

ANNEXURE

Annexure-I

(Referred to in Para 2.3.1)

Provisioning Formula: The provisional and final procurement quantity (PPQ and FPQ) is calculated using the following formula:

$$PPQ = ACL (CCU-CCM+PLT/12) + MSL- S-DI+DO$$

$$FPQ = PPQ + POER$$

The various terms are explained below:

ACL= Annual Consumption Level. This is calculated on the weighted average of actual consumption in the last three years, with weights 3,2,1.

CCM= Category Co-efficient Minimum Stock Level.

CCU= Category Co-efficient Upper Stock Level.

CCM and CCU have different numerical value between 1 to 2 and 2.1 to 3.9 respectively based on their VED and ABC Categorization of nine types. It was provided that till pending categorization of items, CCM is taken as 1.2 and CCU as 3.0 for all items.

MSL = Minimum Stock Level = $ACL*CCM$

USL = Upper Stock Level = $ACL*CCU$

PLT = Procurement Lead Time (In Months)

S= Stock in hand (Present Stock Position)

DI = Dues in, DO = Dues Out

The Controller of Material Planning (CMP) then subjects all the items for which PQ is positive (PPQ) to a review. The planner vets the PPQ and increases or reduces the quantity by an amount, which is termed as Provisioning Offer Expert Review/Value (POER). The FPQ (Final Provisioning Quantity) thus arrived at is to be indented for procurement.

Further, as per Para 5.45 of the MPM, modification of PPQ to FPQ by adding or subtracting POER is a deliberate step which must be recorded by the provisioning officer using the following code:

- R - RPP forecast that is considered reasonable
- N- New Item
- F- Forecast Future Routines
- O-Obsolescence anticipation

Annexure-II

(Referred to in Para 2.3.1)

Audit analysis (August 2015) found that the Provisioning Formula to arrive at PPQ has intrinsic mathematical error as explained below:

PPQ = ACL (CCU-CCM+PLT/12) + MSL- S-DI+DO, in this formula the controlling variables are ACL, CCU, CCM and PLT. The other variables like Stock (S), Dues-In (DI) and Dues-Out (DO) are only making adjustment in provisional procurement quantities based on situation at the time of review.

Thus, if we open the bracket and replace MSL with its value in terms of ACL and CCM we get,

$$\begin{aligned} \text{PPQ} &= \text{ACL} \times \text{CCU} - \underline{\text{ACL} \times \text{CCM}} + \text{ACL} \times \text{PLT}/12 + \underline{\text{ACL} \times \text{CCM}} - \text{S} - \text{DI} + \text{DO} \\ &= \text{ACL} \times \text{CCU} + \text{ACL} \times \text{PLT}/12 + \text{S} - \text{DI} + \text{DO} \quad (\text{Since } \text{MSL} = \text{ACL} \times \text{CCM}) \end{aligned}$$

Therefore, it is clear that due to the aberration i.e., cancellation of MSL (= ACL x CCM), the PPQ is solely based only on the CCU and Lead Time. The value of CCU ranges from 2.1 to 3.9. Thus, PPQ generated would be as under:

Type of Store	PLT	PPQ	
		If CCU= 2.1	If CCU= 3.9
Naval Store	12 months	ACLx2.1+ACLx12/12=3.1ACL	ACLx3.9+ACLx12/12=4.9 ACL
E&SP – Non Russian	18 months	ACLx2.1+ACLx18/12=3.6ACL	ACLx3.9+ACLx18/12=5.4 ACL
E&SP- Russian	24 months	ACLx2.1+ACLx24/12=4.1ACL	ACLx3.9+ACLx24/12=5.9 ACL

The system generated provisional procurement quantity would be between 3.1 to 4.9 ACL for Naval Store, 3.6 to 5.4 ACL for Non-Russian stores and 4.1 to 5.9 ACL for Russian Stores. Thus, the automated system generates PPQ equivalent to 3 to 6 year's annual consumption, defeating the very purpose of automation.

Annexure-III

(Referred to in Para 2.3.1)

Name of the MOs	Review Serial No.	No. of Items reviewed	Qty. PQ Provisional			Changes made by EV at Stage-I (Qty. EV) in system generated PPQ					Changes made by EV Consolidator at Stage-2 (Qty. EV Cons)				
			+ve PPQ	Zero PPQ	-ve PPQ	Reduction in PPQ		Enhancement in PPQ		No. of changes made in PPQ	Reduction in PPQ		Enhancement in PPQ		No. of changes made in PPQ
						No. of cases	Range of Qty. reduced	No. of cases	Range of Qty. enhanced		No. of cases	Range of Qty. reduced	No. of cases	Range of Qty. enhanced	
MO (MB)	20,126	30,6152	17,343	1,40,776	1,48,033	6,189	1 to 19,529	2,350	1 to 485	8,539	10,855	1 to 7,470	225	1 to 371	6,263
MO (V)	20,117	12,4874	12,159	52,490	60,225	8,671	1 to 12,000	1,340	1 to 2,135	2,148	2,418	1 to 8,700	61	1 to 203	9,680
MO (K)	20,144	21,065	3,709	14,582	2,774	3,333	1 to 5,10,901	155	1 to 13,846	221	370	1 to 1,92,054	10	4 to 1390	3,329
MO (KW)	20,136	1,18,916	2,251	1,12,009	4,656	728	1 to 1,200	38	1 to 11	1,485	1,290	1 to 3,501	08	1 to 180	953

Source: ILMS Data provided by IHQ MoD (Navy)

Note- The first four digits in review serial column represents year of review and the fifth digit represents the serial review in that particular year.

Annexure-IV

(Referred to in Para 2.3.4.1)

MO, Mumbai

Category	No. of Items in Inventory	No. of serviceable items in inventory	No. of serviceable Items with ACL>0, LPP>0	Value of Annual Consumption		
				Below ₹ 50,000	Between ₹ 50,000 to ₹ 5 Lakh	Above ₹ 5 Lakh
A	6,136	4,703	2,751	1,188	1,087	476
B	17,232	15,337	6,441	4,708	1,538	195
C	4,54,534	4,35,708	63,930	56,615	5,784	1,531
Total	4,77,902	4,55,748	73,122	62,511	8,409	2,202

MO, Visakhapatnam

Category	No. of Items in Inventory	No. of serviceable items in inventory	No. of serviceable Items with ACL>0, LPP>0	Value of Annual Consumption		
				Below ₹ 50,000	Between ₹ 50,000 to ₹ 5 Lakh	Above ₹ 5 Lakh
A	4,442	4,241	2,100	983	650	467
B	41,775	41,487	9,766	7,195	2,089	482
C	2,96,266	2,93,176	73,757	61,266	9,482	3,009
Total	3,42,483	3,38,904	85,623	69,444	12,221	3,958

MO, Kochi

Category	No. of Items in Inventory	No. of serviceable items in inventory	No. of serviceable Items with ACL>0, LPP>0	Value of Annual Consumption		
				Below ₹ 50,000	Between ₹ 50,000 to ₹ 5 Lakh	Above ₹ 5 Lakh
A	1,316	1,291	751	333	304	114
B	5,289	5,263	1,978	1,565	381	32
C	70,878	70,585	18,216	16,026	1,821	369
Total	77,483	77,139	20,945	17,924	2,506	515

MO, Karwar

Category	No. of Items in Inventory	No. of serviceable items in inventory	No. of serviceable Items with ACL>0, LPP>0	Value of Annual Consumption		
				Below ₹ 50,000	Between ₹ 50,000 to ₹ 5 Lakh	Above ₹ 5 Lakh
A	2,561	2,551	1,474	973	400	101
B	4,911	4,900	2,871	1,928	725	218
C	39,700	39,577	20,115	17,408	2,301	406
Total	47,172	47,028	24,460	20,309	3,426	725

Annexure-V

(Referred to in Para 2.3.4.1)

MO, Mumbai

Category	Total No. of moving serviceable items	Percentage of Total Inventory	Total Annual Consumption Value (ACV) =(ACL*LPP) (₹ in Crore)	Percentage of ACV of total inventory in each category
A	4,703	1.03	342.51	29.75
B	15,337	3.37	58.15	5.05
C	4,35,708	95.60	750.60	65.20
Total	4,55,748	100	1,151.27	100

MO, Visakhapatnam

Category	Total No. of moving serviceable items	Percentage of Total Inventory	Total Annual Consumption Value (ACV) =(ACL*LPP) (₹ in Crore)	Percentage of ACV of total inventory in each category
A	4,442	1.30	180.15	13.01
B	41,775	12.20	128.20	9.26
C	2,96,266	86.50	1,075.95	77.73
Total	3,42,483	100	1,384.30	100

MO, Kochi

Category	Total No. of moving serviceable items	Percentage of Total Inventory	Total Annual Consumption Value (ACV) =(ACL*LPP)(₹ in Crore)	Percentage of ACV of total inventory in each category
A	1,316	1.70	30,21,87,493.60	19.97
B	5,289	6.83	15,64,86,657.92	10.34
C	70,878	91.47	1,05,46,16,354.86	69.69
Total	77,483	100	1,51,32,90,506.38	100

MO, Karwar

Category	Total No. of moving serviceable items	Percentage of Total Inventory	Total Annual Consumption Value (ACV) =(ACL*LPP) (₹ in Crore)	Percentage of ACV of total inventory in each category
A	2,561	5.43	28,08,43,236.17	13.26
B	4,911	10.41	6,51,18,4055.29	30.75
C	39,700	84.16	1,18,56,09,261.19	55.99
Total	47,172	100	2,11,76,36,552.65	100

Annexure-VI

(Referred to in Para 3.1.3.5)

Sl. No.	Name of the ship	Date of accident	Work up due prior to accident
1.	INS Pralaya	2 August 2007	February 2007
2.	FAC 84	12 January 2008	February 2005
3.	INS Jalshwa	1 February 2008	June 2007 <i>(Month of commissioning)</i>
4.	INS Godavari	23 January 2009	March 2007
5.	INS Agray	17 July 2009	October 2005
6.	INS Sarvekshak	4 January 2010	September 2009
7.	INS Delhi	26 November 2010	April 2009
8.	INS Deepak	30 May 2011	January 2011 <i>(Month of commissioning)</i>
9.	INFAC 83	8 October 2012	October 2010
10.	INS Viraat	22 September 2013	January 2012
11.	INS Tarkash	19 December 2013	November 2012
12.	INS Talwar	23 December 2013	January 2013
13.	INS Betwa	8 January 2014	August 2013
14.	INS Vipul	23 January 2014	November 2011
15.	INS Airavat	30 January 2014	November 2012
16.	INS Kora	31 October 2014	January 2012

Annexure-VII

(Referred to in Para 3.2.2.1)

Sl. No.	GT No.	Received Date	Overhaul from	Overhaul up to	Merged in stock after completion of trials	Time taken for merging into stock	Time taken in addition to the prescribed time of 12 months
	(a)	(b)	(c)	(d)	(e)	(f)= (e)-(c)	(g) =(f)-12
1	3,518	15-04-08	08-09-08	11-02-10	27-05-11	33m	21m
2	3,521	09-04-08	10-10-09	25-08-11	25-11-11	25m	13m
3	3,345	01-09-99	24-11-07	20-10-11	16-04-12	53 m	41m
4	3,828	11-04-08	24-11-08	09-12-09	01-11-12	47 m	35m
5	3,517	21-11-11	24-11-11	01-03-13	18-06-13	19m	7m
6	3,415	23-11-11	25-01-12	16-09-13	30-01-14	24m	12m
7	3,519	24-04-08	29-03-10	21-09-12	20-01-16	70m	58m

Source: Information provided by INS Eksila vide No.300/PPC/04(i) dated 21 Sep.16

Annexure-VIII

(Referred to in Para 3.2.2.1)

Delay in overhaul due to trials/revisia

(A) M3E GT

S.No	GT No.	Overhaul from	Overhaul upto	Merged in stock after completion of trials	Time taken for overhaul	Time taken for merging into stock	Time taken for Trials/ Revisia@
1	3518	08-09-08	11-02-10	27-05-11	17M	33 M	16M
2	3521	10-10-09	25-08-11	25-11-11	23M	25M	2M
3	3345	24-11-07	20-10-11	16-04-12	10M	53 M	43M
4	3828	24-11-08	09-12-09	01-11-12	13M	48 M	35M
5	3517	24-11-11	01-03-13	18-06-13	15M	19M	4M
6	3415	25-01-12	16-09-13	30-01-14	20M	24M	4M
7	3519	29-03-10	21-09-12	20-01-16	31M	70M	39M

Source: Information provided by INS Eksila vide No.300/PPC/04(i) dated 21 Sep. 16

@ Time taken between the completion of overhaul and merging into serviceable stock was considered as time period of trials/ revisia, instead of exact time period consumed for revisia as the total delay (including trial time and revisia time) was attributed to the defective workmanship during overhaul.