CHAPTER-3
Mid Life Update of Ships

Audit Objective: Whether the Mid Life Updates (MLUs) were taken up as envisaged and executed efficiently and timely?

3.1 MLUs: The Rationale, Need and the Candidate Ships

Hull of surface ship generally lasts between 25 and 30 years but its electronic sensors, weapons, auxiliary machinery and systems do not match the hull life due to continuous operational use and obsolescence. The weapons and sensors, therefore, fall due for replacement between 7 and 10 years. This in turn affects reliability and combat effectiveness of naval ships. To overcome these shortcomings and to avoid obsolescence, it is necessary to selectively replace sensors, weapons and auxiliary machineries which require update. The process of selective replacement which enhances the operational life of ships in the most cost effective manner is called MLU or Service Life Extension Programme (SLEP). Ideally an investment in MLU/SLEP for a ship is considered worthwhile only if she is going to be role-worthy for the next 8 to10 years.

Refit on Propeller and Shafting

3.2 Planning and implementation of MLUs

A policy paper on MLU/SLEP for Indian Naval Ships was chalked out in July 2000 for implementation during the Xth Plan period (2002-07). The policy, *inter alia*, had brought out that ships with a service life of 15 years or more were fit for undertaking MLU/SLEP. Naval Headquarters, therefore, identified five classes of ship for MLU/SLEP. The expected life extension after the MLU was estimated to be 8 to 10 years. Accordingly, approvals of the CCS for MLU of 18 ships of identified five classes were accorded during the period 2002-2004 at a total cost of ₹ 2735.03 crore as tabulated below:

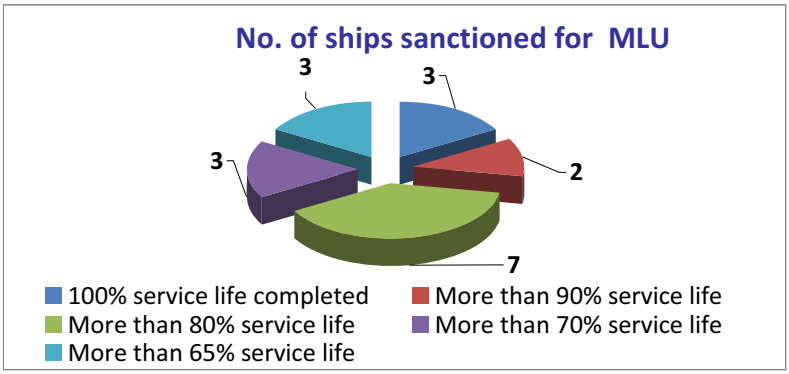
Table 3.1

Sl. No.	Class of ship	Amount (₹ in crore)
1	**1241RE (INS Veer, Nishank, Nirbhik, Nipat, Nirghat)**	**188.90**
2	**1241 PE (INS Abhay, Agray, Ajay, Akshay)**	**254.80**
3	**SNF Class (INS Ranvir, Ranvijay)**	**718.84**
4	**G Class (INS Godavari, Ganga, Gomati)**	**1055.82**
5	**SNM (INS Cannanore, Konkan, Kozhikode, Cuddalore)**	**516.67**
	Total	**2735.03**

Our examination revealed choice of ships for undertaking MLU in deviation of the existing policy, issues relating to financial management, delays in commencement and completion of MLUs, deletion/delinking of equipment from the MLU package, as discussed in subsequent paragraphs.

3.2.1 Limited Residual Life of Ships sent for MLU

The Policy on MLU envisaged that ideally a ship should be taken up for MLU after completing about 50 *per cent* of service life. We noticed that MLUs were undertaken at the fag-end of service life of the ships. The residual life of 18 ships on which MLU was/is being undertaken is given in the graph in the next page:



The execution of MLUs at such a belated stage had not only resulted in less than optimal benefits post MLU but also indicated that, for a considerable period, these ships operated with obsolete systems.

3.2.2 Delay in commencement of MLU

There were delays of 5 to 67 months in commencement of MLUs on 15 ships, whereas the MLU on two ships commenced prior to the dates approved by CCS and on the remaining one ship, had not commenced, (October 2013) despite the fact that estimated life of the ship was already over. The details are summarised in the succeeding Table:

Table 3.2

Sl. No.	Name of the Ship	Anticipated service life in years	Delay in commencement of MLU (in months)
1	INS Ranvir	25	7
2	INS Ranvijay	25	20
3	INS Cannanore	20	16
4	INS Konkan	20	13
5	INS Kozhikode	20	5
6	INS Cuddalore	20	13
7	INS Abhay	20	16
8	INS Ajay	20	-
9	INS Agray	20	21
10	INS Akshay	20	26
11	INS Godavari	25	-
12	INS Ganga	25	24
13	INS Gomati	25	67
14	INS Nirghat	20	7
15	INS Nishank	20	13
16	INS Nirbhik	20	7
17	INS Veer	20	9
18	INS Nipat	20	MLU not commenced

IHQ MoD (Navy) attributed (March 2011 & May 2011) delay in commencement of MLU on 8[1] out of 15 ships to the cascading effect of delays in the earlier refits, increase in the operational periods etc. It was further added that the MLUs of ships were being carried out in tandem with major refits dictated by OCRC of the ships, the requirements to maintain a certain force level, dry/dockyard constraints, and availability of the equipment.

Reasons put forth by IHQ MoD (Navy) are not acceptable as scheduling and operational availability of ships are known much in advance i.e. at the time of obtaining the sanction for MLU of the ships.

Moreover, the justifications provided by Navy for delayed commencement of MLUs were similar to that of delay in commencement of refits. MLUs were special, one time activities that required major changes in the sensors, armament and equipment of selected frontline ships. Given the financial implications, approval of the Cabinet/CCS was necessitated. Adequate time was also available to the Navy to plan and prepare for the MLUs after obtaining the approval. Despite the above, delayed commencements were noticed indicating lack of preparedness on the part of Navy.

Regarding non-commencement of MLU on INS Nipat, IHQ MoD (Navy) stated (February 2012) that during the ship's extended SR most of the MLU equipments were fitted and NR-MLU of the ship was renamed as NR and was planned for 2012.

Profile cutting of steel plates

[1] INS Nirbhik, INS Nishank, INS Vibhuti, INS Vipul, INS Agray, INS Ranvir, INS Kirpan, INS Khanjar

The contention is not acceptable as the MLU was approved by CCS in December 2001 at ₹ 37.78 crore. Further, the ship which was commissioned in December 1988 had outlived its expected life of 20 years in 2007. Reasons for not undertaking the MLU as approved by the CCS were not furnished.

Repairs in progress on propeller shaft

We requested (May 2012) IHQ MOD (Navy) to provide reasons for delay in remaining seven ships and the break-up of the MLU equipment fitted on board INS Nipat during extended SR and the planned NR. However no reply was received as of November 2013.

3.2.3 Delay in completion of MLU

In addition to delays in commencement of MLUs, there were, delays of 1 to 33 months in completion of the MLUs in 10 out of 17 ships as against the authorised MLU Policy as tabulated below:

Table 3.3

Class of Ship	Name of the Ship	Period authorised as per MLU policy (in months)	Actual duration of MLU (in months)	Delay in completion (in months)
1241 RE/ Veer	INS Nirghat	12	20.5	8
	INS Nishank	12	18	6
	INS Nirbhik	12	17.5	5.5
	INS Veer	12	17	5
SNF/ R	INS Ranvir	24	41.5	17.5
	INS Ranvijay	24	32	8
Godavari	INS Godavari	24	25	1
1241 PE/ Abhay	INS Abhay	12	45	33
	INS Agray	12	44	32
SNM	INS Cuddalore	10	14	4

Our analysis revealed that delays in completion of MLUs were primarily due to non-availability of spares to the extent of 73 *per cent* and

67 *per cent* in respect of FCL[2] and PDDs[3] respectively. Additionally, non-availability and failure of equipment also contributed to the delay.

3.2.4 Reasons for delay in completion of MLU

In order to identify the reasons for delay in completion of MLUs at various yards, we scrutinised the MLUs of seven out of 17 ships. We observed the following reasons for the delays which are tabulated below:

Table 3.4

Sl. No.	Name of the ship and delay in days	Reasons for delay
1.	INS Ranvir 524 days	• Four months due to extensive structural modification associated with MLU/modernisation package and delay in availability of MLU/ABER equipment. • Four months due to growth in hull work, cumulative backlog of hot work, delay in availability of equipment/spares, marine grade aluminum. • Delay of 3.5 months due to delay in habitability restoration due to modular accommodation and EVACS, late receipt of cables and additional work for late approval 14 numbers of additions and alterations. • The first phase of docking of ship was delayed by four months due to non-availability of docking slot. The ship was in dry dock for 588 days against an authorized limit of 120 days. • In addition to initial allocation of 130 MUs, another 130 MUs were consumed to liquidate the MLU package and growth of hull work. • Out of 4097 firm demands and Post Defectation Demands raised by the yard, only 2343 (57.19 *per cent*) demands were met.
2.	INS Nishank 147 days	• Shaft alignment after stem tube renewal required additional docking apart from the planned three dockings, resulting in excess utilisation of 77 excess dry docking days. • Poor condition of GT air intakes, Cowlings, STW of GTA and problems relating to GTA components. • Late positioning of galley equipment led to delays in restoring habitability onboard.
3.	INS Veer 143 days	• Extensive hull renewal as the ship had already outlived its prescribed life. • Non-availability of instrumentation spares for the GTs, non-availability/ delays in supply of approved ABER/MLU equipment.

[2] Forecast List – Forecast requirements of spares during refit.

[3] Post Defectation Demand – Spares required for refit, need for which is evident only after opening of equipment/system.

		• **Recurrent failure of coupling of Diesel Alternators with Russian Alternator.** • **Availability of spares was only 33.44 *per cent*.**
4.	**INS Cannanore** **90 days**	• **Delay in installation and commissioning of Central AC plants by the firm.** • **The compliance rate of FCL and PDD was 48.60 *per cent* and 45.20 *per cent* respectively.**
5.	**INS Konkan** **102 days**	• **Defects on Diesel Alternators and design deficiencies in the L&T Switchboard.**
6.	**INS Ajay** **45 days**	• **Late positioning of MLU equipment. The DCD was delayed by 45 days.** • **Considerable modifications of indigenised AC cooling pump.** • **Delay in replacement of Switchboard breakers.** • **Forecast list demand availability at the commencement of MLU was 26 *per cent* only.**
7.	**INS Godavari** **35 days**	• **Spares for Steering Gear and Hydraulic Pump, Stabilisers and Hello Traversing Gear – SOFMA were not available.** • **Poor material state of the ship increased hull work package to 137 tons of steel from the norm of 50 tons.** • **Six hull related additions/ alterations/MLU installations were undertaken.** • **Firm Demand Spares to the extent of 52 *per cent* only.** • **Against allotted man days of 105000 for MR-MLU, the consumption of man days was 141096.**

Thus, the delay in completion of MLUs was primarily due to extensive hull work on account of ageing of ships, delay in getting equipment and spares, excessive dry docking and growth of work.

Evidently, MLUs also suffered from the same problems being faced during refits despite the fact that MLUs are more important and involved one time modernisation package requiring approval of CCS.

3.3 Financial Management

The sanction of CCS for undertaking MLUs of 18 Naval Warships at a cost of ₹ 2735 crore was obtained, inter alia, on the following grounds:

- Ships fitted with weapons & sensors at the time of their acquisition imposed severe limitations on the combat efficiency of these ships,
- There has been no upgradation of the major on-board systems of the ships,
- It was essential to retrofit the ships with upgraded weapons, sensors and other machinery to improve their combat effectiveness.

The segregated data furnished (January 2011) by IHQ MoD (Navy), of equipment fitted and deleted / delinked along with its cost was analysed by us. It was noticed that the data did not have cost of equipment delinked / deleted or fitted as part of the MLU in many instances. The available information is tabulated below:

Table 3.5 **(₹ in crore)**

Class of ship	Sanctioned amount as per CCS	No. of equipment sanctioned	No. of equipment deleted / delinked	Cost of equipment fitted	Difference worked out by Audit	Cost of deleted/ delinked equipment
	(1)	(2)	(3)	(4)	(5)[4]	(6)
SNF(R Class) INS Ranvir INS Ranvijay	718.84 (basic cost, escalation @ 5% pa plus ERV at actual)	52 on each ship	6 6	525.57	193.27	91.00
G class INS Godavari INS Ganga INS Gomati	1055.82 (basic cost, escalation @ 5% pa plus ERV at actual)	37 on each ship	8 8 8	847.56	208.26	31.50
1241 PE(Abhay Class) INS Abhay INS Agray INS Ajay INS Akshay	254.80 (basic cost, escalation @ 5% pa plus ERV at actual)	35 on each ship	7 8 7 7	197.17	57.63	56.00
SNM(Karwar Class) INS Cannanore INS Konkan INS Kozhikode INS Cuddalore	516.67 (Basic cost, ERV at acuals)	36 on each ship	4 4 4 4	254.13	262.54	46.00
1241 RE(Veer Class) INS Veer INS Nirghat INS Nishank INS Nirbhik INS Nipat	188.90 (basic cost, ERV at actual)	39 on each ship	7 7 7 7 7	82.96	105.94	21.00
Total	**2735.03**	**694**	**116**	**1907.39**	**827.64**	**245.50**

[4] The figure has been derived by Audit by deducting the cost of equipment fitted on ship as furnished by Navy, from the total cost of equipment sanctioned by the CCS for MLU.

A number of equipment sanctioned were either delinked or deleted and therefore, not installed during the MLU. Further, fitment cost[5] of equipment for which provision was made in the sanction remained uncalculated/un-compiled. Also, some of the equipment / systems were refurbished instead of being replaced. Resultantly, we could not ascertain the actual expenditure incurred against individual sanctions/MLUs.

The IHQ MoD (Navy) stated (March 2011) that a unified financial monitoring directorate/ body for MLU did not exist and the financial authority in this regard has been delegated to various agencies, which procured the items as per financial powers delegated to them. It was further stated that no consolidated report / return had been submitted by any Naval unit on MLU projects, as no need was felt for the same, and that all payments had been made through CDAs.

The reply is however not acceptable as delegation of powers does not dilute the need for a nodal mechanism to monitor the progress of MLUs in terms of the CCS approval and consequently we did not derive any assurance that the expenditure incurred on individual MLUs was as intended in the CCS approval.

3.4 Efficacy of MLU

The approval accorded by the CCS catered, *inter alia*, for the procurement of 694 equipment of varied nature costing ₹ 2735.03 crore, identified by the Navy for installation on five different classes of ship during their MLUs. We, however, noticed that while executing the MLUs, 116 equipment costing ₹ 245.50 crore as shown in Table No. 3.5 above could not be installed as these equipment were either delinked or deleted from the scope of the work package.

We analysed the delinking and deletion of various equipments from the MLU package of five class of ships and found that deletion/delinking of equipment was primarily due to delay in receipt of equipment, changes in policy decisions, delay in indigenous development of certain equipment and installation of substitute equipment in certain cases. Though, these equipment as part of MLU were approved by the CCS, no approval of the competent authority was taken for the above deletion/delinking. However, Navy stated (July 2013) that action towards regularising deleted/delinked equipment has been initiated and is being progressed for seeking approval of MoD/CFA.

[5] It is a cost of actually fitting an equipment/system/armament on a ship.

IHQ MoD (Navy) stated, (October 2010 and May 2011) that deletion/ delinking of these equipment had no effect on operational role of the ships and decision for deletions were taken at the level of Personnel Staff Officer. The reply is not acceptable as the deletion/delinking of CCS approved equipment at a later stage without the concurrence of approving authority was against the procedure and also failed to achieve the desired standard of operation as planned.

A scrutiny of some important equipment deleted/ delinked from the MLU package revealed the following:

Table 3.6

Sl. No.	Item / equipment	Observation
1	**Equipment/ System 'A'**	• It was one of the equipment planned for the MLU of the 'G' Class of Ships sanctioned in 2002. This was Categorised as 'Buy Indian' in 2006 by VCNS. RFP was issued only in 2009. • TEC recommended (2009) retraction of RFP as four bids received displayed significant variation in scope, were partial / conditional bids and scope of work could be frozen only after freezing detailed design. TEC also recommended that due to significant customisation involved, installation of this equipment be re-assessed. • IHQ asked (March 2010) HQ, WNC to re-examine the requirement of installation of 'A' on this class of ships based on MLU schedule and remaining life of ships. • Directorate of Marine Engineering stated (November 2011) that Board of Officers has been constituted to work out detailed scope of work.
2	**Equipment/ System 'B'**	• The system planned for the MLU of Karwar class ships at an estimated cost of ₹ 6 crore each. • RFP issued to M/s ROE on single tender basis (December 2008) who quoted (July 2009) USD 9.83 million (₹ 49.15 crore) for two ship sets, which was revised by the firm (April 2010) to USD 10.17 million. • Ultimately the firm stated (October 2010) that the work was developmental and all previous vendors were closed. • Because of the high cost, availability of equipment from decommissioned ships and balance life of ships, Navy finally decided to retain the existing system.

3	**Equipment/ System 'C'**	• System was installed on 'G' class during MLU and subsequently on 'R' class. However, it was not installed on other classes of ships. • DME stated (November 2011) that a policy decision has been taken by the VCNS that only Corvettes and above class of ships be installed with 'C' as smaller ships do not form part of Battle Group of Ships. • Hence installation of this equipment on smaller ships was deleted and was installed only on larger ships keeping in view their operational roles.
4	**Equipment/ System 'D'**	• CCS approval for procurement / installation of 'D' during MR/MLU of Ranvir class ships was accorded (2002) at a cost of ₹ 22.50 crore (included in the cost of 14 equipment). • Two BOO was convened (June 2006, October 2007) to study feasibility of installation of system and assess capability of firms to supply the system. • The installation was finally delinked from MLU of Ranvir due to mismatch in procurement and timelines of MLU. • Developmental order placed (November 2009) on the identified vendor for ₹ 1.75 crore for supply in August 2010. In a meeting (April 2010) the firm brought out issues such as SOTR compliance, PERT chart etc. • Subsequently, Navy raised (May 2011) concerns regarding mounting of sensors, junction box, tachometer inputs, routing of cables etc. • Another BOO recommended (July 2010) that SNF class of ships are in operation for three decades and continuous monitoring of this parameter is not essential, MLU of Ranvijay was in final stages and that the system needs to be tested on a test bed for at least one year. • The developmental order was short closed (June 2011) as firm stated that there were unforeseen intricacies beyond their perception.
5	**Equipment/ System 'E'**	• The system was sanctioned by the CCS for installation in Ranvir and 'G' classes of ships during their MLU at ₹ 7.50 crore each. • Replacement of on-board system by 'E' on INS Ranvir and INS Ranvijay was planned during the ship's MLUs, during 2004-08 and 2008-10 respectively. However, considering the delay in delivery of requisite launchers, a decision was taken at IHQ MoD (Navy) to retain the existing system onboard these ships.

6	**Equipment/ System F'**	• Sanctioned by the CCS for installation in 'G' Class of ships during their MLU. • Equipment / system 'F' is indigenously developed by Naval Science and Technological Laboratory (NSTL), Visakhapatnam. On successful completion of User Evaluation Trials, Naval HQ initiated a case, in May 2006, for procurement of 'F' along with accessories and support equipment from a Defence PSU. • A Defence PSU was nominated as the production agency by Department of Defence Production and Supplies (DDP&S) in 1997 for a system / equipment developed by NSTL. The User Evaluation Trials were completed satisfactorily in May 2005. • On successful completion of User Evaluation Trials, the case was taken up internally within Naval HQ for the approval for induction of 'F' into Navy. • The order for 'F' was placed on the Defence PSU with End Date of Supply (EDS) of December 2011. However, contract for supply of a system was concluded in June 2010 with M/s WASS, Italy, which were to be delivered only by September 2012. The equipment/system 'F' was not fitted during the MLU.

The above examples bring out the need for improved planning and more detailed assessment of MLU package. At present MLU package was fluid and was being changed based on availability of equipment, cost and changes in fitment policy, which led to deviations from the envisaged MLU package. Further, delinking/deletion and substitution of items during MLU in deviation from the approved CCS package amounted to modification of scope of such approvals.

3.5 Procurement of MLU equipment

Examination of procurement of equipment/machinery for MLUs revealed the following inefficiencies:

3.5.1 Avoidable expenditure in procurement

Case- I: Extra expenditure due to non-exercising of option clause

Shaft bearings of a ship

The Navy concluded (August 2005) a contract with Garden Reach Shipbuilder and Engineers (GRSE) on single tender basis for supply of a ship set consisting of two MTU engines for INS Abhay at a total cost of ₹ 41.70 crore with an option clause to be exercised within one year of the contract i.e. by August 2006 at the same price. Instead of exercising the option clause, Navy in June 2006 initiated a fresh case for procurement of two ship sets for propulsion plants of INS Ajay and INS Akshay. The fact that one ship set had already been contracted in August 2005 and the technical specifications of the propulsion plants for these ships were similar to the specifications of the first ship set of INS Abhay was not brought out in the case seeking sanction.

We noticed that the total cost of procurement, installation and commissioning of the first ship-set procured under the contract of August 2005 was ₹ 49.20 crore, whereas cost for two systems procured under the subsequent contract of April 2010 was ₹ 62 crore per ship set. Thus, failure to procure/install the ship-set under option clause resulted in an avoidable expenditure of ₹ 25.60 crore.

Repairs in progress on Main Engine

The Navy stated (January 2011) that the installation was the maiden attempt at re-engining and it was imperative that efficacy of the installation be established prior to placement of subsequent orders and hence option clause could not be exercised.

The reply is not acceptable as the successful trials of the first ship-set were completed only by April 2010, whereas the case for procurement of two subsequent sets was initiated in June 2006 i.e. before lapse of the option clause period, and its CNC (December 2009) was finalised much before completion of successful trials of the first ship-set in April 2010. Further, the feasibility study in the year 2000, TEC report (November 2004), and detailed study by the GRSE, the ship designer and the engine manufacturer had already established the suitability of MTU engines for these ships.

Case – II: Extra expenditure on procurement of Gear Box

Two gear boxes meant for MLU on INS Abhay were supplied and installed by the GRSE under contracts of August 2005 and March 2007 respectively. Both gear boxes, however, failed on 13 September 2008 i.e. within warranty which was to expire on 6 December 2008. Nevertheless, the contract conditions were not enforced by the Navy and an extra avoidable amount of ₹ 2.52 crore was paid to the GRSE for rectification of defects.

3.5.2 Extra expenditure and delays due to inconsistent mode of tendering

The principles of public procurement stipulate that, to the extent possible, all public procurement should be fair, equitable and competitive to ensure best value for money. However, certain items are propriety product of manufacturing firms. Such items are only available with those firm or their dealers, stockists or distributors as the specifications are not available with others to manufacture the item. In such situations, a Proprietary Article Certificate (PAC) is issued to the Original Equipment Manufacturer (OEM) and items procured on PAC basis from that particular firm or their authorised dealers or distributors. PAC once issued is valid for three years from the date of issue unless cancelled earlier by the CFA.

We noticed instances where extra expenditure and delays occured in procurement of equipment due to inconsistent mode of tendering. Some of the more important cases are discussed below:

Case – I: Extra expenditure on development of indigenised Steering Gear System

The CCS approval of October 2002, *inter alia*, included replacement of 'Steering Gear System' (SGS) during MLU of three ships of 'G' class. During MR-MLU the equipment was delinked from the package as the system was still under development. The existing systems of all the three ships were declared (September 2003) Anticipated Beyond Economical Repair (ABER). Our scrutiny revealed that M/s Lloyds Steel had indigenously developed the Steering Gear Systems for P-16A class of ships which were the extension of 'G' class ships. Since it met Navy's requirements of indigenisation, assured product support, proven applications and standardisation, IHQ MoD (Navy) proposed (October 2003), to procure the system from the firm on PAC basis. M/s Lloyds Steel, submitted (September 2003) their quote of ₹ 3.91 crore for the supply of one ship-set Steering Gear. After a lapse of more than two years, Navy reviewed (February 2006) its earlier decision and proposed to replace the system as per the specification of 'new construction ships'.

Tenders were issued (December 2006) to five firms for the indigenous development of SGS. While technical bids were opened on 27 February 2007, 'Q' bids were opened only on 28 March 2008 after a delay of more than a year and M/s L&T had quoted the lowest at ₹ 6.96 crore.

However, by that time the validity of the offer had expired. Therefore, the firms were requested to extend their validity till 31 May 2008. Two firms including L&T extended their validity up to 31 May 2008. Since Navy could not adhere to the above time schedule, the firms were again asked to extend the validity up to 31 August 2008. However, this time L&T did not extend the validity. Thus, on re-tendering, M/s Veljan became L1 with a quote of ₹ 8.15 crore and during Price Negotiation Committee (PNC) meeting (September 2010) the price was reduced to ₹ 6.06 crore (excluding taxes). Government sanction was issued in April 2011 and the contract was concluded in April 2011. This amount was ₹ 2.15 crore more than that of M/s Lloyds Steel. This apart, tender process was in deviation of Defence Procurement Manual (DPM 2006), which provides two weeks for opening of 'Q' bids after opening of technical bids and another one week for preparation of Comparative Statements of Tenders (CSTs).

The Navy stated (January 2011) that non-procurement of the item from M/s Lloyds Steel was due to certain grey areas in respect of supportability and documentation of the system supplied by them. However, the above contention is not acceptable as P-16 A class of ships were commissioned between 2000 and 2005. In October 2003, Navy had proposed procurement of the same system from Lloyds as it met IN's requirement of indigenisation, assured product support, proven application and standardisation. Contrary to the above contentions, Navy had issued tenders on LTE basis to M/s Lloyds Steel in December 2006 for procurement of the same system for 'G' class ships. In reply to an audit query, HQ WNC stated (March 2011), that the performance of the SGS supplied by M/s Lloyds Steel was satisfactory without any major defect and its supportability and documentation have been satisfactory.

Thus, inconsistent stand in method of tendering led to extra expenditure of ₹ 2.15 crore. This apart, delays were witnessed in the procurement process. Most importantly, SGS could not be installed during the MLU. We also observed that due to non-availability of equipment during MLU of the ships, Naval Dockyard, Mumbai overhauled the existing systems of all three ships at a cost of ₹ 2.69 crore by offloading them to trade.

Case – II: Extra expenditure due to delay in development of indigenised Stabilizer

The stabilizer system fitted onboard of 'G' class ships was proposed to be replaced as part of MLU with an indigenous stabilizer system.

Repairs in progress on ship machinery

M/s Lloyds Steel had indigenously developed the stabilizer systems for P-16A ships, an extension of 'G' class ships. IHQ MoD (Navy) proposed (October 2003) to procure the system from the firm on PAC basis for 'G' class ships against ABER. The firm submitted (2003) a budgetary quote of ₹ 3.01 crore. Navy issued (April 2004) PAC status to the firm for stabilizer system for 'G' class of ships.

However, we noticed during audit scrutiny (August 2010) that the mode of tendering was changed from PAC to LTE and RFP was issued to five firms in January 2007 and quote of one of the firm viz. M/s Veljan Hydrair was the lowest. The contract was concluded (November 2008) with the firm at a cost of ₹ 5.48 crore. The stabilizer system was to be installed and commissioned by June 2010.

Thus, due to delay, the system could not be made available during MLU of the ship and ND, Mumbai had to resort to overhauling of existing system on the ships at an expenditure of ₹ 3.31 crore.

Recommendations

- The identification of candidate ships for planning and execution of MLU needs to be streamlined so that MLUs are completed around half way stage of a ship's life so as to ensure that full benefits of MLU are exploited.

- There is a need to designate a nodal agency in the Ministry and in the IHQ to ensure that MLUs are taken up and completed timely. The nodal agency should also ensure that expenditure incurred by different agencies on MLUs is collected and tracked to ensure that expenditure is incurred as intended by the sanctioning authority.

- The planning and process of obtaining sanctions for MLU needs to be far more rigorous. Only such equipment which could be reasonably put on board as part of MLU should be projected.

- The process of procurement of spares and equipment required for the MLU needs rationalisation. Sources of supply and tendering mode need to be assessed realistically. The items to be indigenised should be selected based on firm timelines for productionisation.