compared to the previous year.

A broad summary of allotment and expenditure is given in the Table below:

Table 1.5: Expenditure of Coast Guard

(₹ in crore)

Year	Budget Estimates			Final Grant/ Appro-Priation	Expenditure		
	Capital	Revenue	Total		Capital	Revenue	Total
2009-10	1,300.42	604.37	1,904.79	1,525.72	908.05	621.10	1,529.15
2010-11	1,100.00	882.45	1,982.45	2,016.06	1,200.78	813.57	2,014.36
2011-12	1,600.00	890.94	2,490.94	2,532.88	1,575.38	925.84	2,501.22
2012-13	1,620.00	906.63	2,526.63	2,525.41	1,564.71	945.35	2,510.06
2013-14	1,775.00	1,054.81	2,829.81	2,078.15	1,070.22	1,047.50	2,117.72

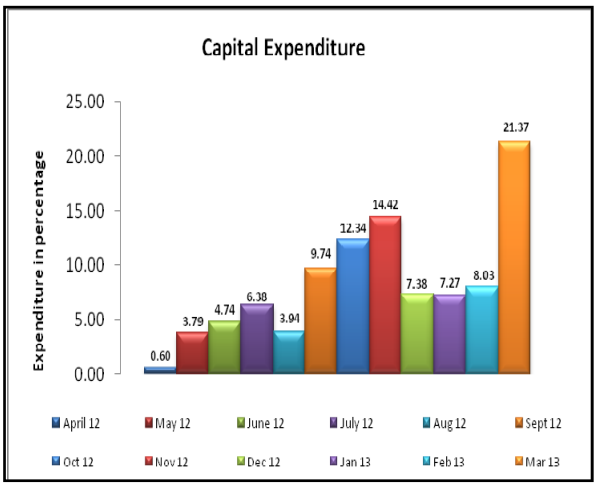
(Source: Information provided by Coast Guard Headquarters)

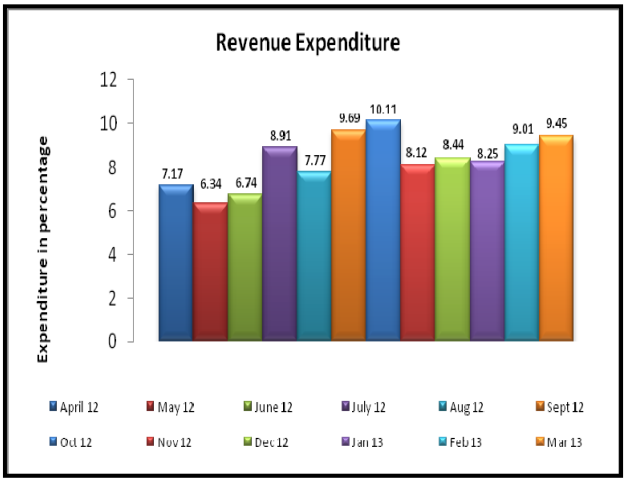
The Capital expenditure of Coast Guard decreased by nearly 31.60 *per cent* from ₹1,564.71 crore to ₹1,070.22 crore in the year 2013-14 as compared to the previous year. The Revenue expenditure of Coast Guard increased by nearly 10.81 *per cent* from ₹945.35 crore to ₹1,047.50 crore in the year 2013-14 as compared to the previous year.

1.7.2 Flow of Expenditure during the year

Audit examined flow of Capital and Revenue expenditure during the year 2013-14, which is indicated as below:

Figure: 1.2 Flow of Expenditure of Coast Guard during 2013-14





(Source: Information provided by Coast Guard Headquartrs)

Scrutiny of expenditure revealed that a substantial portion of Capital expenditure was incurred by the Coast Guard in the month of March 2014. The Coast Guard incurred about 21.37 *per cent* of the Capital expenditure in the month of March 2014 alone and 36.67 *per cent* of the Capital expenditure in the last quarter which was not within the limit of 15 *per cent* for the month of March and 33 *per cent* for the last quarter as prescribed by the Ministry of Finance. However, the Revenue expenditure was within the limits prescribed by Ministry of Finance.

1.8 Receipts of the Navy and Coast Guard

The details of receipts and recoveries pertaining to the Indian Navy and Coast Guard during the last five years ending 2013-14 for the services that they provided to other organisations/departments are given in the Table below:

Table 1.6: Revenue Receipt of Indian Navy and Coast Guard

(₹ in crore)

Year	Receipt and Recoveries in respect of Navy	Receipt and Recoveries in respect of Coast Guard
2009-10	241.30	31.09
2010-11	165.68	13.33
2011-12	154.94	06.73
2012-13	285.07	34.41
2013-14	437.89	27.19

Source: Figures of actual receipts as given in Defence Service Estimates for each year (For Navy) and Information provided by Coast Guard Headquarters

The receipt and recoveries in respect of Navy has shown an increase of 54 *per cent* as compared to previous year, whereas the receipts and recoveries in respect of Coast Guard have shown a decline of 21 *per cent* from the previous year.

1.9 Response to Audit

1.9.1 Response of the Ministry to Draft Audit Paragraphs

On the recommendations of the Public Accounts Committee (PAC), the Ministry of Finance (Department of Expenditure) issued directions to all the Ministries in June 1960 to send their response to the Draft Audit Paragraphs proposed for inclusion in the Report of the Comptroller and Auditor General of India within six weeks.

The Draft Paragraphs proposed for inclusion in this Report were forwarded to the Secretary, Ministry of Defence between January 2015 and February 2015 through demi-official letters, drawing attention to the audit findings and requesting a response within six weeks.

Despite the instructions of the Ministry of Finance, MoD's replies to six Paragraphs out of thirteen Paragraphs included in this Report were not received as given in Annexure I. Thus, the response of the Ministry could not be included in respect of these Paragraphs.

1.9.2 Action Taken Note on Audit Paragraphs of earlier Reports

With a view to enforce accountability of the executive in respect of all issues dealt with, in various Audit Reports, the PAC desired that Action Taken Notes (ATNs) on all paragraphs pertaining to the Audit Reports for the year ended 31 March 1996 onwards be submitted to them, duly vetted by audit, within four months from the laying of the Report in Parliament.

Status of outstanding ATNs on Audit paragraphs relating to the Navy and Coast Guard as on 31 August 2015 is shown as under:

Table 1.7: Status of ATN

Status of ATN	Navy and Coast Guard	Defence Shipyards
Audit Paragraphs/ Reports on which ATNs have not been submitted by the Ministry even for the first time	6	1
Audit Paragraphs/ Reports on which revised ATNs are awaited.	15	2

CHAPTER II: MINISTRY OF DEFENCE

2.1 Medium Refit cum Upgradation of INS Sindhukirti

2.1.1 Executive Summary

Ten EKM submarines were acquired by the Indian Navy from Russia between 1986 and 2000. Of the ten submarines, Medium Refit (MR) of six submarines was offloaded to Russia due to lack of expertise, non-availability of spares and technical documentation. The first indigenous MR of an EKM submarine commenced at Naval Dockyard, Visakhapatnam [ND(V)] in July 1999. In order to develop alternative MR capability outside Naval Dockyards, the MR of INS Sindhukirti was awarded to a PSU yard i.e. Hindustan Shipyard Limited, Visakhapatnam, in June 2005. The execution of MR within the parameters of economy, efficiency and effectiveness was examined and salient points are mentioned below:

- While planning and scheduling the Medium Refit cum Upgradation of a submarine, INS Sindhukirti, the Operational-cum-Refit-Cycle (OCRC) was not adhered to. MR of the submarine was due for commencement by 2001 and completion in 2004, but was actually carried out from 2006 after the submarine witnessed extensive deterioration and was put on extended notice for motoring[1] in June 2004.
- Though the development of indigenous repair capability was envisioned in 2000 and the sanction for the first MR of submarine at an indigenous commercial yard was accorded in June 2002, yet the contract for the MR was concluded only in October 2005.

[1] Extended notice for motoring – indicates that deployment of a ship/submarine for operational duty will not be at short notice

- Against the scheduled completion of the refit by January 2009 as per the above contract, the submarine has been delivered by the shipyard to the Navy in June 2015, with Sea Acceptance Trials yet (September 2015) to be completed.
- Deficiency in manpower deployed for the refit by the yard, non-adherence to the requirement of protection of cables and delayed supply of yard materials as well as modernisation of equipment delayed the refit. Ineffective project management and lack of a dedicated project team to oversee the refit further hampered the progress of refit as planned.

  Cumulatively, the cost of refit was enhanced from ₹629.50 crore (June 2005) to ₹990.52 crore (August 2013), with additional liabilities of ₹92.17 crore still being claimed (September 2015) by the yard. This apart, improper financial management led to diversion of funds to the tune of ₹92 crore.
- Resultantly, the Navy was unable to operate one of its EKM submarines since June 2004 and was deprived of one of its conventional platforms for more than 10 years.

Recommendations:

(a) Planning and commencement of refits of submarines should be as per schedule, to avoid excessive exploitation of submarines as well as extended refit schedule.

(b) The Ministry should ensure that efforts are augmented to improve the scale of utilisation of indigenous materials in refits, in line with its own directives.

(c) The Navy should establish a dedicated Project Team, the expertise of which is available to each indigenous offloaded refit.

2.1.2 Introduction

Repairs and Refits are critical activities of a Ship/ Submarine to make it operational again by repairing, re-equipping or re-supplying. Repairs and refits are to be undertaken in accordance with the Operational Cum Refit Cycle (OCRC) promulgated by Integrated Headquarters Ministry of Defence (Navy)

[IHQ MoD (N)] for each class of ship/ submarine as stipulated in the relevant order. The OCRC is promulgated based on the operating experience, changes in technologies and induction/phasing out of different classes of ships/submarines. Essentially, the OCRC depicts the period the ship is to remain at sea, available for deployment, followed by a period to be spent on a particular refit.

2.1.3 Kinds of Refits for Ships/Submarines

Table 2.1

Refit	Description
Short Refit (SR)	caters to defects arising within the ship's operational cycle and is basically meant for essential repairs and for repairs on equipment that has fallen due as per the recommendation of the OEM, based on time and running hours
Normal Refit (NR)	includes full hull survey and major routine maintenance on main equipment such as gear box, main engine, pumps, etc
Medium Refit (MR)	includes all major repairs and replacements on the ship

2.1.4 MR of INS Sindhukirti

INS Sindhukirti belongs to the EKM class of submarines, ten of which were built under a contract between FSUE Rosvooruzhenie (RVZ) and the Ministry of Defence(MoD) and had been acquired by Indian Navy between 1986 and 2000. Up to June 2000, MR of two EKM submarines was offloaded (June 1999) to Russia while the MR of one EKM submarine commenced(July 1999) in Naval Dockyard, Visakhapatnam. As per OCRC promulgated (January 1996) by IHQ MoD (N), INS Sindhukirti was commissioned in November 1989, was due for her MR in 2001 which was scheduled to be completed in 36 months. Sanction for offloading of MR cum Upgradation of INS Sindhukirti to Hindustan Shipyard Ltd, Visakhapatnam [HSL (V)] at a cost of ₹629.50 crore was accorded (June 2005) by GoI, MoD. Accordingly, the

contract was concluded (October 2005) between ND(V) and HSL at a total cost of ₹629.50 crore, with commencement of refit in January 2006 and delivery of the submarine scheduled for January 2009. The cost and timelines, however, underwent several revisions during the MR, as detailed below :

Table 2.2

Contract/Extension Date	Probable Date of Completion (PDC)	Cost (₹ in crore)
October 2005	January 2009	629.50
June 2010	June 2011	778.30
August 2013	February 2014	990.52
June 2014	March 2015	-
June 2015	May 2015	-

In response to a query, Audit was informed by ND(V) (August 2015) that all the contracted works and trials in the scope/control of the shipyard were completed as on 31st May 2015. As of August 2015, ₹944.72 crore was paid to HSL for the MR cum Upgradation. Sea Acceptance Trials (SATs) of the submarine were scheduled to be undertaken after 30th September 2015.

2.1.5 Refit Implementation

The scope of work of the refit included removal of equipment, defect survey, repair of hull, lowering and installation of equipment, undocking and completion of Harbour Acceptance Trials (HATs) by the shipyard. The scope of work also included Modernisation of equipment[2] to be supplied by the Russian agency M/s ROE (Rosoboronexport) as well as

[2] Apassionata-EKM, AICS-LAMA-EKM, Torpedo Tubes and Water Cooling System (ROE scope) and Sonar Ushus, System Porpoise, CCS Mk-II and Air Conditioning system (Navy scope)

the Navy. The MR was being implemented through the following agencies/entities:

Table 2.3

Agency/Entity	Role in the MR of INS Sindhukirti
Ministry of Defence	Competent Financial Authority for all matters relating to cost and timelines of the MR.
Integrated Headquarters Chief Of Materials /Directorate of Fleet Maintenance (DFM)	Responsible for overseeing the execution and progress of refit.
ND (V)	Contract Operating Authority (COA) and a party to the contract with the shipyard.
Warship Overseeing Team, Visakhapatnam [WOT(V)]	Team of Naval personnel responsible for overseeing the refit and certifying completed work at the yard's premises.
HSL	The shipyard executing the MR in collaboration with M/s ROE, the Russian agency, providing technical assistance and material support for undertaking the MR cum Modernisation.

2.1.6 Scope and Methodology of Audit

In view of the significance of the MR cum Upgradation of INS Sindhukirti, we conducted a review of the MR cum Modernisation of INS Sindhukirti at DFM, ND (V) and WOT (V), by issuing preliminary audit memos and observations. We requested (November 2014) IHQ MoD(N) for an Entry Conference, however, there was no response from the Navy. Interactions were also held with Naval Officers at DFM, ND (V) as well as WOT (V) for better appreciation of the issues. The Draft Audit Paragraph was issued to the Ministry in February 2015. An Exit

Conference was conducted in May 2015. The reply of the Ministry was received in May 2015 and has been suitably incorporated.

2.1.7 Audit objectives

The primary audit objectives were to ascertain whether:

(a) Overall planning for offloading of Medium Refit cum Upgradation of INS Sindhukirti was comprehensive and effective for implementation of the MR-cum-Upgradation?

(b) Implementation of contractual provisions for MR by the parties for the contract was as per the contractual obligations and was efficient and effective?

(c) Overall monitoring mechanism and financial management was in place and working efficiently to ensure timely implementation of the refit?

2.1.8 Sources of Audit Criteria

The major sources of audit criteria were:

1. Confidential Navy Order (CNO)
2. Navy Order 2/98
3. Navy Order 84/02
4. Detailed Project Report for infrastructural development concluded between FSUE Rosoboronexport, Russia and HSL
5. Government of India Sanction for offloading of MR cum Upgradation of INS Sindhukirti to HSL
6. Main Contract and supplementary contracts concluded between HSL and ND (V) and addendums thereof
7. Supplementary Agreements concluded between FSUE Rosoboronexport, Russia and HSL
8. Minutes of Review meetings held at various levels viz, MoD, IHQ MoD(N), HQENC(V), ND (V) for monitoring of progress of the MR cum Upgradation

9. Planning and PERT (Programme Evaluation Review Technique) chart

Our scrutiny showed non-consideration of vital performance parameters in selection of the yard, poor planning in commencement and execution of refit, improper financial management as well as non-adherence to extant orders/regulations in monitoring the progress of the project.

Major audit findings are discussed in subsequent paragraphs:

2.1.9 Whether the overall planning for offloading of Medium Refit cum Upgradation of INS Sindhukirti was comprehensive and effective for implementation of the MR-cum-Upgradation ?

As sufficient repair facilities were not available in India for undertaking MR level of repairs, the MR of submarines were offloaded to Russia in a progressive manner. In response to directives from MoD in January 2000 to bring out detailed position with regard to efforts to undertake refit/ modernisation of submarines in India and further efforts, that would be required to make navy fully capable indigenously, the Navy submitted (June 2000) a paper on "Development of Indigenous Submarine Repair Capability" to MoD, which proposed offloading of MR of submarines to Public Sector Undertaking (PSU) shipyards in cases of capacity constraints in Naval Dockyards. The Navy shortlisted (June 2000) M/s Hindustan Shipyard Ltd (HSL) and M/s Mazagon Dock Limited (MDL) and subsequently proposed (November 2001) HSL to MoD, preferring HSL over MDL due to work order position as well as HSL's co-location with Naval Dockyard, Visakhapatnam [ND(V)]. The Government of India (GoI) accorded (June 2002) approval for nomination of M/s HSL to undertake the MR cum Upgradation of INS Sindhukirti, in collaboration with ROE, on the conditions that the refit cost would be competitive, the timelines would be as per the Navy and the augmentation of infrastructure at HSL would be with minimal duplication between Navy and HSL.

Our scrutiny showed the following issues in planning the refit :

2.1.9.1 Non-adherence to provisions of CNO 2/96 for planning the refit

Confidential Navy Order (CNO) 2/96 contained comprehensive instructions in respect of the OCRC of all ships and submarines, encompassing other related aspects of refits and maintenance. We observed (September 2014) non-adherence to the provisions of CNO 2/96, which led to deterioration of the submarine by June 2004 and delay in conclusion of the contract for MR, before the MR commenced in January 2006, as discussed below:

(A) As per the OCRC promulgated vide CNO 2/96, MR of an EKM submarine has to commence 138 months after its commissioning. Based on that, the MR of INS Sindhukirti should have commenced in June 2001. We observed (September 2014) that the MR commenced only in January 2006 as the implementation of the proposal to carry out the MR at HSL and obtaining Government approval did not materialise till June 2005. The MR was also delayed due to problems associated with finalisation of Detailed Project Report (DPR) for infrastructure by HSL. The contract for the MR was concluded in October 2005.

The Ministry stated (May 2015) that the timelines given were to be utilised as a guideline and refits were actually scheduled based on the requirements of the operational periods and refits during the cycle, adding that the OCRC had been revised in 2004 and 2012.

The reply of the Ministry is not acceptable because the basis for planning the MR of this submarine was CNO 2/96 which reckoned the concerned cycles to be applicable from the date of commissioning of the vessel. Further, the Principal Director of Fleet Maintenance (PDFM) observed (March 2005) that the MR of INS Sindhukirti, commissioned in November 1989, was due in June 2001 and the commencement of refit was delayed due to the time taken for processing the case for government sanction. Further, due to delay in commencement of the refit, the material state of the submarine deteriorated and it had to be taken off from active operational

duty as well as placed under extended notice for motoring with effect from June 2004.

(B) CNO 2/96 further mentions that the Refit Planning Programme (RPP) aims at streamlining the planning process to facilitate effective scheduling, monitoring and execution of refit of ships and submarines. RPP clearly spells out schedule of various activities such as compiling the work carried out during the previous refits, compilation of defect list etc. in a time bound sequence along with agencies responsible for their execution. Our examination (September 2014) revealed that these activities were not followed.

On the issue of deviation from the provisions of CNO 2/96 with reference to RPP during the MR, the Ministry responded (May 2015) that as per CNO 11/04, the RPP procedure for fully offloaded refits differed as some of the standard RPP activities had to be advanced and some became irrelevant.

The contention of the Ministry regarding the applicability of CNO 11/04 is not tenable as nomination of the yard for the refit and finalisation of work package as well as the issue (September 2004) of Request for Proposal (RFP) for the MR, were completed under CNO 2/96 which was prior to the promulgation of CNO 11/04 (November 2004).

(C) As per Para 11 of CNO 2/96, Pre-refit Trials (PRTs) provide vital inputs to the yard for appreciation of the scope of work and assessment of spares required. In addition, they also aid in identifying fresh defects, inadvertently not projected or inadequately recognised for some reason. PRTs are to be completed five weeks prior to date of commencement. Prior approval of DFM is to be obtained for any deviation.

As per the contract (October 2005), the MR was to commence from 01 January 2006. Hence, PRTs were to be completed by the 4th week of November 2005.

When we enquired (September 2014) about PRTs, the Ministry replied (May 2015) that in the case of Sindhukirti, the Scope of Work (SoW) was drawn up by OEM specialists, therefore the requirement for a PRT would not be

significant as in other refits.

The Ministry's reply is not acceptable as the Set to Work (SoW) was firmed up based on the joint survey in June 2003 and the refit commenced only in January 2006. Hence, the intervening period of over 2 ½ years and further deterioration of the submarine since June 2004 made it all the more incumbent upon the Navy to undertake the PRTs to identify fresh defects/defects overlooked and further firm up the scope of work.

2.1.9.2 Selection of the shipyard

As discussed earlier, MoD preferred (November 2001) HSL over MDL considering certain inherent advantages like HSL's previous experience of undertaking refits of Russian origin submarines as well as its co-location with ND (V) where the Navy had built up its repair infrastructure.

Our scrutiny (November 2014) revealed the following:

- ND (V) expressed (October 2001) serious reservations to HQENC (V) regarding lack of expertise, manpower, quality control mechanism, infrastructure at HSL for undertaking the MR.
- Consideration of advantage of the yard's experience in undertaking refits of Russian origin was incorrect, as the earlier refit of INS Vagli, a Foxtrot[3] class submarine, scheduled between August 1997 and August 2000, was completed by HSL only in September 2006. IHQ MoD(N) observed (November 2001), prior to nomination (June 2002) of HSL for the refit, that HSL would be attempting the MR of an EKM submarine for the first time and these submarines were a quantum technological jump on the Foxtrot class.

The Ministry replied (May 2015) that during the period 2001 to 2012, there had been several instances wherein HSL, MoST, MoD/DDP and other agencies (including Russian side) had endorsed the suitability of the yard. However, the fact remains that ND (V) reiterated their reservations (2001) about lack of expertise and inadequate planning by HSL to HQENC (V)

[3] Foxtrot – submarines with a displacement of 2475 T, 7 of which arrived in India from the former Soviet Union between July 1968 and December 1975 vintage where as EKM submarines were inducted between 1986 and 2000.

in 2011 in view of the inordinate delay in completion of refit. Further, in reply to an audit query regarding the delayed refit of INS Sindhukirti, HSL intimated (May 2012) that "the yard was more tuned to merchant shipbuilding and not very conversant even with the warships, let alone the refit of EKM submarines which was definitely far more complicated"**.**

2.1.9.3 Exclusion of certain cost components in the proposals for sanction of CFA

The Commercial Negotiations Committee (CNC) finalised the cost of MR cum Upgradation as ₹640.69 crore, which was revised to ₹629.50 crore. Even though the negotiated cost was found to be substantially high in comparison to the same work package of INS Sindhuvijay[4] negotiated with ROE for an all inclusive cost of ₹419 crore during the same period (February 2005), CNC recommended the cost, considering the benefits that would accrue to the country and the strategic capability that would be developed for the nation from this project. CNC meeting for amendment to contract (October 2005) and financial sanction was held in February 2010 and an additional Government sanction of ₹148.80 crore was obtained in June 2010.

We observed from the papers (CNC meeting of February 2010) leading to the additional Government sanction of June 2010 that certain components *viz*; Growth of Work (₹52.70 crore) and Service Tax (₹21 crore) included in revised sanction were actually discussed (CNC meeting of May 2005) at the time of processing the original sanction (June 2005) but were not included in the sanctioned cost. Non-inclusion of these components in the initial sanction led to virtual reduction in the cost of refit by the Ministry and further effaced the cost competitiveness which was one of the three conditions on which HSL was nominated and sanction accorded.

The Ministry agreed (May 2015) with the audit findings.

[4] INS Sindhuvijay – an EKM class submarine

2.1.10 Refit Execution:

Whether implementation of refit by the parties to the contract was as per the contractual obligations and was efficient and effective?

As per the contract, the refit was to be completed by January 2009. However, the duration of refit was extended four times up to 31 May 2015, due to delay of 11 to 19 months in supply of yard material by ROE, growth of work on hull and Main Line Cable (MLC) renewal, 16 months time taken in Govt approval for MLC renewal with consequent refit extension and problems arising in ROE scope of work and other refit related activities.

Our scrutiny showed poor refit execution and contract management, as discussed below:

2.1.10.1 Deficiency in engaging required manpower for refit

As per the envisaged/approved deployment of manpower planned by HSL, 3,81,000 man days were to be utilised in the refit activities for completion of refit by January 2009. The Contract Operating Authority *i.e.* ND (V) observed (January 2011) in their communication to HQENC (V) that the rate of deployment of manpower by HSL was very low and the focus of HSL was towards civil orders. We noticed (October 2014) that only 17 *per cent* of the envisaged manpower *i.e.* 64770 mandays (17 *per cent* of 3,81,000) was utilised by HSL as of January 2009 (due date of completion of refit as per contract). HSL replied (December 2014) that delay in supply of yard material by ROE and delay in finalisation of hull survey norms were reasons for low deployment of manpower during the initial three years of the MR. The reply of HSL contradicts the earlier admission (May 2012) to audit that large number of dedicated people were not employed as it was not cost effective for HSL in absence of assured future orders.

The reasons for not taking appropriate action to ensure adequate manpower deployment as well as not discussing this issue during the Annual Refit Conferences(ARC)/ Mid Year Refit Reviews (MYRR)[5] were sought (December 2014) from WOT (V). WOT (V) replied that deployment of

[5] **ARC/MYRR – ARC/MYRR** are conducted every year by IHQ MoD(N) to plan forthcoming refits as well as review the status and progress of on-going refits (in-house/offloaded) being executed under different Naval Commands

manpower is the prerogative of the contractor and they were neither equipped nor provided with manpower to check the deployment of manpower by the yard.

In its reply (May 2015), the Ministry reiterated that it was the shipyard's responsibility to ensure that adequate mandays were deployed to achieve requirements.

The reply of the Ministry has to be seen in light of the fact that timely completion of the refit by optimal deployment of manpower was in the Navy's operational interest and maritime security of the country. Thus, the Ministry could not be absolved of its responsibility to oversee that the deployment of manpower by the yard was optimal.

2.1.10.2 Inadequate protection of electric cables

As per Navy Order (NO) 84/02, electric cables are to be covered by asbestos cloth or other protective material during the hot work to be carried out on the submarine. Under the contract (October 2005), the contractor had to take requisite precautions as per the Navy Order *ibid* prior to commencement of hot work/ welding/burning during the period of vessel's refit.

Our scrutiny of records revealed that the Russian team had carried out initial survey (November 2006) of Main Line Cables (MLCs)[6] and stipulated (November 2006) that HSL had to protect the cables from thermal and mechanical damages during the refit work. However, five years after commencement of refit, specialists from M/s Arktika (OEM) noticed (December 2010) deterioration in the state of MLCs while undertaking repairs of the cables. A joint inspection report (February 2011) of Russians, HSL and WOT(V) brought out that main cables showed flexibility loss due to their long time exposure to ambient air of high temperatures and suffered mechanical/thermal damages caused at the time of dismounting of equipment and repairing hull structures by HSL during 2008-10. The report also mentioned that the cables were protected with asbestos only at an advanced stage of refit, i.e. in April/May 2009 - 40 months after

[6] MLCs – Cables which conduct current from the batteries to various equipment including the main propulsion motors and form the core of the power generation distribution network

commencement of refit. Russian specialists recommended 100 *per cent* renewal of MLCs. HSL proposed the cost for renewal of MLCs as ₹228.92 crore (November 2012). However, the cost was negotiated and renewal of MLCs was sanctioned at a cost of ₹191.80 crore out of the financial sanction of ₹212.22 crore accorded in August 2013.

We observed that though HSL proposed to ND (V) for an additional work for the renewal of MLC, neither HSL's proposal nor ND(V)'s letter forwarding such proposal contained reasons for damage to MLCs. Even HQENC (V)'s recommendation of the proposal to IHQ MoD (N) for 100 *per cent* renewal of MLCs did not contain the fact that the cables were damaged.

We enquired (December 2014) about the reasons for not referring the causes for damage to MLCs to IHQ MoD (N) while seeking their renewal, WOT (V) replied (December 2014) that a mention about the Russian reports was made in the Statement of Case (SOC) forwarded by HSL.

The Ministry replied (May 2015) that asbestos covering was not a pre-requisite prior to any hot work on the submarine, adding that cables were not required to be covered with asbestos cloth during dismounting of equipment. The Ministry also stated that the primary reason for change of MLCs was deterioration of cables, which pointed to the life of cables.

The reply of the Ministry is not acceptable because the contract stipulated that electric cables had to be covered by asbestos cloth or other protective material prior to the commencement of hot work on the submarine by HSL during the refit work. But, the main cables suffered mechanical/thermal damages caused at the time of dismounting of equipment and repairing hull structures by HSL during 2008-10 as brought out in the joint inspection report.

From the above, it is clearly evident that lack of compliance to NO 84/02 and instructions of OEM by HSL for protection of MLCs from thermal and mechanical damages during the refit work resulted in 100 *per cent* renewal of MLCs leading to an extra expenditure of ₹191.80 crore and consequent time overrun of 27 months. In addition, the facts related to non compliance of regulations by HSL, were not highlighted by the Navy while forwarding the proposal to CFA for financial approval and extension of refit duration.

2.1.10.3 Poor Material Management for refit

(a) Contracts between HSL and ROE

HSL concluded (November 2003, September 2004 and October 2005) nine contracts with ROE (being Russian collaborator for the Refit) for undertaking the MR cum Upgradation of INS Sindhukirti. Out of these, one contract was concluded (October 2005) specifically for supply of materials such as steel plates, welding electrodes, pipes, cables, associated fittings and accessories, required for the MR and to be delivered between December 2006 to October 2008. However, the delivery under the contract was not completed timely by ROE, leading to delay in receipt of materials by 11 to 19 months which had a cascading effect on the commencement of major repairs in hull structure. Our examination (December 2014) of six contracts between HSL and ROE for supply of materials and services further revealed that Liquidated Damages (LD) clauses were not included in any of the contracts.

The Ministry replied (May 2015) that the issue was not relevant to the implementation of the contract between HSL and MoD. The reply of the Ministry is untenable because the scope of work for ROE was included in the MR contract between ND(V) and HSL and hence linked to completion of the MR. Therefore, the Ministry cannot abdicate its overall responsibility of ensuring the inclusion of standard contractual clauses in ROE contracts.

Thus, lack of LD clauses prevented remedial action against ROE despite delayed deliveries which had affected the overall progress of refit.

(b) Lack of due diligence while using indigenous electrodes in the MR

The contract for MR of Sindhukirti did not contain a provision for usage of indigenous electrodes and was formulated based on Russian methodology which catered for overall repair and refit of submarine as per Russian Technical Documents (RTDs) which do not cater for use of Indian equipment. However, when the electrodes contracted from ROE were substantially delayed by 19 months, HSL utilised the indigenous electrodes, Ultratensal-MH and Ultratherme-H, in place of 48N1 and 48N11 electrodes authorised

under RTDs. The Russians raised (May 2009) objections to the use of indigenous electrodes. Eastern Naval Command intimated(June 2012) to IHQ, MoD(Navy) that the Russians expressed their inability to depute representatives for Sea Acceptance Trials (SATs) of the submarine, till the issue of electrodes was resolved. Further IHQ MoD (N) intimated to HSL (June 2013) that issue of use of indigenous electrodes has been a point of contention with the Russians in all Indo Russian Inter Governmental Committee (IRIGC) meetings, wherein in the 13th IRIGC meeting they have demanded a separate contract for certification of indigenous electrodes.

In response to our query (October 2014) about electrodes, ND (V) stated (November 2014) that IHQ MoD (N) had approved (March 1995) the usage of indigenous electrodes Ultratensal-MH and Ultratherme-H in lieu of imported electrodes 48N1 and 48N11. IHQ MoD (N) had also stated (June 2012) that indigenous electrodes were used for hull repairs on board EKM class submarines during previous refits at ND (V) and ND (MB)[7] prior to MR at Russia.

We observed (November 2014) that non-consideration of the usage of indigenous material at the contract stage and resorting to their utilisation only after delay in supplies by ROE and without obtaining specific approval from ROE, indicated lack of due diligence by the Navy.

The Ministry admitted (May 2015) that objection of the Russians created hurdles in progress of refit.

Resultantly, utilisation of indigenous yard materials, despite past knowledge and experience of their use in refits of other EKM submarines, could not be sufficiently ensured in the refit effort.

2.1.10.4 Modernisation package for INS Sindhukirti

Scope of Work under the MR cum Upgradation included Modernisation package of INS Sindhukirti by installation of equipment/systems to be supplied by both ROE as well as the Navy.

[7] ND(MB) – Naval Dockyard, Mumbai

(a) Modernisation by ROE

In our analysis (September 2014), we found that as per the scope of work of ROE under the Modernisation package, (i) Supply and installation of Apassionata-EKM (ii) Supply and installation of AICS-LAMA-EKM (iii) Adaptation of Torpedo Tubes and (iv) Installation of water cooling system were included.

As per the contract (October 2005) for Modernisation, guarantee of items supplied was 12 months post completion of SATs but not more than 24 months from the date of delivery, whichever was earlier. We observed (September 2014) that the validity of guarantee of the systems Aius Lama[8] and Appassionata[9] received under ROE contracts for Modernisation package and for equipments Pirit-M[10] and Pallady-M[11] expired even without installation between December 2012 and December 2013.

Resultantly, Supplementary Agreements (SAs) for Maintenance Support (up to 12 months Post SATs) for Appassionata/AICS-Lama and Pirit/Pallady were concluded (October 2013) by HSL with ROE at a cost of ₹6.34 crore. It was further seen from the records that the equipments were installed between June 2014 and September 2014.

The Ministry replied (May 2015) that no costs had been agreed to with HSL by MoD towards the additional guarantee costs.

The Ministry's reply is factually incorrect as the sum of ₹6.34 crore towards the additional guarantee cost for Appassionata/AICS Lama and Pirit/Pallady was included in the total amount of ₹212.22 crore sanctioned by the Ministry for renewal of MLCs in August 2013.

---

8 AICS LAMA - Automated Information Control System
9 Appassionata – Appassionata is a navigational complex for EKM submarines
10 Pirit M - an auto pilot system of the submarine
11 Pallady – M – an auto control system of the submarine

(b) Modernisation by the Navy

As per the indigenous part of the Modernisation package, the Navy had to provide four equipment (i) Sonar USHUS[12] (ii) System Porpoise[13] (iii) CCS Mk-II[14] and (iv) Up-gradation of Air Conditioning system[15].

Audit observed mismatch between date of receipt of equipment by HSL and completion of MR, with regard to two out of four equipment as discussed below :

(i) Sonar USHUS

Sonar USHUS, to be supplied by Navy under Modernisation package, was procured (March 2001) by Navy from M/s Bharat Electronics Ltd. (BEL). Due to recurring defects and sub-optimal performance of the sonar on previous platforms[16], engineering enhancements were recommended to the Navy for INS Sindhuvijay by a core team consisting of M/s BEL and Naval Physiological and Oceanographic Laboratory (NPOL). For Sindhukirti, HSL was directed (September 2012) by IHQ MoD (N) to undertake similar enhancements and sanction for the same was accorded (October 2013) by MoD at a cost of ₹11.40 crore.

The Ministry replied (May 2015) that the sub-optimal performance of USHUS did not affect the overall refit schedule.

The Ministry's reply is factually incorrect because delay of more than 10 months in supply of engineering enhancement package of Sonar USHUS by M/s BEL was cited as one of the reasons by HSL for seeking extension of delivery period up to 31 March 2015.

(ii) Upgradation of AC

Under the indigenous part of modernisation in the Navy's scope of work, existing AC system onboard of INS Sindhukirti was to be upgraded. Our examination (November 2014), showed that the above AC plant ordered (August 2008) by the Navy along with two other AC plants, was allotted to INS Sindhukirti. The AC plant allotted to INS Sindhukirti was received in

---

12 Sonar USHUS – Active and Passive Sonar

13 System Porpoise- An Electronic Support Measures (ESM) system

14 CCS Mk-II - Composite Communication System, CCS Mk II is an integrated communication system designed to provide external and internal communication facilities onboard Naval ships

15 Air Conditioning System- Air conditioning system is used for maintaining the ambient temperature of submarine

16 INS Sindhudhwaj, INS Sindhughosh and INS Sindhuvijay

October 2009 and carried a warranty up to April 2011. Due to delay in completion of refit, the warranty for the AC plant procured at a cost of ₹2.56 crore expired.

In its reply (May 2015), the Ministry admitted the loss of warranty period.

2.1.11 Financial Management

Whether overall financial management was in place?

Audit findings with regard to financial management during MR cum upgradation of INS Sindhukirti are discussed below:

2.1.11.1 Lack of provision for accounting of scrap due to renewal of steel and replaced material/machinery

As per para 6 of Appendix A of Navy Order (NO) 02/98, old ferrous scrap consequent to steel/ pipe renewal would be the property of the contractor if *pro rata* discount per tonnage/meter was given in the refit cost against respective serial.

We sought (September 2014) details of the return/accounting of scrap as well as the *pro rata* discount per tonnage in the refit cost. ND (V) admitted (December 2014) that the contract did not contain the provision either for returning of scrap / old spares or for *pro rata* discount for these scrap/old spares in the refit cost.

Thus, due to non-inclusion of the clause for return/accounting of scrap, the Navy could not derive the benefits of better financial management as the cost of scrap and consequent *pro rata* discount on the refit cost could not be ascertained.

2.1.11.2 Variance in stages for payments between Request for Proposal (RFP) and the contract

As per the deliberations of CNC, the contract with 19 stage payments was concluded (October 2005) mainly to keep the stage payments by and large similar to those agreed with the MR contract of another submarine, INS Sindhuvijay.

Our examination (December 2014) of the stage payments of the contract revealed that 61 *per cent* of total value was payable to the contractor for completion of only degutting/removal of machinery and engines in

comparison to payment of only 20 *per cent* on completion of degutting as per RFP. Similarly, for completion of guarantee after SATs, only 3 *per cent* of the total value was assigned in the contract against the 20 *per cent* of the total value envisaged for this purpose in the RFP.

We further observed that most of the stage payments were of the nature of advances rather than payments for physical completion of various parts of the MR, which provided leverage to HSL for diverting funds meant for the project leading to delay in completion of refit.

The Ministry replied (May 2015) that the decision was taken to provide level playing field to Indian and Russian shipyards undertaking MR of submarines of the Indian Navy.

The Ministry's reply is not acceptable because as per the payment terms of MR contract of INS Sindhuvijay, off loaded to Russia, repair of the equipment was linked from the ninth stage payment onwards where as the repair of equipment of INS Sindhukirti was linked from twelfth stage payment only. Thus, HSL had received three additional stage payments without linkage to the physical completion of refit work. Further as per the CNC, 15 *per cent* advance was proposed with final two stage payments being exactly similar to Sindhuvijay and other payments had been so compiled so as to facilitate HSL in making payments to ROE.

2.1.11.3 Non-inclusion of provision for payments through ESCROW[17] account

HQENC (V) informed (October 2009) IHQ MoD(N) that HSL had diverted ₹92 crore from the total payments of ₹448 crore made to HSL under the project for other projects of HSL and recommended that all future payments be paid through a dedicated ESCROW account in order to avoid any diversion of funds and ensure timely payment to sub-contractors and ROE.

[17] ESCROW - An account wherein the fund out flow would be based upon certification by Warship Production Superintendent (V) and Contract Operating Authority for actual invoices of work done by various sub-contractors on INS Sindhukirti

Despite diversion of funds in the previous refit of INS Vagli, no efforts were made by the Ministry for inclusion of provision of payments through ESCROW account since commencement of this refit, to ensure better financial control and timely completion of refit.

The Ministry admitted (May 2015) that funds had been diverted by HSL and the issue was intrinsic to HSL's management. The Ministry further replied that there was no option of opening of Escrow account available and was a fall out of the thought process during the refit.

The Ministry's contention that diversion of funds was intrinsic to HSL is not tenable as monitoring of fund utilisation by the Navy could have prevented diversion of funds, especially as the prior experience of diversion of funds during the earlier refit of INS Vagli was evidently available before this refit. Further, most of the stage payments were in the nature of advances, i.e. payments for conclusion of contracts with ROE and opening of Letter of Credit (LC) etc. rather than payments for physical completion of various parts of MR. Moreover, 61 *per cent* of total value was payable to the contractor for completion of only degutting/removal of machinery and engines.

Thus, non-exercise of the option of opening an ESCROW account from the commencement of refit prevented smooth progress of the refit of INS Sindhukirti.

2.1.11.4 Delay in accord of financial sanction/ Delivery Period (DP) extension resulted in extra demand of ₹92.17 crore by HSL

HSL forwarded (April 2012) a Statement of Case (SOC) for additional cost of ₹162.58 crore, which was further revised (November 2012) to ₹228.92 crore. Additional sanction for renewal of MLCs at the cost of ₹212.22 crore was accorded (August 2013) by the Ministry. In view of the delay in conclusion of CNC, for the additional cost and consequent 16 months time taken to accord sanction from the request (April 2012) by HSL, the shipyard demanded (February 2014) additional funds of ₹125 crore towards services to Navy for the extended period, deployment of additional labour during extended period and escalation of cost for works services & deputation of specialists etc. HSL

subsequently reduced (September 2014) the amount to ₹92.17 crore due to reduction of tax amount.

We observed (December 2014) that the Ministry acknowledged the delay and approved (June 2014) early conduct of CNC for the additional demand of ₹92.17 crore, The Ministry replied (May 2015) that the additional financial sanction had not been negotiated/approved.

However, the fact remained that the demand for additional sanction by the yard had not been turned down by the Ministry.

2.1.12 Refit Monitoring

Whether overall monitoring mechanism was in place to ensure timely and effective implementation of the refit?

As per the contract dated October 2005, WOT (V) was entrusted with monitoring of the progress of refit at HSL. In addition, the contract also provided for a monthly review meeting at ND (V) level.

Issues related to monitoring noticed during the audit of MR cum Upgradation are discussed in detail below:-

2.1.12.1 Lack of a dedicated Project Team

As per guidelines for offloading of refits of ships and submarines to Indian PSUs/ Private and foreign ship repair yards promulgated by NO 2/98, a dedicated project team consisting of officers and men having intimate knowledge of the work package and ship/submarine's layout was to be nominated/ constituted for close supervision of the refit at the contractor's premises. Local Warship Production Superintendent (WPS), suitably augmented if necessary, would undertake the duties of project team whenever the refit was being undertaken by DPSU/PSU yards.

In response to an audit query (September 2014) regarding constitution of any dedicated project team for close supervision of the refit work, WOT(V) informed (November 2014) that no dedicated project team was constituted for monitoring this MR.

The Ministry replied (May 2015) that the WOT along with COA had effectively monitored the refit. The Ministry's reply has to be seen in light

of the fact that WOT was functioning as an extension of the unit earlier established for the MR of INS Vagli and was facing shortage of manpower, with only six officers posted from January 2006 to January 2014. Further, even at HQENC (V), three officers were initially posted for refit management, out of which two officers were transferred out over a period of time due to non-deployment of manpower by the yard as well as low priority accorded by the yard to this refit.

2.1.12.2 Lack of regular refit monitoring by the Contract Operating Authority (COA)

As per Clause 2.9.3 (a) of the contract (October 2005), in order to ensure proper monitoring of the refit, refit meetings at the level of ND (V) (being the COA) were to be conducted on monthly basis. When we enquired (September 2014) about adherence to the above periodicity, ND (V) admitted (November 2014) that regular review of the refit was conducted at Command level by HQENC (V) and ND (V) prior to conduct of Annual Refit Conference (ARC) and Mid Year Refit Reviews (MYRR). The authority and reasons for not adhering to the contractual provisions on conduct of monthly review meetings by ND (V) were enquired (December 2014).

The Ministry replied (May 2015) that refit progress meetings had been conducted on a monthly basis by the COA. The Ministry's reply contradicts the statement of the COA which stated that the refit was being reviewed prior to conduct of ARC and MYRR.

2.1.13 Conclusions

The refit had to be completed within 36 months as per the extant naval policy and the contract, however, there was inordinate delay in refit execution and hence the submarine was not available for operational exploitation for more than nine years (January 2006 to June 2015).

Ineffective planning and scheduling of the MR led to commencement of the MR in 2006, though it was due in 2001. Consideration of advantage of the yard's experience in undertaking refit of Russian submarines, i.e. INS Vagli prior to its nomination for the refit of INS Sindhukirti, was inaccurate as the yard had not completed the refit prior to its

nomination. This, coupled with lack of serious efforts to use indigenised materials as well as non-adherence to contractual clauses for protection of main line cables, caused delays in progress of the refit. Low manpower deployment for the refit contributed to tardy progress in the execution of the MR.

Even refit management suffered with no dedicated project team and inadequate Naval manpower with necessary technical expertise at the yard, to steer the project.

The cost of refit was not competitive as cost of growth of work and service tax were excluded from the negotiated cost of refit. Belatedly, these had to be included in the refit cost leading to its revision, resultantly defeating one of the three cardinal conditions which formed the basis for nomination of HSL to undertake this refit.
Thus, the objectives envisioned by the Ministry could not be realised.

2.1.14 Recommendations

(a) Planning and commencement of refits of submarines should be as per schedule, to avoid excessive exploitation of submarines as well as extended refit schedules.

(b) Expertise held by the Navy in dealing with prospective suppliers of materials and equipment should be gainfully utilised by the shipyard to ensure robust contract management.

(c) The Ministry should exercise stringent financial control to prevent diversion of project funds.

(d) The Ministry should ensure that efforts are augmented to improve the scale of utilisation of indigenous materials in refits, in line with the directives of the Ministry of Defence.

(e) The Navy should establish a dedicated Project Team, the expertise of which is available to each indigenous offloaded refit.

CHAPTER III: INDIAN NAVY

3.1 Avoidable expenditure of ₹20.80 crore on Medium Refit cum Cadet Training Ship conversion of INS Sujata due to improper evaluation of bids

Navy accepted (February 2009) the unsolicited bids of M/s WISL, Mumbai (*i.e.* a shipyard) for conversion of Indian Naval Ship (INS) Sujata as Cadet Training Ship, on the assumption that it was a merged entity of M/s ABG, Gujarat (another shipyard) to whom Request for Proposal (RFP) was issued (November 2008). Further, rejection (October 2009) of the bid of M/s WISL in spite of provisions for consideration of unsolicited bids in the Defence Procurement Manual and consequent re-issue (January 2010) of RFP led to a delay of 18 months in conclusion of contract and avoidable expenditure of ₹20.80 crore.

Ministry of Defence (Ministry) accorded Approval in Principle (AIP) (November 2008) for conversion of Indian Naval Ship (INS) Sujata[1], commissioned in November 1993, as Cadet Training Ship (CTS) during its Medium Refit (MR). The MR was to be offloaded to a suitable Public Sector Undertaking (PSU)/Commercial Ship Repair Yard on Limited Tender Enquiry basis, at an estimated cost of ₹80.22 crore for a duration of 12 months, with effect from March 2009. The Request for Proposal (RFP) for undertaking the work of MR-cum-CTS conversion was issued by Naval Ship Repair Yard (NSRY), Kochi (K) to seven firms[2] (November 2008) including M/s ABG Shipyard Limited, Mumbai.

---

1 INS Sujata is a Sukanya class Offshore Patrol Vessel (OPV) of Indian Navy

2 (1) M/s Cochin Shipyard Ltd. (CSL), Kochi, (2) M/s Hindustan Shipyard Ltd. (HSL), Visakhapatnam, (3) M/s Garden Reach Shipbuilders & Engineers (GRSE), Kolkata, (4) M/s Bharati Shipyard Ltd., Mumbai, (5) M/s ABG Shipyard Ltd. (ABG), Mumbai, (6) M/s Mazagon Dock Ltd. (MDL), Mumbai and (7) M/s Goa Shipyard Ltd. (GSL), Goa

In response to RFP, quotes were received (February 2009) from M/s HSL, M/s CSL and M/s Western India Shipyard Ltd (WISL), to whom RFP was not issued. M/s ABG, to whom RFP was issued, in its letter (February 2009), requested Navy to forward all correspondence related to refit to M/s WISL, who would undertake the required activities on their behalf. The quote of M/s WISL was accepted by Ministry with the understanding that M/s WISL was a part of M/s ABG as a merged entity. The Technical Evaluation Committee (TEC) found (February 2009) all the three shipyards (including M/s WISL) technically competent for undertaking the MR and CTS conversion of INS Sujata. The commercial bids were opened by the Tender Opening Committee (TOC) (April 2009) and the quote of M/s WISL at ₹55.71 crore was found to be the lowest followed by the quote of M/s HSL at ₹55.85 crore. Thereafter, Contract Negotiation Committee (CNC), in its meeting (July 2009) sought clarification as to whether M/s WISL was a division of M/s ABG or a separate shipyard. Navy, after obtaining clarification from M/s ABG (July 2009) intimated (October 2009) that the merger was subjudice before Bombay High Court. CNC recommended (October 2009) that the case for offloading the refit of INS Sujata be re-tendered from RFP stage.

RFP was re-issued to the same seven shipyards in January 2010 and the quotes were received from three firms viz., M/s HSL, M/s CSL and M/s ABG. The price quoted by the firms were evaluated by CNC in June 2010 and the price of ₹77.26 crore quoted by M/s ABG was found to be the lowest. During negotiations, the firm offered (July 2010) discount and quoted a final price of ₹73.85 crore. CNC recommended (July 2010) conclusion of contract with M/s ABG at a cost of ₹73.85 crore, which was approved by the Competent Financial Authority (September 2010). As per the contract concluded (October 2010) with M/s ABG, refit was scheduled to be completed by September 2011. However, it was finally completed in August 2012, after a delay of 325 days and incurring an expenditure of ₹76.51 crore including Growth of Work.

We observed (July 2014) that instead of cancelling the procurement process after opening of commercial bids and re-tendering the case from RFP stage, Navy had the option of rejecting the bid of M/s WISL and concluding the contract with M/s HSL, who was the second lowest bidder at a quoted price of ₹55.85 crore, which was just ₹0.14 crore higher than M/s WISL.

In reply to the audit observation (July 2014), Ministry replied (April 2015) that the quote of M/s WISL was accepted on the basis of the authorisation letter of M/s ABG and even if the bids had been submitted without authorisation, the same could not be rejected as per the provisions of Defence Procurement Manual-2009 (DPM), which provided for acceptance of unsolicited bids by technically compliant vendors.

The reply of Ministry is contradictory to its own actions, as Navy, on their own accord, first accepted the bid of M/s WISL on assumption that it was a merged entity of M/s ABG and later rejected the same. Further, Navy retendered (November 2008) the process instead of accepting the bid of M/s WISL as an unsolicited bid, as per the provisions of DPM, quoted in its reply.

The Ministry further stated that the initial quote of M/s WISL was ₹63.47 crore after loading of the Defect Lists (DLs) which were not quoted by the yard in its initial quote.

This reply of the Ministry is not based on facts as the Comparative Statement of Tenders vetted by MoD (Fin) included cost of certain unquoted DLs of all the three yards with the highest quoted cost to equate all the yards for the purpose of determination of L-1.

Thus, improper assumption by Navy in considering M/s WISL to be a merged entity of M/s ABG and later rejecting the bid instead of considering the bid of M/s WISL as an unsolicited bid, as stipulated in DPM, not only led to a delay of 18 months in conclusion of contract, but also an avoidable expenditure of ₹20.80 crore[3].

[3] ₹76.51 crore (Actual cost of Refit) - ₹55.71crore (Cost as per quote of M/s WISL) = ₹20.80 crore

3.2 Over provisioning of Roller Steel

Failure of the Indian Navy to follow the extant system driven Review Programme to determine the Procurement Quantities of Roller Steel coupled with the fact that there was reduction in the holding of Sea Harrier aircraft, during the last decade led to the over provisioning and an avoidable expenditure of ₹2.54 crore. Further, due to imminent scheduled decommissioning of aircraft fleet in December 2015, the prospect of utilisation of this over-provisioned quantity of Roller Steel lying in stocks is unlikely.

The relevant Naval Instruction stipulates that with the introduction of Integrated Logistics Management System (ILMS) the review process of the entire Naval Inventory is to be carried out on an annual basis, as per centrally approved and promulgated Annual Review Plan (ARP). During the Review Process all the Review Planning factors are taken into account in a system driven Review Programme on ILMS to generate Procurement Quantities (PQ).

Roller Steel is a component of bearing used in Constant Speed Drive Unit (CSDU) of Sea Harrier aircraft. A total quantity of 22 Roller Steel is fitted in each CSDU. The Indian Navy has an inventory of 11 Sea Harrier Aircraft which are fitted with 22 CSDUs and hence a total of 484 Roller Steel is fitted on the entire Sea Harrier fleet.

Based on a requirement projected (October 2010) by Naval Aircraft Yard (Navy) Kochi {NAY (K)}, Directorate of Naval Air Materials, Integrated Headquarters, Ministry of Defence (Navy) {DNAM, IHQ MoD (Navy)} placed (November 2011) an order on M/s Aviation and Defence Spares, UK (ADS) for 17 items of spares at a total cost of $779,545.325 (₹3.48 crore[4]) which *inter alia* included 2000 Roller Steel costing $671,000.00 (₹3 crore). The firm supplied 16 items of spares, including quantity 2000 Roller Steel, in April 2012 and balance one item of spare in November 2012.

[4] 1 US $ = ₹44.70

We noticed (July 2013) that the Indian Navy did not follow the extant system driven Review Programme on ILMS to generate Procurement Quantities (PQs) and the PQs of 2000 Roller Steel was decided upon as the quantity 2500 Roller Steel, projected earlier in 2007, had not materialised. Besides, while freezing the requirement (October 2010), DNAM, IHQ MoD (Navy) overlooked the following:

- During the last decade *i.e.* from December 2001 to October 2010, only 484 Roller Steel had been consumed.
- There was a high attrition rate of Sea Harrier fleet due to accidents between December 2001 and October 2010. While the Indian Navy had an inventory of 19 Sea Harrier aircraft in December 2001, which reduced to only 12 Sea Harrier aircraft by October 2010.

DNAM, IHQ MoD (Navy), stated (August 2013) that 2000 Roller Steel had been procured to cater for future "Worst Case Scenario" requirements, wherein, increasing number of CSDUs may need to be turned around and at that time procurement of the item might not be possible.

The contention of IHQ MoD (Navy) is not tenable due to the following reasons:

- The term "Worst Case Scenario", is not mentioned in any provisioning / procurement manuals or guidelines notified by either the Ministry of Defence or the Indian Navy as a review planning factor for generating PQs.
- There is no documentary evidence available on record to suggest that any survey of CSDUs was carried out by the Indian Navy to ascertain their physical / functional condition.
- Even considering the "Worst Case Scenario" argument put forth by IHQ MoD (Navy) *i.e.* all the Roller Steel fitted on entire Sea Harrier fleet become repairable simultaneously/ in one go, only 484 Roller Steel would be required by the Indian Navy. Further, once all the Roller Steel fitted onboard is replaced with new ones, there is a remote chance of these going bad/ faulty in immediate future.
- The Indian Navy was aware at the time of raising the indent in October 2010 that the Sea Harrier fleet was planned for likely de-induction by

2012. The de-induction of Sea Harrier was later, (November 2012), rescheduled by IHQ MoD (Navy) to December 2015.

Principal Director Air Logistics Support, IHQ MoD (Navy) agreed (September 2013) with the facts and accepted that there was an over provisioning of the item.

In response to an audit query raised (June 2015), IHQ MoD (Navy) intimated (August 2015) that out of quantity 2000 Roller Steel contracted in November 2011, only quantity 308 Roller Steel had been utilised till July 2015 for undertaking repairs of 14 CSDUs.

Thus, the likelihood of utilising the balance stock of 1692 Roller Steel, valuing USD 567,666 (₹2.54 crore)[5], appears remote by December 2015 *i.e.* the scheduled de-induction of Sea Harrier aircraft.

The Ministry of Defence, in response to Audit Paragraph stated in July 2015, that the cardinal points regarding expenditure incurred on procurement of 2000 Roller Steel needs to be appreciated in the following light:

(a) The suppliers are fully aware of the obsolescence and criticality of the items being sought by the Indian Navy for its Sea Harrier fleet and quote exorbitant cost for the items to extract maximum commercial gains. There is no fixed basis for assessing the variation in the cost of spares quoted by the vendors and hence it cannot be reasonably predicted. Many a times buying an item at an exorbitant cost from a vendor remains the only option for the Indian Navy to sustain Sea Harrier fleet operations, since the Indian Navy is the only operator of these aircraft in the world;

(b) With sudden demand of an item in increased quantity, procuring the item in increased quantity with economical unit cost, while maintaining adequate stock would serve as insurance spares and prevent the item from becoming a "Critically Required Item" or grounding of aircraft in future;

(c) Adequate quantity of the item available in stock would also prevent the possibility of having to procure this item compulsorily at an exorbitant price in future to meet the critical or Aircraft On Ground (AOG) requirements;

[5] @ 1 USD = ₹44.70

(d) In order to obviate the above mentioned factors; prudent inventory control norms would mandate procurement of the item in increased quantity and economical unit case in one attempt taking into account worst case situation to extract maximum cost benefit; and

(e) L-1 firm had quoted the rates, with the condition that they were willing to supply the item, provided a Minimum Order Quantity (MOQ) of 2000 Roller Steel is included in the Supply Order.

The reply of the Ministry is not acceptable because the Review Process for generating Procurement Quantities (PQs) of an item, has been notified by IHQ MoD (Navy) themselves and it takes into account all the Review Planning Factors necessary for generating PQs for normal circumstances. For emergent and operational requirements, special types of indents are raised for procurement of items with envisaged deliveries in a short span of time.

The Indian Navy neither carried out any Review Process for establishing the Procurement Quantities (PQs) of Roller Steel in October 2010 nor did it take into account the factors prevalent then and instead projected the PQs, generated for the item in 2007, for procurement.

Further, the contention of Ministry of Defence about MOQ lacks rationale because IHQ MoD (Navy) themselves in their indent raised in April 2011 and the tender enquiry floated in June 2011, had mentioned the quantity of Roller Steel at 2000. The tender enquiry also stipulated that no MOQ is to be quoted by the prospective bidders. The MOQ condition of L-1 firm was, therefore, rendered irrelevant.

Thus, failure on the part of the then DNAM, IHQ MoD (Navy) to follow the extant system driven Review Programme on ILMS to generate Procurement Quantities (PQs) of Roller Steel coupled with the fact that they overlooked the consumption pattern of Roller Steel during the previous decade, which was only 484; reduced the holding of Sea Harrier aircraft with the Indian Navy. Further, their scheduled de-induction being imminent, resulted in excess procurement of Roller Steel. The over provisioning/procurement resulted in an avoidable expenditure of ₹2.54 crore.

3.3 Extra expenditure of ₹2.43 crore incurred on procurement of spares from a foreign firm

Material Organisation, Mumbai procured spares from a foreign firm on Proprietary Article Certificate basis even though the spares were available indigenously at a much lesser cost resulting in extra expenditure of ₹2.43 crore.

The Proprietary Article Certificate (PAC) is issued to the Original Equipment Manufacturer (OEM) and items are procured on PAC basis from that particular firm, when such items are available only with those firms or their dealers. As per Defence Procurement Manual 2006 (DPM 2006) PAC bestows monopoly and obviates competition, hence, PAC status should be granted after careful consideration of all factors like fitness, availability, standardization and value for money.

Material Organisation, Mumbai [MO (MB)] raised two indents for INS Matanga in April 2007 and May 2008 for procurement of spares for Main Engine 'G8V 30/45 ATL' on Limited Tender Enquiry (LTE) basis**.** The items were required by 30 May 2007 (for indent of April 2007) and 30 June 2008 (for indent of May 2008).

Accordingly, for the indent of April 2007, tenders were floated by MO (MB) twice (September 2007 and August 2008) with the Tender Opening Date (TOD) of 12 December 2007 and 24 September 2008 respectively and both the times quotes were received only from one firm viz., M/s South Calcutta Diesel[6]. As regards indent of May 2008, tenders were floated in February 2009 with TOD of 01 April 2009. The quote received from M/s Garden Reach Shipbuilders & Engineers (GRSE, Ranchi) was not considered as it was received one day late on 02 April 2009.

In the meantime, with regard to indent of April 2007, MO (MB) intimated (July 2008) Integrated Headquarters, Ministry of Defence (Navy) {IHQ MoD (N)} that M/s GRSE had not been quoting for a large number of spares of

[6] M/s South Calcutta Diesel is one of the sub-vendors of M/s GRSE, Ranchi.

G8V 30/45 ATL engines and the only other known source of these spares was M/s MAN Germany to whom PAC might be accorded. Accordingly, IHQ MoD (N) accorded (March 2009) PAC to M/s MAN Germany with M/s MAN Diesel India (M/s MAN) as the sole authorized representative for supply of spares for the Main Engine type G8V 30/45 ATL. PAC was initially valid for one year i.e. up to 24 March 2010 and later re-validated up to 24 April 2015**.**

In view of the PAC issued by IHQ MOD (Navy), further processing of the indents on LTE basis was stopped and MO (MB) floated (September 2009) two tender enquiries against the same indents on M/s MAN. MO (MB) placed (May 2012) two Purchase Orders on M/s MAN for 24 items against indent of April 2007 at a total cost of ₹1.27 crore and for 16 items against the indent of May 2008 at a total cost of ₹1.61 crore. The items under both the Purchase Orders were received between December 2012 and January 2013**.**

Audit scrutiny (February 2013) revealed that the price of items in the order placed (May 2012) on M/s MAN against indent of May 2008 was exorbitantly high as compared with the quoted price of M/s GRSE (April 2009). A comparison of the items procured from M/s MAN, revealed that the procurement prices of 14 out of 16 items were 55 to 5260 *per cent* higher than the price offered by M/s GRSE. The total purchase from M/s MAN was made at ₹2.23 crore whereas M/s GRSE were willing to supply the same at a cost of ₹29.75 lakh for these 14 items, resulting in excess expenditure of ₹1.93 crore.

Further, scrutiny (January 2015) revealed that even after issue of PAC, other MOs at Visakhapatnam, Karwar and Kochi were procuring these items for same type of engines of other ships from M/s GRSE and M/s South Calcutta Diesel at a much lesser price. A comparison of rates of 15 items, which were procured by other MOs during the validity of PAC, revealed an extra expenditure of ₹0.50 crore incurred by Navy on procuring from M/s MAN.

On this being pointed out (January 2015), IHQ MoD (N) stated (April 2015) that G8V 30/45 ATL engines fitted on Indian Naval Ship Matanga had become obsolete and out of production and the license agreement between the OEM i.e. M/s MAN and M/s GRSE for manufacture of engine (with 20 *per*

cent indigenous spares and 80 *percent* supplied by M/s MAN, Germany) was terminated by M/s MAN in 1980s. As regards procurement of spares by other MOs from local sources, IHQ, MoD (Navy) stated that it was done due to urgent requirement of spares as a possible one-off measure.

The contention of IHQ is not acceptable as MO Vizag, MO Karwar and MO Kochi had placed 25 orders between May 2009 and February 2014 for purchase of more than 1000 items costing ₹11.87 crore through local sources and M/s GRSE and M/s South Calcutta Diesel were supplying spares for the engine even after cancellation of the licence by OEM i.e. M/s MAN.

The high price of spares was also justified in the reply stating that pricing of a foreign OEM cannot be compared to indigenous sources wherein old stock, quality of sub-vendors are the likely reasons for the low pricing of M/s GRSE and M/s South Calcutta Diesel. IHQ MoD (N) further cited variation of Euro as one of the reasons for high prices.

The contention of IHQ is not based on facts as the MOs at Vizag and Kochi have confirmed (April 2015) that after issue of the indigenous spares, no defects/ unsatisfactory performance had been reported by the end users. Moreover, the actual difference in price of various items ranged between 378 and 5260 *per cent*, which could not be due to variation in exchange rates. Further, PAC status to M/s MAN was accorded for complete set of spares although 20 *per cent* of those spares were being manufactured indigenously.

Thus, conferring PAC status on a foreign firm, in violation of DPM, when the same items were available indigenously at a much lesser price was not justified and thus resulted in extra expenditure of ₹2.43 crore[7].

The matter was referred to the Ministry (February 2015); reply was awaited (August 2015).

[7] ₹1.93 crore + ₹0.50 crore= ₹2.43 crore

3.4 Unfruitful expenditure of ₹2.17 crore due to improper planning and consequent offloading of nickel and chrome plating work

A project sanctioned at a cost of ₹4.58 crore was short-closed after incurring an expenditure of ₹2.17 crore, due to the unilateral action of Director General Naval Projects (Visakhapatnam) in reducing the scope of work by deleting critical items. As a result, the user, Naval Dockyard, Visakhapatnam [ND (V)] was deprived of the intended facility and had to off-load Nickel/ Chrome plating jobs to private trade.

The Electroplating Shop of ECE[8] Department at ND (V) was commissioned in 1983 for electroplating activities. A Board of Officers (BoO) recommended (November 2005) 'Augmentation of facilities in ECE Department' at a Rough Indication of Cost (RIC) of ₹4.27 crore. HQENC (V)[9] forwarded (March 2006) the Board Proceedings (BPs) to IHQ MoD (N)[10] which were approved in May 2006.

While processing the case for approval of Ministry of Defence (MoD), DGNP (V)[11] submitted the Approximate Estimates (AEs) of ₹5.43 crore after deleting 146 out of 242 items costing ₹39.58 lakhs. On scrutiny of AEs, IHQ, MoD (N) requested (July 2007) DGNP (V) to reduce the cost to enable its sanctioning under financial powers of HQENC (V). Based on the request (August 2007), ND (V) reviewed (September 2007) the requirement and recommended deletion of six items, thus reducing the quantity of two items leading to reduction of cost by ₹0.76 crore.

Thereafter, DGNP (V) modified the AEs and forwarded (October 2007) the same to HQENC (V) for sanction. However, it was only after forwarding the modified AEs to HQENC (V) that DGNP (V) provided (October

8 ECE – Electro Chemical Engineering
9 HQENC(V) – Headquarters Eastern Naval Command, Visakhapatnam
10 IHQ MoD(N) – Integrated Headquarters Ministry of Defence, Navy
11 DGNP(V) – Director General Naval Projects, Visakhapatnam

2007) ND (V) the list of 151[12] deleted items. ND (V) observed (November 2007) that the deletion of items was not in line with BPs and the purpose of augmentation of the facility was defeated. ND (V) informed DGNP (V) (November 2007) about 10 critical/important items worth ₹12 lakh (approx) as given in Annexure II, which were not to be deleted. But DGNP (V) replied (December 2007) that it was not feasible to include the critical items at that stage, since the AEs had already been forwarded (October 2007) to the Competent Financial Authority (CFA) for approval.

HQENC (V) accorded (January 2008) Admin Approval for the subject work 'Augmentation of the ECE Department at ND (V)' at an estimated cost of ₹4.58 crore. The work, which was to be carried out by DGNP (V) and completed in 104 weeks *i.e.* by January 2010, included civil works (₹1.46 crore) and equipment portion (₹3.12 crore).

DGNP (V) requested (July 2010) ND (V) to intimate its decision on progressing the work/requirements at the earliest so that the project could be executed within the sanctioned amount. However, with no response from ND (V), DGNP (V) requested (September 2010) the former to examine the feasibility of progressing/short closing the work. ND (V) proposed (October 2010) a revised scope of work, which was not accepted by DGNP (V) as the same would result in cost escalation. Thereafter, ND (V) forwarded (July 2011) a new scope of work which was found by DGNP (V) considerably different from the original Admin Approval and the estimated expenditure for executing the new scope of work would also exceed the available funds by over ₹64 lakh. The work was short closed (November 2011) after incurring an expenditure of ₹2.17 crore (₹1.61 crore on civil works and ₹0.56 crore on procurement of laboratory equipment and furniture).

We observed (January 2014) that unilateral action by DGNP (V) in reducing the scope of work by deleting 10 critical/important items required for augmentation of facilities in ECE Department led to short-closure of the work. Besides, it was also seen (January 2014) that an

[12] Correspondence between ND(V) and DGNP(V) indicates the number of deleted items as 151 / 152. However, audit scrutiny of AEs showed the number to be 152

expenditure of ₹0.56 crore was incurred on offloading of plating work between April 2010 and January 2014.

In response to the audit observations, the Ministry while admitting the facts, stated (June 2015) that during execution of the project, certain unforeseen interfacing issues involving few of the deleted equipment arose leading to the upgraded proposal, the financial implications for which exceeded the administrative approval, leading to foreclosure of the project. The Ministry also stated that ₹0.56 crore was incurred on offloading emergent plating requirement, adding that the expenditure of ₹2.17 crore was being gainfully utilised.

The Ministry's reply regarding gainful utilisation of expenditure is not acceptable because the facility was not augmented due to non-procurement of equipment items vital for enhancement of quality and durability of plating, which were recommended by the Board. Hence, without vital equipment, utilisation of executed civil works for installation and commissioning of equipment and usage of procured lab equipment for analysis of plating solutions and effluents of the proposed facility, remained incomplete. The Ministry's reply stating that ₹0.56 crore was incurred on offloading emergent plating requirement is not tenable because expenditure on off-loading of Nickel chrome plating was of recurring nature due to absence of the facility at the Electroplating shop.

Thus, contrary to the Board's recommendations and user's requirement, unilateral action by DGNP (V) to delete critical items led to non-finalisation of the equipment package and short-closure of the work, after incurring an expenditure of ₹2.17 crore. In addition, non-availability of the intended facility also resulted in an avoidable expenditure of ₹0.56 crore on off-loading of Nickel and Chrome plating work, which was of recurring nature.

3.5 Excess procurement of naval stores worth ₹1.03 crore

Lack of due diligence on the part of Material Organisation, Visakhapatnam {MO (V)} in analysing the specification while placing the purchase order led to excess procurement of cables and resultant avoidable expenditure of ₹1.03 crore.

The Defence Procurement Manual (DPM) 2009 stipulates that specifications in terms of quantity of goods to be procured should be clearly spelt out keeping in view the specific needs of the procuring organisations.

Integrated Headquarters Ministry of Defence (Navy) {IHQ MoD (N)} approved (July 2012) a list of Base and Depot (B&D) spares for Single and Dual channel Keltron Echo Sounder (Version-3)[13]. The list included two types of cables[14] of 10 metres each.

Based on the approval of IHQ MoD(N), Headquarters Eastern Naval Command, Visakhapatnam {HQENC(V)} directed (September 2012) MO(V) to procure 07 sets of B&D spares for Single and Dual channel Keltron Echo Sounder (Version-3). Consequently, MO(V) raised (December 2012) an indent for procurement of 07 sets of B&D spares consisting of 122 types of items, which included the two types of cables of quantity 70 numbers each, from M/s Keltron, Kerala on Proprietary Article Certificate (PAC) basis.

Tender enquiry was floated (March 2013) to M/s Keltron and the firm quoted (June 2013) an amount of ₹1.65 crore for the 07 sets of B&D spares. MO (V) requested (July 2013) M/s Keltron to justify the quoted prices and also to furnish details of purchase order (PO) placed for these items by any Govt/Defence Organisation since last purchase price (LPP) of the items were not available with MO(V). The firm provided (July 2013) to MO(V) a copy of the PO of December 2012 placed by M/s Garden Reach Shipbuilders and Engineers (GRSE) on the firm for supply of B & D spares for Echo sounder (Version-3).

---

13 Keltron Echo sounder Ver 3 is used to ascertain the depth of sea and helps in giving exact depth below ships' keel so as to avoid any underwater collision.

14 AWG 28-16/G/300 CABLE 16 COND 300' RIBON and AWG 28-16/6/300 CABLE 10 COND 300' RIBON

During the Naval Logistics Committee (NLC) meeting (September 2013), the firm agreed to match the rates of M/s GRSE`s order for 111 types of items and also offered one *per cent* bulk discount on the Total Order Value (TOV). MO (V) placed (December 2013) the PO on M/s Keltron for ₹1.55 crore for procurement of 07 sets of B&D spares consisting of 122 types of spares which included the two types of cables of 70 numbers each.

After inspection (March 2014) by the Naval Quality Assurance Establishment, MO (V) received 70 numbers each of both the cables and took them on charge (April 2014). Upon forwarding (May and July 2014) of bills by MO (V), the Defence Accounts Department (DAD) released (May and July 2014) payment of ₹1.55 crore to the firm for supply of 122 types of spares which involved two types of cables of 70 numbers each.

We compared (August 2014) the GRSE PO of December 2012 with the MO (V) PO of December 2013 and found that as per M/s GRSE`s order, denomination of the subject cable was mentioned in numbers, with one number equivalent to 10 metres. However, MO (V) failed to evaluate the equivalent denomination of numbers in metres and placed (December 2013) the PO for 70 numbers of each cable (total of 140 numbers equivalent to 1400 metres) instead of the actual requirement of 07 numbers for each cable. This resulted in placement of order for excess quantity of 63 numbers for each cable (total 126 numbers equivalent to 1260 metres).

Further, it was seen (August 2014) that against a total quantity of 1400 metres of cable to be received by MO (V) as per the PO placed by it, the firm supplied (March 2014) only 140 metres of cable to MO (V). However, payment was made by MO (V) for a total quantity of 1400 metres of cable, resulting in excess payment of ₹1.03 crore to the firm, in spite of short receipt of 1260 metres of cable.

In reply to the audit observation (August 2014) regarding excess payment and short receipt of cables, MO (V) stated (September 2014) that the indent of 70 numbers cable was raised based on HQENC directives (September 2012) and the denomination in Integrated Logistics Management System (ILMS) for this cable was in numbers. Hence, the indent and PO was issued for 70 numbers cable. MO (V) also stated that the firm had not informed them that one number had been mentioned as 10 metres in GRSE

PO as compared to one number equalled to one meter in the MO (V) PO (December 2013).

The reply of MO (V) is not acceptable because the approved list by IHQ MoD (N) contained denomination of cables in metres only. Despite being the consignee for the PO (December 2012) placed by GRSE on the firm, MO (V) failed to analyse the PO in which the denomination of one number of cable was given as equal to 10 metres.

The firm admitted (November 2014) to MO (V) that the balance quantity of 1260 metres cables had remained with them erroneously and the same had been supplied (November 2014) subsequently to MO(V). MO (V) requested (November 2014) the firm to roll back the excess quantity supplied and also return the excess payment incurred on additional cables. In response, the firm accepted (December 2014) that the quantity of cable ordered was more than the actual requirement, however stated that being PSU, they were not in a position to take back the material once sold out.

MO (V) requested (December 2014 and January 2015) to the firm for intimating the exact quantity of cables that can be utilised against a contract concluded (February 2014) by IHQ MoD (N) for procurement of 27 Echo Sounders (Ver 3.1). The firm replied (February 2015) that if IHQ MoD (N) agreed to delete the items from the B&D spares list of the contract, supplied items could be adjusted against this supply order internally. Accordingly, MO (V) requested (March 2015) IHQ MoD (N) that the IHQ contract be amended to incorporate availability of the two cables. IHQ MoD (N) refused (May 2015) to amend the contract quantity in the contract, reasons for which were not available in the records of MO (V).

Thus, lack of due diligence on the part of MO (V) in evaluating the specifications while placing the purchase order led to excess procurement of cables and resultant avoidable expenditure of ₹1.03 crore.

3.6 Non-exercise of Tolerance Clause resulting in avoidable extra expenditure of ₹1.44 crore

Lack of due diligence by Navy in consolidating the requirement before issuing of Request for Proposal (RFP) led to issue of two separate RFPs for same type of equipment within eight months. Further, it did not invoke the provision of Tolerance Clause included in the RFP which resulted in procurement of the same item from the same firm at a much higher rate thus incurring an extra expenditure of ₹1.44 crore.

The Defence Procurement Manual (DPM) stipulates that the Service Headquarters must put in place a system for data sharing and data networking to obviate different prices being paid for the same item. Further, as per the Tolerance Clause included in the Request for Proposal (RFP) the buyer has the right to increase or decrease the quantity of required goods up to 50 *per cent* without any change in the terms and conditions and price quoted by the seller, before conclusion of the contract.

We noticed (March 2014) that Integrated Headquarters Ministry of Defence (Navy) {IHQ MoD (N)} issued an RFP (January 2010) for procurement of three Radio and Blinking Equipment and the contract was concluded (November 2010) with M/s Spets Techno Exports Ukraine (M/s STE) at a total cost of USD 334,676.09 (₹1.53 crore) for three equipment (Unit price USD 111,558.7 i.e. ₹0.51 crore[15]). We further noticed (March 2014) that before conclusion of the contract, IHQ MoD (N) issued (August 2010) another RFP for two more Radio and Blinking equipment. The contract was concluded (August 2011) with the same firm i.e. M/s. STE at USD 550,779.88 (₹2.46 crore) (Unit price USD 275,389.94 i.e. ₹1.23 crore[16]).

We observed (March 2014) that Navy initiated two separate procurement processes by issuing RFPs for three and two numbers of the same type of

[15] @ 1USD= ₹45.60
[16] @ 1USD = ₹44.70

equipment within eight months (January 2010 and August 2010) which clearly indicates that the calculation of required quantities by Navy was not done prudently. Further, instead of invoking the Tolerance Clause of RFP issued in January 2010, IHQ MoD (N) issued fresh RFP in August 2010 leading to conclusion of a contract (August 2011) which was 142 *per cent* higher than the first contract (November 2010).

On this being pointed out (January 2015), Ministry stated (May 2015) that efforts were made to bring down the item-wise rates but was not accepted by the firm. It was also stated by the Ministry that the procurement quantity (PQ) vis-à-vis RFP (January 2010) was proposed to be increased from three to seven which was not accepted by the firm, as the rate quoted by the firm, M/s STE in this case, was a special rate. The indent was approved for three numbers and hence, the Tolerance Clause was not applied to the contract.

This justification is not acceptable as the bid of M/s STE did not mention the price offered by the firm as a special price and its non-acceptance of the Tolerance Clause included in the RFP. Thus, the firm was bound to accept the additional quantities as per the RFP since the procurement process against RFP (August 2010) was still continuing.

Thus, Navy did not apply due diligence in consolidating the requirement before issuing the RFP in January 2010, leading to issuance of two separate RFPs. Further, it did not invoke the provision of Tolerance Clause included in the RFP which resulted in procurement of the same item from the same firm at a much higher rate, thus incurring an extra expenditure of ₹1.44 crore[17].

[17] (₹1,23,09,930 - ₹50,87,077) X 2 = ₹1.44 crore

3.7 Avoidable payment of interest amounting to ₹1.15 crore

Undue delay by the Engineer-in-Chief Branch in taking up an Arbitration Award, for seeking advice of the Legal Advisor (Defence) resulted in an avoidable payment of penal interest of ₹1.15 crore. Moreover, a Project sanctioned in 2003 is still languishing even after a lapse of 12 years with a 42 *per cent* increase in Project cost.

The Military Engineer Services (MES) Manual on Contracts (2007) stipulates that after publication of an Arbitration Award where decision of Legal Advisor (Defence) [LA (Def)] is warranted, the case shall be analysed with reference to the award in the Engineer-in-Chief's Branch (E-in-C's branch) and then be sent to the LA (Def) through MoD seeking advice, whether to contest or accept the Arbitration Award. It is further laid down that such cases in E-in-C's Branch should be processed within 10 days of receipt of case in the E-in C's branch.

Ministry of Defence (MoD) sanctioned (February 2003) ₹63.47 crore for "Provision of Officers Married Accommodation at Indian Naval Academy, Ezhimala". The Chief Engineer Naval Academy (CE) (NAVAC) Kochi concluded (March 2003) a contract with M/s Engineering Projects (India) Ltd., Chennai (M/s EPI), a Public Sector Undertaking (PSU), for execution of the work at a cost of ₹58.77 crore. The contract was based on a Fast Track Procedure for Naval Academy Project, which stipulated that there would be no escalation clause in these contracts. The work was to be completed by December 2004.

The work commenced in March 2003 but could not be completed on time for reasons beyond the control of the contractor, who sought (December 2004) an extension of time till 31 December 2005. The CE granted (January 2005) the extension up to December 2005 without any financial implications. However, due to slow progress of work , the CE cancelled (May 2005) the contract at the risk and cost of M/s EPI and concluded (November 2005) a risk and cost contract with M/s Iragavarapu Venkata Reddy Construction Infrastructures & Projects Ltd., Hyderabad (M/s IVRCL) at a cost of ₹62.76 crore for completion of incomplete works by April 2007.

Meanwhile, in May 2005, M/s EPI invoked the Arbitration Clause claiming ₹45.35 crore from Military Engineer Services (MES). The arbitrator, appointed in February 2009, pronounced (November 2011) an award of ₹9.21 crore plus interest at 15 *per cent per annum* (p.a) in favour of M/s EPI. This award was not accepted by both the parties and the matter was taken up (December 2011) with the Appellate Authority who finally passed (April 2012) an award of ₹8.96 crore plus interest at 12 *per cent per annum* (i.e ₹16.31 crore) from June 2005 till April 2012, in favour of M/s EPI. The award also stipulated that if the entire award amount including interest was not settled within two months from the date of issue of order, then MES would be liable to pay additional interest @ 3 *per cent* p.a. from the date of the order till the date of realisation.

CE Kochi sought (May 2012) advice from the Directorate of Contract Management, Engineer-in-Chief (E-in-C) Branch, New Delhi for further course of action against the award of April 2012. Audit observed (June 2013) that the E-in-C branch took up the matter with Legal Adviser (Defence) (LA (Def)) in January 2013 i.e. after a delay of nine months from the date of the award (April 2012). The LA (Def) advised (February 2013) the E- in-C that the award of April 2012 was to be implemented as the award of the Appellate Authority was binding upon the parties finally and conclusively. In March 2013, MES compensated M/s EPI with an amount of ₹17.27 crore which included ₹1.15 crore[18] in excess of the Award of ₹16.12 crore[19], by way of additional (penal) interest, which was avoidable.

While accepting the facts and figures, Engineering-in-Chief's (E-in-C) Branch stated (June 2014) that the delay occurred due to non existence of clear and proper procedure for dealing with such cases at various Government levels. This contention of E-in-C Branch is not acceptable since in violation of the

[18] Amount paid ₹17.27 crore (-) Amount of award ₹16.12 crore = ₹1.15 crore (interest @12% p.a. from June 2005 to April 2012)

[19] Award passed in favour of EPI = ₹8.96 crore + 12% p.a. from June 2005 to April 2012 = ₹16.31 cr
Amt in favour of MES to be claimed from EPI = ₹11 lakh + 12% p.a. from June 2005 to April 2012 = ₹0.19 cr
Thus Net award passed in favour of EPI = ₹16.12 cr

laid down timeline (i.e 10 days), the E-in-C Branch took up the matter with LA (Def) only in January 2013 i.e after a delay of nine months from the date of award (April 2012).

Further, the existing contract with M/s IVRCL had also been cancelled with effect from July 2014 due to financial problems faced by the contractor and a risk and cost contract had been concluded in March 2015. The physical progress of the work (June 2015) was 0.30 *per cent.*

Thus, in violation of the prescribed timeline under the Arbitration Award, inordinate delay in taking up the matter with appropriate authority for payment to the contractor resulted in an avoidable payment of ₹1.15 crore by way of additional (penal) interest. Further, the work on the married accommodation undertaken (2003) at a cost of ₹58.77 crore by invoking the Fast Track Procedure, remained incomplete even after a lapse of 12 years and an expenditure of ₹83.78 crore (26 June 2015).

The matter had been referred to the Ministry (January 2015); their reply was awaited (August 2015).

3.8 Unwarranted procurement of Electric Tachometers

Material Organisation, Mumbai{MO (MB)} concluded a contract in May 2009 for purchase of 14 Tachometers at a cost which was about 15 times higher than the Last Purchase Price of another contract concluded just two months before, in March 2009, for purchase of 24 Tachometers resulting in extra expenditure of ₹76.44 lakh. Further, in gross violation of Defence Procurement Manual, MO (MB) raised the indents for procurement of Tachometers without assessing the requirement which led to 23 Tachometers worth ₹85.74 lakh lying in stock for the last four years without any demand.

The Defence Procurement Manual 2006 (DPM-2006) stipulates *inter alia*, that every authority delegated with the financial powers of procuring goods in public interest should take care to avoid purchasing quantities in excess of requirement to avoid inventory carrying costs. In addition, reasonableness of prices must be based on a careful analysis of the prices offered and after

establishing the price reasonableness in relation to the estimated rates, Last Purchase Price. Further, the relevant Naval Instructions stipulates that with the introduction of Integrated Logistics Management System (ILMS) the review process of the entire Naval Inventory is to be carried out on an annual basis as per centrally approved and promulgated Annual Review Plan.

Material Organisation, Mumbai {MO (MB)} raised an indent (May 2007) for procurement of 12 Tachometers[20] for 6K/12K[21] routine on Gas Turbine Generators (GTGs) for Delhi class of Ships[22]. Within seven months of this indent, MO (MB) raised three more indents in December 2007, for 14 Tachometers (6Nos+2Nos+6Nos) to cater for urgent requirement of 6 K routines of all three Delhi Class Ships. Thereafter, MO (MB) reviewed (February 2008) the indent of May 2007 and the requirement was increased from 12 Tachometers to 24 Tachometers. This increase was approved by the Naval Logistics Committee (NLC) without taking into account pending three indents for 14 Tachometers. Against the indent of May 2007, tenders were floated (August 2007) by the Directorate of Procurement (DPRO) to 11 firms of which two firms responded and M/s Tekhkom International Co., Ukraine (M/s Tekhkom) emerged as the L1 firm.

When this procurement process was underway, IHQ MoD (Navy) issued (February 2008) Propriety Article Certificate (PAC) status to FSUE Rosoboronexport, Moscow, Russia (M/s ROE) for GTGs and its spares. PAC status was granted to M/s ROE being the sole authorized agency designated to deal with the OEM and also to ensure availability of spares. Subsequently, against the three indents of December 2007 for 14 Tachometers, tenders were floated (August 2008) by DPRO IHQ MoD (Navy) to M/s ROE on PAC basis.

In the meantime, contract (March 2009) against indent of May 2007 was concluded by the DPRO, IHQ MoD (Navy) with M/s Tekhkom for 24 Tachometers at a cost of USD 22800[23] (i.e ₹9.70 lakh) {unit price $950 i.e. ₹0.40 lakh}. These items were received between November 2009 and June 2010.

---

[20] A Tachometer (revolution counter) is an instrument measuring the rotation speed of a shaft or disk as in a motor or other machine. The devices usually display the RPM (Revolution per Minute) on a calibrated analogue dial.

[21] 6K/12K routine means 6000 hourly and 12000 hourly routine on Gas Turbine Generators (GTGs)

[22] Delhi Class Ships- 3 ships-INS Delhi, INS Mumbai, INS Mysore

[23] $ 22800 for 24 Tachometers. Hence Unit price $950 i.e. ₹40423{@ 1USD= ₹42.55}

As against the three indents of December 2007 for 14 Tachometers, contract was concluded by DPRO (May 2009) with M/s ROE at a total cost of USD 166,693[24] (i.e. ₹82.04 lakh) {unit price $11907 i.e. ₹5.86 lakh}. These items were received between September 2010 and October 2010.

We observed (April 2014) that Navy, while concluding the contract with M/s ROE for procurement of 14 Tachometers in May 2009, was aware of the Last Purchase Price (LPP) for the items procured under the contract concluded in March 2009 with M/s Tekhkom. However, Navy procured the items at a much higher rate which was 1153 *per cent*[25]more than the LPP resulting in extra expenditure of ₹76.44 lakh[26]. We further observed that out of the total 38 Tachometers received, only 15 tachometers were issued to the ships since January 2010 with the last issue being in October 2012. The ad-hoc nature of procurement resulted in the balance 23 Tachometers worth ₹85.74 lakh[27] lying in stock which indicates improper assessment of the requirement.

On this being pointed out by Audit (April 2014), IHQ MoD (Navy) admitted (May 2015) that the three indents of December 2007 might not have been cancelled due to lack of knowledge of the indenting/ procurement officer regarding the total fitted quantity on Delhi Class Ships. This response of IHQ MoD (Navy) is an attempt to cover up the negligence of MO (MB) for gross violation of the DPM norms which stipulates *inter alia*, that every authority delegated with the financial powers of procuring goods in public interest should take care to avoid purchasing quantities in excess of requirement to avoid inventory carrying costs. IHQ's response also confirms the audit contention that MO (MB) did not assess the requirement correctly as the indents for procurement of 14 Tachometers were raised without considering the earlier indent of May 2007 though this was reflected in the Integrated

---

[24] $ 71439.78 + $ 23813.26 + $ 71439.78 = $ 166692.82 i.e. $ 166693 (for 14 Tachometers)
Hence Unit rate $ 11907 i.e. ₹ 5.86 lakh {@1 USD= ₹ 49.25}

[25] $ 11907 (May 09) - $950 (March 09) / 950 * 100 = 1153*per cent* escalation

[26] ₹5.86 lakh (Unit price of June 2009) - ₹0.40 lakh(Unit price of March 2009) * 14 Tachometers = ₹76.44 lakh

[27] Data from the Electronic Bin Card that shows the receipt/issue details:-
14 Nos. worth ₹. 82.10 lakh (unit rate ₹. 5.86 lakh)
9 Nos. worth ₹ 3.64 lakh (unit rate ₹. 40423)
₹ 85.74 lakh

Logistics Management System (ILMS). Further, the reply of IHQ was silent on the issue of higher cost.

IHQ further stated (May 2015) that the present stock would be utilised by these ships in future considering the residual life of Delhi class and newly commissioned Kolkata class of ships. The reply is not acceptable as the forecast details at MO (MB) in the ILMS revealed (April 2015) that only a small quantity of four Tachometers had been slated for issue between 2016 and 2019. Moreover, the Kolkata Class ships were still under construction and the likelihood of using it in the near future was remote, as only one of the three ships had been commissioned (August 2014).

Thus, procurement of Tachometers on PAC basis though the same were available from other sources led to an extra expenditure of ₹76.44 lakh. Further, incorrect assessment of requirement of these items in violation of DPM norms led to tachometers worth ₹85.74 lakh lying in stock (July 2015) for four years without demand.

The matter was referred to Ministry (January 2015); their reply was awaited (August 2015).

CHAPTER IV: INDIAN COAST GUARD

4.1 Delay in acquisition of Inshore Patrol Vessels

Acquisition of Inshore Patrol Vessels (IPVs) for Coast Guard on nomination basis for timely replacement of existing 13 IPVs did not fructify due to procedural delays. Resultantly, eight of the thirteen IPVs decommissioned between December 2008 and July 2013 could be replaced after a delay of four to sixty months, while replacement of the remaining five IPVs had not been received, thereby resulting in restricted operational effectiveness of the Coast Guard.

Inshore Patrol Vessels (IPVs) are medium class vessels which are suitable for high speed interception, coastal surveillance and Search / Rescue operations. The Coast Guard (CG) had 13 numbers of IPVs, commissioned between February 1984 and November 1990, which were designed for a life span of 15 years.

In order to replace the aging vessels, Coast Guard Headquarters (CGHQ) initiated (November 2005) a case for acquisition of 16 IPVs (13 for replacement and 3 new). The Department of Defence Production (DDP) recommended (December 2005) to CG, nomination of M/s Garden Reach Shipbuilders and Engineers Ltd. Kolkata (M/s GRSE) and M/s Goa Shipyard Ltd, Goa (M/s GSL) for construction of eight IPVs each. The purpose of nomination of two shipyards was to ensure early delivery of ships and to maintain time line of the year 2009/ 2010 for replacement of the vessels. In its recommendations, DDP stated that M/s GSL was in a position to meet the delivery schedule provided the order was placed within the same financial year i.e. 2005-06.

Acceptance of Necessity (AoN) was accorded by Defence Acquisition Council (DAC) in August 2006 and recommendations of DDP were sought again by

CGHQ in view of lapse of timeline of March 2006 as recommended by DDP. DDP again recommended (October 2006) nomination of M/s GRSE and M/s GSL for construction of 16 IPVs. Thereafter, a commercial Request for Proposal (RFP) was issued (February 2007) to M/s GRSE and M/s GSL for 16 IPVs, after approval by Ministry of Defence (MoD) (February 2007). RFP had a provision for sharing of the order quantities between the two shipyards subject to L-2 shipyard matching the final negotiated cost of L-1.

Bids were received from both the vendors (March 2007) viz., M/s GRSE and M/s GSL. Contract Negotiation Committee (CNC), in March 2007, declared M/s GRSE as L-1 at final negotiated basic price of ₹973.24 crore for 16 IPVs. However, Defence Procurement Board found (June 2007) the negotiated price to be on the higher side as compared to the Last Purchase Price and the matter was referred back to CNC for re-negotiation. Thereafter, CNC conducted prolonged deliberations with M/s GRSE for about 13 months (August 2007 to September 2008) to re-negotiate the basic price of 16 IPVs from ₹973.24 crore to ₹968.33 crore.

While the negotiations were on, M/s GSL withdrew its offer (July 2007) after the expiry of the validity of bids, citing its inability to participate in construction of IPVs due to ongoing pressing commitments leading to a resultant single vendor situation.

Cabinet Committee on Security (CCS) approved the proposal (March 2009) for acquisition of only eight IPVs from M/s GRSE at a total price of ₹532.79 crore, inclusive of spares, with directions to issue multi-vendor RFP for the remaining eight IPVs within three months. The contract was concluded (March 2009) with M/s GRSE for eight IPVs, with first IPV to be delivered in August 2011 and delivery of all the eight IPVs to be completed by May 2013.

In spite of the directions of CCS (March 2009) to issue multi-vendor RFP for the remaining eight IPVs, RFP was issued (November 2009) to only four DPSU/PSU shipyards[1] for which techno-commercial proposals were received (March 2010) from all the four vendors. Subsequently, CNC recommended (November 2010) acquisition of eight IPVs from L1, M/s HSL at a total price of ₹551.12 crore, inclusive of spares. After approval by Competent Financial

[1] (1) M/s Cochin Shipyard Ltd. (CSL, Kochi, (2) M/s Hindustan Shipyard Ltd. (HSL), Visakhapatnam, (3) M/s Garden Reach Shipbuilders & Engineers Ltd. (GRSE), Kolkata and (4) M/s Goa Shipyard Ltd. (GSL), Goa

Authority (CFA) (February 2011), contract was concluded (March 2011) with M/s HSL for eight IPVs, with the first IPV to be delivered in August 2013 and subsequent vessels at intervals of three months.

In this connection, we noticed (May 2013 and April 2015) that:

- CGHQ/MoD took 40 months for conclusion of contract with M/s GRSE as against the stipulated 11-16 months of which 13 months were taken for according of AoN instead of one month as stipulated in DPP. Further, CNC could only achieve a discount of ₹4.91 crore even after negotiating for about 18 months as against 3 to 5 months as per DPP. This resulted in withdrawal of bids by M/s GSL leading to loss of opportunity to negotiate with L-2, i.e. M/s GSL for the remaining IPVs and achieving time advantage.
- IPVs were to be delivered by M/s GRSE from August 2011 to May 2013, but were actually delivered between January 2012 and October 2013 and none of the IPVs had been delivered by M/s HSL due to shipyard's inability to finalise the design/designer for the project. The delivery of the first IPV to be delivered by M/s HSL has been re-scheduled to be delivered in December 2016 after a delay of 40 months.

In response to our observations CGHQ stated (July 2013) that the delay was due to approval of the project in phases and the time consumed by CNC, due to detailed deliberations, aimed at arriving at a reasonable cost. It was also stated that M/s GSL decision to withdraw was based on the ongoing pressing commitments on various projects vis-à-vis construction facilities available with them. Further, in reply to our observations on issuing of RFP to DPSU/ PSU shipyards only, CGHQ justified the exclusion of private yards sighting unsatisfactory experience in the ongoing ship construction projects. CGHQ further stated (April 2015) that it had recommended the issuance of RFP to M/s HSL, based on the fact that the shipyard was already involved in ship building projects for Indian Navy. Further, DDP had confirmed that HSL had huge infrastructure which were under-utilised and had the capacity to construct these eight IPVs with delivery on time.

The reply of CGHQ is not tenable due to the following reasons:

- CGHQ/MoD took 40 months for conclusion of contract against stipulated 11 to 16 months. Thus, in spite of the fact that operational

effectiveness of the Coast Guard was being hampered, there was no urgency in processing the case for conclusion of contract for acquisition of IPVs.

- Issue of RFP only to PSU/ DPSU shipyards was not in keeping with the spirit of the CCS sanction for issue of a multi-vendor RFP, thus, adversely affecting the level of competition by limiting the competition to PSU/ DPSU shipyards only.
- HSL's inability to finalise the design of the IPVs leading to delay in delivery, clearly shows that the capacity of M/s HSL was not adequately assessed before conclusion of the contract.

Thus, procedural delays in conclusion of contract resulted in delay of four to sixty months in replacement of eight out of the 13 IPVs which were decommissioned between December 2008 and July 2013, while replacement vessels for the remaining five IPVs were yet (August 2015) to be received, thereby restricting the operational effectiveness of the Coast Guard.

CHAPTER V: DPSU SHIPYARDS

Defence Public Sector Undertakings (DPSUs) function under the administrative control of Department of Defence Production. There are four Defence Public Sector Shipyards (DPSS) viz. Mazagon Dock Limited (MDL), Garden Reach Shipbuilders & Engineers Limited (GRSE), Goa Shipyard Limited (GSL) and Hindustan Shipyard Limited (HSL).

5.1 Utilisation of facilities created by Shipyards

Garden Reach Shipbuilders and Engineers Limited created facilities without ensuring orders commensurate with the facilities created resulting in under utilisation of facilities created. The facilities created in Goa Shipyard Limited remained underutilised due to non-finalisation of collaborator for Mine Counter Measure Vessels project and non-receipt of orders for Offshore Patrol Vessels.

DPSS are mainly dependent on entrustment of orders for construction of ships on the basis of nomination by the Ministry of Defence (MoD). The facilities created after spending ₹592.15 crore in Garden Reach Shipbuilders and Engineers Limited (GRSE) were underutilised due to want of orders for big ships from MoD and facilities created in Goa Shipyard Limited (GSL) after spending ₹561.20 crore remained underutilised due to non-finalisation of collaborator for Mine Counter Measure Vessels (MCMVs) project and non-receipt of orders for Offshore Patrol Vessels (OPVs). The details are discussed below:

5.1.1 Garden Reach Shipbuilders and Engineers Limited

MoD communicated (March 2003) approval of Government of India for the construction of four ASW Corvettes at GRSE and sanctioned (March 2003) ₹180 crore towards cost of augmentation of Yard facilities at 2001-02 price

level. GRSE constructed[1] dry dock & inclined berth, module hall and installed 250 tonne Goliath Crane at a cost of ₹592.15 crore of which ₹331.27 crore was from MoD.

The utilisation of facilities was as detailed below:

Sl. No.	Area	Facilities Created	Utilisation
1.	**Dry Dock & inclined berth**	Increase in construction/ launching capacity of ship from 900 tonne (erstwhile Slipway-4) to 10,000 tonne & 4,500 tonne Dead Weight Tonnage (DWT) respectively for Dry Dock & Inclined berth.	Presently it is handling P28 ships with dead weight 535.8 tonne and full displacement weight 3384 tonne and Landing Craft Utility (LCU) of 214.5 tonne and 865.7 tonne.
2.	**Module Hall**	Construction of mega hull block of about 225 tonne.	Module Hall was not used as GRSE is currently constructing small ships without any requirement of mega hull blocks.
3.	**Goliath Crane**	Increase in capacity of handling blocks/equipment upto 250 tonne. Lifting of Dry Dock Gates weighing around 200 tonne.	Presently, Goliath crane is handling maximum of 60 tonne since supporting cranes are of 40 tonne each and no big ships are being constructed.

As could be seen from the above, the facilities created were not being utilised to the full extent as GRSE had no orders for construction of big ships.

5.1.2 Goa Shipyard Limited

MoD (Navy) nominated (October 2005) GSL as the production agency for construction of MCMVs. GSL incurred ₹561.20 crore upto May 2015 against

[1] Construction was completed in June 2013

₹400 crore released by MoD and completed (September 2010) construction of Repair berth 1 & 2 and Transfer area and Supply and Installation of Shiplift & Transfer system (March 2011).

The utilisation of facilities created was as detailed below:

Sl. No.	Area	Facilities Created	Utilisation
1.	**Supply and Installation of Shiplift & Transfer system**	6,000 tonnes capacity ship lift of 120 m long and 25 m wide platform to be used for the launching and retrieval of vessels for new building and repair	The facility has been made ready for MCMV construction. The facility is being utilised for construction of OPVs upto 105 M and ships with weight upto 4,500 tonne were docked/undocked since April 2011.
2.	**Civil construction work**	Repair berth 1 & 2, Transfer area	Created as launching/ docking facility for MCMV construction and pending receipt of MCMV orders, being partially utilised.

As could be seen from the above, the facilities created were not being utilised to the full extent. MoD issued (August 2008) Request For Proposal (RFP) for selection of collaborator for MCMV project. As per the terms of RFP, delivery of first indigenous MCMV was to be in 72 months after signing of contract for first ship to be built at collaborator's yard and commissioning of infrastructure facilities was to be completed within 30 months after signing of contract with collaborator. MoD directed (November 2014) GSL to initiate a fresh acquisition process for eight MCMVs and as per the proposal submitted (February 2015) by GSL to MoD, Preliminary Staff Requirements (PSRs) were to be finalised at Integrated Headquarters of Ministry of Defence (Navy) (IHQ MOD (N)) by June 2015. Thus, due to delay in finalisation of collaborator for MCMV project, the facilities created were underutilised.

5.2 Non-recovery of Liquidated Damages – Mazagon Dock Limited

Non-recovery of liquidated damages amounting to ₹2.75 crore by Mazagon Dock Limited for delay in completion of the works was an undue favour to the contractor.

Mazagon Dock Limited (MDL) entered into (May 2011) a contract with M/s Hyosung Corporation, South Korea for design, manufacture, supply, erection, installation, testing and commissioning of four cranes (one each of 100T and 50T and two of 15T) at a cost of USD 12,226,357 (approx. ₹55 crore at ₹45 per USD). As per the contract, time for completion of works was 463 days from the commencement date of contract (13 May 2011) and thus, the work had to be completed by August 2012. The work was completed in June 2013 but MDL did not levy liquidated damages amounting to ₹2.75 crore as stipulated in clause 4.2[2] of the contract.

Ministry endorsed (March 2014) the reply of the Management that liquidated damages would be as per contractual terms and conditions.

Non-levy of liquidated damages was an undue favour to the contractor.

5.3 Diversion of funds by Hindustan Shipyard Limited

Hindustan Shipyard Limited, despite receiving funds from Ministry of Defence (MoD), did not commence the work of Repair and Refurbishment of Machinery and Infrastructure due to absence of orders from MoD. The funds received were kept in fixed deposits and also temporarily diverted to meet the working capital requirements contrary to the terms of sanction.

Hindustan Shipyard Limited (HSL) proposed (November 2010) refurbishment and replacement of the existing marine assets, plant & machinery to realign its business towards construction/repair of warship and submarines for the Indian

[2] Liquidated damages was to be levied at the rate of 0.072 *per cent* per day subject to a maximum of 5 *per cent* of the contract price for delay in completion of the whole of the work.

Navy and the Coast Guard. The estimated cost of modernisation of 72 items of existing marine assets and plant and machinery was ₹457.36 crore to be funded by Ministry of Defence (MoD). The Ministry released (December 2011) ₹457.36 crore to HSL and stipulated that the funds be utilised for creation of specified assets and not diverted for any other purposes. HSL was to submit utilisation certificate within one year to MoD and in case of non-utilization of sanctioned amount within one year, interest earned on unutilised funds was to be credited to the Government. However, no specific time frame for completion of Repair and Refurbishment of Machinery and Infrastructure (RRMI) activities was mentioned. HSL did not initiate any action in respect of 18 works valued ₹59.90 crore and 27 works valued ₹278.20 crore were in various stages of tendering. The balance 27 works valued ₹119.26 crore was in progress as on date (June 2015). HSL kept the unutilised funds in fixed deposits besides resorting to temporary diversion for meeting working capital requirements. HSL stated (December 2014) in reply to Audit observation that absence of orders from MoD affected modernisation schedule.

MoD stated (March 2014) that temporary usage of funds was due to acute shortage of working capital. This resulted in the outstanding dues to contractors not being paid and vendors not being prepared to supply the materials unless payment was assured.

Ministry's reply was only regarding diversion of funds and was silent regarding absence of orders.

In response to Audit requisition seeking the reasons for poor utilisation, HSL stated (December 2014) that activities under RRMI were long lead in nature requiring considerable time for completion, the project was being implemented with available resources as dedicated team for execution of RRMI activities could not be allocated and technical specifications for some of the activities could not be finalised since HSL had not got any commitment/order towards construction of Landing Platform Docks (LPDs), Submarines etc. from MoD.

HSL's reply of December 2014 that absence of orders from MoD affected modernisation schedule clearly indicates the fact that MoD had not addressed

this issue while sanctioning the funds. Thus, diversion of funds released for modernisation not only delayed indefinitely the intended refurbishment and replacement of worn out machinery adversely affecting the Company's efficiency but also resulted in blocking of funds in deposits which was not the intention of its release to HSL.

New Delhi **(PRAMOD KUMAR)**
Dated: **Principal Director of Audit**
Navy

Countersigned

New Delhi **(SHASHI KANT SHARMA)**
Dated: **Comptroller & Auditor General of India**

ANNEXURE

Annexure I

(Refers to in Para No. 1.9.1)

Paragraphs to which Ministry did not reply

Sl No.	Draft Para No.	Brief Subject
1.	3.3	Extra expenditure of ₹2.43 crore incurred on procurement of spares from a foreign firm.
2.	3.5	Excess procurement of naval stores worth ₹1.03 crore.
3.	3.7	Avoidable payment of interest amounting to ₹1.15 crore.
4.	3.8	Unwarranted procurement of Tachometers.
5.	4.1	Delay in placing of order led to an extra expenditure in procurement of Inshore Patrol Vessels.
6.	5.1	Utilisation of facilities created by Shipyards

Annexure –II

(Refers to in Para No. 3.4)

List of Critical items deleted from the Approximate Estimates

Sl. No.	Description of Critical items
1.	Plating Chemicals for first fill and maintenance for Electro less Nickel Plating Facility.
2.	Spares for filters, air agitation units and heaters.
3.	Special Polishing/Buffing facilities Essential spares for maintenance.
4.	Electrophoretic Coating Facility.
5.	Specifications and Ric details Exhaust Ventilation consisting of single phase rotary motors for barrel rotation mechanism.
6.	Romical/ Glydatte type semiautomatic transportation system with a span of 25 mtrs and of a width of 1.5 mtrs over 25 Nos. Barrel plating process tanks of sizes 1 X 1 X 1 mtrs, carrying a perforated barrel of a capacity of 20 Kgs, pendant controls, limit switches, loading and unloading stations with devices.
7.	Single phase rotary motors for barrel rotation mechanism.
8.	Laboratory Instruments: Digital pH Meters.
9.	Hot Air Oven Temp Range: 50C to 100C, Accuracy: 0.50C, fitted with Digital Temp controller and indicator.
10.	Table top conductivity meter, range: 1= 199 ms/cm in 5 ranges and supplied with conductivity cells of cell constant 0.1 and 1, each 4 Nos. cell stand sample container, 125 ml with standard calibration solutions.

Glossary of Terms	
AA	Administrative Approval
AC System	Air Conditioning System
ADS	M/s Aviation and Defence Spares, UK
AE	Approximate Estimates
AOG	Aircraft on Ground
AoN	Acceptance of Necessity
ARC	Annual Refit Conference
ARP	Annual Review Plan
ASW	Anti-Submarine Warfare
ATN	Action Taken Note
BEL	Bharat Electronics Limited
CCS	Cabinet Committee on Security
CE	Chief Engineer
CFA	Competent Financial Authority
CNC	Contract Negotiation Committee
CNO	Confidential Navy Order
COA	Contract Operating Authority
CSDU	Constant Speed Drive Unit
CSL	Cochin Shipyard Limited
DAD	Defence Accounts Department
DDP	Department of Defence Production
DFM	Directorate of Fleet Maintenance
DGNP (V)	Director General Naval Projects, Visakhapatnam
DL	Defect Lists
DPM	Defence Procurement Manual
DPP	Defence Procurement Procedure
DPR	Detailed Project Report

DPRO	Directorate of Procurement
DPSS	Defence Public Sector Shipyards
DPSU	Defence Public Sector Undertaking
ECE	Electro Chemical Engineering
E-in-C	Engineer-in-Chief
EPI	Engineering Projects (India) Ltd, Chennai
GoI	Government of India
GRSE	Garden Reach Shipbuilders and Engineers Ltd.
GSL	Goa Shipyard Limited
GTG	Gas Turbine Generators
HAT	Harbour Acceptance Trials
HQENC (V)	Headquarters, Eastern Naval Command (Visakhapatnam)
HSL	Hindustan Shipyard Limited
ICG	Indian Coast Guard
IN	Indian Navy
IHQ, MoD (Navy)	Integrated Headquarters, Ministry of Defence (Navy)
ILMS	Integrated Logistics Management System
INS	Indian Naval Ship/Submarine
IPV	Inshore Patrol Vessel
IRIGC	Indo Russian Inter Governmental Committee
IVRCL	Iragavarapu Venkata Reddy Construction Infrastructures & Projects Ltd., Hyderabad
LA (Def)	Legal Advisor (Defence)
LC	Letter of Credit
LCU	Landing Craft Utility
LD	Liquidated Damages
LPDs	Landing Platform Docks
LPP	Last Purchase Price

LTE	Limited Tender Enquiry
MCMVs	Mine Counter Measure Vessels
MDL	Mazagon Dock Limited
MES	Military Engineer Service
Ministry	Ministry of Defence
MLC	Main Line Cables
MOQ	Minimum Order Quantity
MoD	Ministry of Defence
MO (MB)	Material Organisation (Mumbai)
MO (V)	Material Organisation (Visakhapatnam)
MR	Medium Refit
MYRR	Mid-Year Refit Review
NAVAC	Naval Academy
NAY (K)	Naval Aircraft Yard (Kochi)
ND (MB)	Naval Dockyard (Mumbai)
ND (V)	Naval Dockyard (Visakhapatnam)
NHQ	Naval Headquarters
NLC	Naval Logistics Committee
NMRL	Naval Materials Research Laboratory
NO	Navy Order
NPOL	Naval Physical and Oceanographic Laboratory
NR	Normal Refit
NSTL	Naval Science and Technological Laboratory
OCRC	Operational-cum-Refit-Cycle
OEM	Original Equipment Manufacturer
ONGC	Oil and Natural Gas Corporation
OPVs	Offshore Patrol Vessels
PAC	Proprietary Article Certificate

PAC	Public Accounts Committee
PDA (N)	Principal Director of Audit (Navy)
PDFM	Principal Director of Fleet Maintenance
PERT	Programme Evaluation and Review Technique
PNC	Price Negotiation Committee
PO	Purchase Order
PQ	Procurement Quantities
PRTs	Pre Refit Trials
PSRs	Preliminary Staff Requirements
PSU	Public Sector Undertaking
R&D	Research & Development
RFP	Request for Proposal
ROE	Rosoboronexport, Russia
RPP	Refit Planning Programme
RRMI	Repair and Refurbishment of Machinery and Infrastructure
RTD	Refit Technical Documents
RVZ	Rosvooruzhenie, Russia
SATs	Sea Acceptance Trials
SA	Supplementary Agreement
SOC	Statement of Case
SoW	Scope of Work
STE	Spets Techno Exports, Ukraine
TEC	Technical Evaluation Committee
TOD	Tender Opening Date
TOV	Total Order Value
WOT (V)	Warship Overseeing Team (Visakhapatnam)
WPS	Warship Production Superintendent