

**INJUDICIOUS PROCUREMENT OF AN  
ADDITIONAL CNC HORIZONTAL BORING  
AND MILLING MACHINE: PATIALA  
LOCOMOTIVE WORKS**

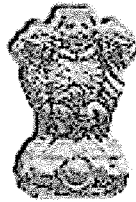
**MINISTRY OF RAILWAYS (RAILWAY BOARD)**

**PUBLIC ACCOUNTS COMMITTEE  
(2023-24)**

**NINETY SIXTH REPORT**

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**SEVENTEENTH LOK SABHA**



सत्यमेव जयते

**LOK SABHA SECRETARIAT  
NEW DELHI**

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PAC NO. 2326

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(2023-24)**

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LOCOMOTIVE WORKS**

**MINISTRY OF RAILWAYS (RAILWAY BOARD)**



*Presented to Lok Sabha on:*

*Laid in Rajya Sabha on:*

**LOK SABHA SECRETARIAT  
NEW DELHI**

**February, 2024 /Magha, 1945 (Saka)**

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## COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE (2023-24)

Shri Adhir Ranjan Chowdhury

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Chairperson

### MEMBERS

#### LOK SABHA

2. Shri Thalikkottai Rajuthevar Baalu
3. Shri Subhash Chandra Baheria
4. Shri Bhartruhari Mahtab
5. Shri Jagdambika Pal
6. Shri Vishnu Dayal Ram
7. Shri Pratap Chandra Sarangi
8. Shri Rahul Ramesh Shewale
9. Shri Gowdar Mallikarjunappa Siddeshwara
10. Shri Brijendra Singh
11. Shri Rajiv Ranjan Singh *alias* Lalan Singh
12. Dr. Satya Pal Singh
13. Shri Jayant Sinha
14. Shri Balashowry Vallabbhaneni
15. Shri Ram Kripal Yadav

#### RAJYA SABHA

16. Shri Shaktisinh Gohil
17. Dr. K. Laxman
18. Shri Derek O' Brien\*
19. Shri Tiruchi Siva
20. Dr. M. Thambidurai
21. Shri Ghanshyam Tiwari
22. Dr. Sudhanshu Trivedi

#### SECRETARIAT

1. Dr.Sanjeev Sharma - Joint Secretary
2. Shri Partha Goswami - Director
3. Shri Prakhar Prakash Anand - Assistant Executive Officer

\* Elected w.e.f. 19.08.2023 consequent upon retirement of Shri Sukhendu Sekhar Ray, MP on 18.08.2023.

## **INTRODUCTION**

I, the Chairperson, Public Accounts Committee (2023-24) having been authorised by the Committee, do present this Ninety-sixth Report (Seventeenth Lok Sabha) on "Injudicious procurement of an additional CNC horizontal boring and milling machine: Patiala Locomotive Works" based on Para 3.2 of C&AG Report No.25 of 2022 relating to the Ministry of Railways (Railway Board)

2. The C&AG Report No. 25 of 2022 was laid on the Table of the House on 21.12.2022

3. The Public Accounts Committee (2023-2024), selected the aforesaid subject for detailed examination and took oral evidence of the representatives of the Ministry of Railways (Railway Board) on the subject matter on 21 November, 2023. Based on the oral evidence and written replies, the Committee examined the subject in detail.

4. Public Accounts Committee (2023-2024) considered and adopted the Draft Report on the aforementioned subject at their Sitting held on 05.02.2024. The Minutes of the Sittings are appended to the Report.

6. For facility of reference and convenience, the Observations and Recommendations of the Committee have been printed in thick type and form Part- II of the Report.

7. The Committee would like to express their thanks to the representatives of the Ministry of Railways (Railway Board) for tendering evidence before them and furnishing the requisite information to the Committee in connection with the examination of the subject.

8. The Committee also place on record their appreciation of the assistance rendered to them in the matter by the Committee Secretariat and the Office of the Comptroller and Auditor General of India.

**NEW DELHI:**  
**05<sup>th</sup> February, 2024**  
**16 Magha 1945 (Saka)**

**ADHIR RANJAN CHOWDHURY**  
**Chairperson,**  
**Public Accounts Committee.**

## **PART - I**

### **INTRODUCTORY**

1. This Report of the Committee is based on Para 3.2 of C&AG Report No. 25 of 2022 on the subject, "Injudicious procurement of an additional CNC horizontal boring and milling machine: Patiala Locomotive Works". Public Accounts Committee (2023-24) selected the aforesaid C&AG Para for examination and report. The PAC (2023-24) considered the subject for detailed examination and took oral evidence of the representatives of the Ministry of Railways on 21.11.2023.

### **PROCUREMENT OF AN ADDITIONAL CNC HORIZONTAL BORING AND MILLING MACHINE BY PATIALA LOCOMOTIVE WORKS**

2. The Committee have learnt that Railway Board assigns the work for manufacturing and rebuilding of various types of Locomotives to different Production Units of the Indian Railway as per its production plan. The Patiala Locomotive Works (PLW), entrusted with the manufacturing and rebuilding of Diesel Locomotives for Zonal Railways and Non-Railway Customers, embarked on a procurement initiative for an additional CNC Horizontal Boring and Milling Machine in pursuit of increased production targets (i) rebuilding of Locomotives (enhanced from 72 to 108 per year) and (ii) manufacturing of new ALCO Type Diesel Locomotives (100 per year). However, the course of events took an unforeseen turn when the Railway Board communicated in June 2014 that there was no need for new mainline ALCO Locomotives for Indian Railways and advised PLW to stop production of mainline ALCO Locomotives from 2015-16 onwards, leading to a fundamental shift in PLW's production strategy.

3. Despite the directive to cease the production of mainline ALCO Locomotives, PLW proceeded with the procurement of the CNC machine without revisiting the necessity in light of the policy change. The machine, contracted through COFMOW, faced delays in installation and commissioning, resulting in substantial time overrun. Moreover, within six months of commissioning, PLW sought to transfer the machine to other Railway Units, citing a declining trend in engine block production due to decreased demand for Diesel Locomotives.

### **AUDIT FINDINGS**

4. Audit findings in Para No. 3.2 of C&AG Report No. 25 of 2022 noted that the delivery of CNC machine was made to PLW in November 2016. Against the time limit of 150 days for installation, commissioning and prove out test of the machine, the machine was installed in June 2017 and finally commissioned in January 2020. Two and half years time was taken in the commissioning of the machine since its delivery by the firm. Commissioning certificate of the machine was issued in January 2020 with various deficiencies and Prove out Test Certificate (PTC) is yet to be issued (as of April 2022). Total expenditure of ₹ 25.43 crore (as of April 2022) was incurred by PLW for purchasing of the CNC machine.

5. Audit further revealed that the machine, commissioned in January 2020, encountered deficiencies, and the Prove out Test Certificate was yet to be issued as of April 2022. Despite its rejection by PLW in November 2020, the machine was not transferred, leading to an encashment of the Performance Bank Guarantee.

6. The Ministry of Railways (MoR) justified the initial procurement based on the 2011 requirement for new engine blocks but failed to acknowledge the need for a review after the 2014 directive to cease mainline ALCO Locomotive production. The procurement's intended benefits were compromised by deficiencies in the machine, ultimately resulting in an infructuous expenditure of ₹22.87 crore (as of April 2022).

7. To seek further clarification on the background of the requirement of the CNC machine, the Committee asked the Ministry of the justification on the part of Patiala Locomotive Works (PLW) initially requesting the procurement of an additional CNC machine, and the basis for this decision and the production targets it aimed to meet. The Ministry, in this regard furnished the following reply:

“In the year 2011-12, DMW (now renamed as PLW) was engaged in mid-life rebuilding of old diesel locomotives as its primary activity. The process required rebuilding of the engine blocks, which are actually heart of the diesel engines, because all the other engine components are assembled on to the engine blocks only to make a complete functional diesel engine.

During the rebuilding process of old engine blocks, all the distorted and worn-out surfaces are rebuilt by depositing metal through welding process. Then these welded areas are machined on sophisticated CNC machines to create accurate mating surfaces. It is also worth mentioning that the machining process remains the same for manufacturing of even new engine blocks.

For this machining activity, PLW had one machine at that time, which was received as replacement of an old machine. But due to excessive workload, permission was obtained from the Railway Board to even use the old machine till December 2011 with limited capacity. Both these machines were able to machine about 160 engine blocks in a year, by adopting 3-Shift working. Once the old machine was to be taken out of service, the capacity of one new machine would have come down to 10 blocks per month only (i.e. 120 blocks per year).

In 2010-11, out of the total production of about 160 blocks, 109 blocks were used internally for rebuilding of old diesel locos and the balance quantity of engine blocks was being sent to Zonal Railways to meet their maintenance requirements. Therefore, these machines were not only meeting the internal requirement of PLW but were also meeting Zonal Railways' maintenance requirements.

Further, in the year 2010, Railway Board advised PLW to create capacity for manufacturing about 100 new ALCO diesel locomotives per annum. As the machining capacity of the existing machine was grossly inadequate to meet the enhanced requirement, the new machine was proposed under M&P Program of Railway Board.

With the proposed new machine, the combined targeted capacity was anticipated to be 22 engine blocks per month (10 old+12 proposed machine), translating to 264 engine blocks per year.”

8. When the Committee questioned further on the intended benefit of procuring the CNC machine, and how this benefit was expected to align with the manufacturing or maintenance needs of Indian Railways and whether there were any alternatives considered for meeting the requirements without procuring the CNC machine, the Ministry, in reply, stated as under:

"The intended benefits of procuring the CNC machine were already elaborated in previous answer. At that point in time, i.e. FY 2010-11, BLW and PLW were the only units in Indian Railways that were capable of manufacturing/rebuilding ALCO engine blocks. No known private firm was existing in the country having the proven capability of manufacturing new ALCO engine blocks at that time therefore there was no other alternative but to enhance the in-house capacity of PLW to meet the Indian Railways' requirement of engine blocks."

9. The Committee asked the Ministry to explain the process of decision-making within the Ministry, from the initial procurement request to the eventual commissioning of the machine, and how evolving circumstances were considered at each stage and whether there are any accountability measures or investigations in place to evaluate the decision-making process and financial implications of the machine's procurement. The Ministry stated as under:

"The subject machine was sanctioned under M&P Programme 2011-12. Indent was submitted to COFMOW on 09.07.2011. Letter of Acceptance (LOA) was issued on 05.12.2014 and AT issued on 16.01.2015. Thereafter, delivery of the machine was made in November, 2016, installed in June, 2017 and commissioned in January, 2020. Planning /Procurement of each Machinery and Plant is routed through well laid down process involving exercise of due diligence across all departments within the divisions, Zonal Railways HQ, Production Units and also in the Railway Board, before it is included in the pink book, voted by the parliament and executed thereafter by procuring agency on the basis of indents received from consignee. The procurement process after receipt of indent involves no. of steps, viz. calling of indents of similar machines from railways, updating/ preparation of specifications, confirmation of specs from consignees, floating of tender, pre-bid conference in some cases, opening of technical bids, conduct of technical Tender Committees and acceptance of its recommendations, opening of financial bids, conduct of financial Tender Committees and acceptance of its recommendations, confirmation of fund availability certificate from consignees, issue of Letter of Acceptance (LOA). LOA is followed by submission of Performance Bank Guarantee (PBG) by successful vender and issuance of Acceptance of Tender (AT) after vetting. The supply periods of machine vary from 06 to 12 months after issue of LOA/Contract depending upon the complexity of machines. Regular tracking/monitoring of installation and commissioning of machines is done and regular meetings are also held with the suppliers towards reducing delays on the account of the vendors. Consignees are also sensitized for providing clear site and other infrastructure well in advance in order to ensure timely installation and commissioning of the machine."



10. The Committee further asked the Ministry to provide documentation or records that support the Ministry's decisions at various stages of the procurement process and its response to policy changes. They further asked as to how these decisions were communicated to relevant stakeholders within the Ministry and to higher authorities, including the Railway Board. The Ministry stated as under:

"The machining capacity of the existing machine at PLW was grossly inadequate (i.e. 120 blocks per year). to meet the enhanced requirement. As Railway Board had sanctioned a total of 1077 new engine blocks between 2012-13 and 2017-18 under various annual rolling stock programs. PLW had to procure a total of 1318 new engine blocks from private firms between 2013-14 and 2020-21. With the proposed new machine, the combined targeted capacity was anticipated to be 22 engine blocks per month (10 old+12 proposed machine), translating to 264 engine blocks per year.

The decision taken by Railway Board of 100 % Electrification resulted in the abrupt reduction in Zonal Railways requirement of new/remanufactured engine blocks from FY 2020-21.

However, the minutes of exit conference held by Principal Director of Audit on 30/10/2018 are attached, wherein PDA concurred with PLW's justification that the requirement of the machine still exists, though the Railway Board had decided to stop the production of new ALCO locomotives with effect from 2014. (Annexure - C)"

11. The Committee then further sought details about the tendering process and the selection of the supplier, M/s. Juaristi TS Commercial, SL Spain, for the CNC machine. They also desired to know whether there were any alternatives considered and the criteria used to evaluate the supplier and award the contract, and if there were any concerns expressed on the selection process. The Ministry replied as below:

"Global Tender was floated for procurement of the item by COFMOW with single bid system. Based upon the lowest technically suitable offer; 3 PHOD Level Tender Committee has dealt with the case. The firm's offer was financially lowest and was technically and commercially suitable offer among three bids received. Hence, the order was placed on the firm with the recommendation of Tender Committee and approval of Tender Accepting Authority (TAA)."

12. The Committee further sought to know as to why PLW had not reviewed its procurement plan in 2014 after the Railway Board's directive to stop production of mainline ALCO Locomotives and the factors that led to the failure to reconsider the requirement of the CNC machine. The Ministry stated as under:

"Though the Railway Board had advised to discontinue with manufacturing of new locomotives in 2014, but procurement of the new machine was not dropped, because of the huge requirement of new engine blocks required for replacement of old engine blocks on Zonal Railways. This requirement was being sanctioned in the annual Rolling Stock Program of Railway Board and communicated to PLW for

supplying to respective Zonal Railways as per Zone wise break-up given by Railway Board. The fresh demand for new engine blocks was so high that even after the decision to stop manufacturing of new Diesel locomotives, the new machine would have been fully utilised for manufacturing of the new engine blocks, required by Zonal Railways.

It is matter of fact that the Railway Board had sanctioned a total of 1077 new engine blocks between 2012-13 and 2017-18 under various annual rolling stock programs (Details enclosed at Annexure-B) and PLW was entrusted with the responsibility of supply of the new engine blocks to Zonal Railways.

PLW had to procure a total of 1318 new engine blocks from private firms between 2013-14 and 2020-21 after following an arduous process of developing new sources. This had become imperative because the machining capacity available with PLW was inadequate and the new machine was not getting commissioned due to technical deficiencies.”

13. The committee further desired to know as to how the PLW adapted to the policy change communicated by the Railway Board in June 2014, which called for stopping the production of mainline ALCO Locomotives and whether there were any discussions or considerations within PLW regarding the changing requirements and their impact on the procurement of the CNC machine. The Ministry stated as below:

“As detailed in reply to point above, the decision to continue with the procurement of new machines was well considered by PLW. As far as internal discussions on the subject are concerned, these could not be traced in the available records.

However, the minutes of exit conference held by Principal Director of Audit on 30/10/2018 are attached, wherein PDA concurred with PLW's justification that the requirement of the machine still exists, though the Railway Board had decided to stop the production of new ALCO locomotives with effect from 2014. (Annexure - C)”

14. When the Committee enquired on the cause of the significant delay in the installation, commissioning, and prove-out test of the CNC machine, which took two and a half years from delivery by the supplier to final commissioning and further asked about the specific deficiencies identified during the commissioning process, and the reasons for not addressing such issues promptly, the Ministry stated as below:

“The commissioning of the machine got delayed on account of the supplier. Initially one of the trucks carrying machine parts in a container, met with a road accident in Nov'2016 in which some critical parts got damaged. The firm had to get replacement of those parts manufactured afresh in Spain and the replacement was received in Aug'17. Once the machine was assembled and machining trials started, it was found that the tooling used for machining of Serrations was not as per actual requirement. The firm had to get the new tooling designed and developed from a reputed tool manufacturing company, which took a long time,

delaying the commissioning of the machine. Later the machine could be commissioned but the machine was not able to achieve specified process capability requirements (Cpk parameter, which is basically repeated accuracy of machining over multiple operations). This deficiency could not be rectified by the firm by any means and PLW was forced to reject the machine as per contractual requirements.”

15. Upon noting that the PLW requested the transfer of the CNC machine, the Committee questioned the Ministry on the factors that prompted PLW to request the said transfer of the CNC machine to any other Railway Units within six months the commissioning of the machine. The Committee further sought reasons for rejecting the machine with remarks 'no replacement required' in November 2020 within six months from its commissioning. The Ministry mentioned in its reply that:

“It is a matter of fact that till 2019-20 PLW was still remanufacturing old engine blocks at full capacity. At the same time new engine blocks were also being procured from trade up till 2020-21 to meet the requirement of Zonal Railways. The requirement of new engine blocks came down abruptly, in view of 100% electrification decision taken by Ministry of Railways.

In view of the above major policy shift, PLW had to realign its working as per changed scenario. In these circumstances, PLW attempted to offer this machine to other workshops and production units through COFMOW, wherever it can be put to alternate use. This is a common practice in Railways where surplus machines are offered to other Zonal Railways/PUs.

After the machine was commissioned, the supplier could not meet the technical requirements of the contract even after repeated attempts. The machine was not able to achieve specified process capability requirements (Cpk parameter, which is basically repeated accuracy of machining over multiple operations). This deficiency could not be rectified by the firm by any means and PLW was forced to reject the machine as per contractual requirements.”

16. The Ministry had in the background note Inter- alia stated that the primary responsibility for commissioning the machine rests with the supplier. Therefore, the Committee desired the Ministry to provide details on the technical requirements that the supplier failed to meet despite repeated attempts. The Committee also enquired as to how these technical deficiencies were communicated to the supplier, and what actions were taken to rectify those deficiencies. The Ministry stated as under:

“The primary responsibility for commissioning of the machine, while complying all the technical parameters specified in the contract, lies with the supplier. As detailed above, the firm failed to meet the process capability requirements on critical engine block dimensions i.e. crank bore, cam bore and serration pitch as per para number 3.2.8.1 of the contract..... The report during commissioning, in which all technical deficiencies were properly documented, was jointly signed by the firm's representative and PLW officials. The firm failed to rectify this deficiency.”

17. Further questioning about the Machine in question, the Committee asked the Ministry about the actions, if any, taken by the PLW to rectify the issues with the CNC machine since its commissioning, and why the Prove out Test Certificate (PTC) was not issued as of April 2022. The Ministry stated that:

“The commissioning certificate of the machine was issued on 08/01/2020. In conditional commissioning report, the defects related to non compliance to process capability requirements, balance payment by the firm for engine block repair and deficient tooling were documented. After commissioning report, the firm attended the machine on 03/07/2020. ....The firm later on supplied all the balance tools except small 05 nos. of maintenance tools and the firm also made the payment of Rs. 11.13 lacs on 30/09/2020 as cost against engine block repair. The PTC was not issued as the deficiency related to repeatability in accuracy as mentioned in the commissioning report was not rectified by the firm and the machine was finally rejected on 05/11/2020. Therefore, PLW took all possible efforts to remove the deficiencies as documented in the commissioning report.”

18. The Ministry in their reply to audit had stated that deficiencies in the machine were cropping up repeatedly. In light of the above reply, the Committee desired to know whether the PLW had taken up the issue with the supplier and the outcome of these interactions. The Ministry in reply mentioned as under:

“The main defect identified during commissioning of the machine was that the machine was not capable of obtaining the process capability requirements as prescribed in the contract. After the commissioning certificate was issued, 16 engine blocks were machined in the ensuing 9 months but the same defect of process capability was popping up and it could not be resolved. Firm failed to rectify this defect and therefore finally the machine had to be rejected in November 2020. As detailed in answer to point no. 53, there were interactions between PLW and the firm and some of the documented deficiencies were attended by the firm. However, the main deficiency related to process capability requirements could not be resolved which led to the rejection of the machine.”

19. The Ministry has stated that the machine was offered to other workshops and production units. The Committee, in light of the said information, had desired the Ministry to provide details on the outcome of these attempts. In the line of further enquiry, the Committee asked the Ministry whether any other units have expressed interest in acquiring the machine and how the Ministry was ensuring that it was effectively and efficiently utilized within the railway system. The Ministry replied as under:

“The machine was offered to other workshops and production units of Indian Railways but there was no interest shown by any Indian Railway unit in accepting the machine. As detailed previous answers, PLW stopped the work of rebuilding ALCo engine blocks in 2020 in compliance to Railway Board decision of 100% electrification. This is a special purpose machine for machining of large items like engine blocks or magnet frames. No other railway unit is carrying out such major

machining jobs after phasing out policy of diesel locos, so PLW could not find any taker for this machine in Railways.”

20. The Ministry has further mentioned that 80% of the payment was made to the supplier before the machine's shipment. Hence, the reasons for opting for such a payment schedule, and safeguards, if any, in place to protect the Ministry's interests in case of non-compliance by the supplier were asked for. . The Ministry, in reply, stated that:

“This was a Global Tender. In Global Tender the payment terms for foreign suppliers is governed by Para 1801 of Section-II of Bid Documents Part-I. As per para 1801, “80% of the payment against irrevocable LC will be made on proof of inspection certificate and shipment document within 30 days of receipt of shipping documents as specified. Balance 20% payment will be made through bank transfer on furnishing a Bank Guarantee for an amount equal to 10% of the contract value, as per Annexure-II fully indemnifying the Purchaser against all losses incurred by the Purchaser during the Warranty period stipulated in the Warranty Clause No.3400 within 30 days of the receipt of Bill along with Proving Test Certificate after successful completion of proving test in which the machine performance would have been demonstrated by the supplier of his agent after its commissioning at the consignee's premises”.

To safeguard Railways interest Performance Bank Guarantee was taken from the firm which has already been encashed and recovery advice issued to all Railway Units for recovery of balance 15.459 crores.”

21. Also asked about the action taken by COFMOWin regard to encashing the Performance Bank Guarantee submitted by the supplier and what the result of this action, the Ministry in reply, stated as under :

“The PBG for Rs. 2,55,55,519/- submitted by the firm in the subject case has been encashed on 22.09.2023. Recovery advice of Rs. 15,45,91,467/- sent to All Indian Railways vide letter dated 07.07.21 for recovery.”

22. The Committee further desired to have details of the break-up of expenditure of Rs. 22.87 crore (as of April 2022) incurred on procuring the CNC machine. The Ministry, in reply, stated as follows:

The breakup of Rs. 22.87 Cr expenditure incurred by Railways is as follows:

Sr	Cost element	Amount
1.	Cost incurred by Railways in payment of 80 % cost to firm on supply of machine (FOB) ;	Rs. 17.87 Cr.
2.	Ancillary cost incurred by Railways in freight charges (sea freight and inland freight), inspection charges, customs and cost of indigenous items :clearance etc	Rs. 07.54 Cr.

	of machine	
3.	(Less) Recovery of bank guarantee of firm by COFMOW:	Rs. (-) 2.55 Cr.
	Total	Rs. 22.87 Cr.

23. Asked about the steps PLW has taken or plans to take to prevent such situations in the future and ensure judicious procurement and whether accountability has been fixed or investigation undertaken, as also the financial implications related to procurement of CNC Machine, the Ministry stated as under:

“This was an extraordinary situation which had occurred for the first time in the history of PLW. It mainly happened when the requirement of new/remanufactured engine blocks abruptly came down in 2020-21, after Ministry of Railways decided in 2020 to stop the mid-life rehabilitation and periodic overhaul of diesel locomotives in view of 100% electrification decision.

There are systems in place so that any M&P which is not required does not get procured.

PLW reviews the M&P requirements on a quarterly basis. The changes in the Production plan or any policy changes due to Railway Board instructions are regularly taken in account during review. A large number of other newly sanctioned machines were dropped from procurement, once it became apparent that requirement of ALCo loco spares would drop drastically in near future.”

24. Enquiring about the future plans of PLW, the Committee desired to know PLW's proposals for meeting its manufacturing and rebuilding needs in light of the changing requirements for locomotives and the presence of an existing engine block manufacturing machine. Details of further plans for optimizing resources and undertaking procurement based on current and projected needs were asked for. In this regard, the Ministry replied as under:

“PLW stopped the rebuilding of old ALCO engine blocks from 2020-21, based on the Railway Board decision of 100% electrification. PLW is now mainly producing 3-Phase Electric locomotives and Diesel Electric Tower Cars. Optimization of Resources and procurement are always based on the annual production plans conveyed by the Railway Board from time to time. Periodic reviews of production activities and available resources are undertaken at PLW.”

25. The Ministry, in the Background Note indicated inter alia that the shift in situation in 2020 due to the government's policy change towards electrification prompted the Railways to undertake certain policy decisions. In this regard, it was informed that :

“In view of 100 % Electrification, Railway Board decided that: (a) Mid-life rehabilitation and Periodic Overhaul of diesel locomotives must be stopped immediately and diesel locos due for MLR and major schedules after MLR should be condemned every year. (b) Policy for condemnation of diesel locomotives should be revised and steps should be taken to immediately condemn identified diesel locomotives. (c) Expenditure on maintenance of diesel locomotives must be

minimised by way of regular review of requirements of spares and minimising procurement of spares and consumables.

It resulted in the abrupt reduction in Zonal Railways requirement of new/remanufactured engine blocks from FY 2020-21."

26. In light of the changing circumstances, the Committee asked the Ministry on the planning for optimising its resources, including equipment and workforce, to align with the Government's electrification and locomotive stabling policies and whether there are any measures in place to ensure that future procurements align with the evolving needs of the railway system. The Ministry, in reply, stated as below:

"Annual production plans are issued by the Railway Board for all Production units of Indian Railways. PLW is now mainly producing 3-Phase Electric locomotives and Diesel Electric tower cars. Optimization of Resources and procurement review is a constant process and are always based on the annual production plans issued by the Railway Board or any changes conveyed from time to time. Periodic reviews of production activities and use of available resources are undertaken at PLW. All future procurements are planned keeping in line with evolving circumstances and in compliance to Railway Board instructions."

27. In light of the above provided information, the Committee further enquired whether the Ministry had conducted a formal review of its procurement decisions and processes, particularly in response to the changing policy landscape and the experience with the CNC machine's procurement and the steps being taken to avoid similar injudicious procurement in the future. The Ministry furnished their reply as under:

"Planning /Procurement of each Machinery and Plant is routed through well laid down process involving exercise of due diligence across all departments within the divisions, Zonal Railways HQ, Production Units and also in the Railway Board. Regular tracking/monitoring of installation and commissioning of machines is done and regular meetings are also held with the suppliers towards reducing delays on the account of the vendors.

As per contract, the Contractor has to commission the machine within the stipulated time as per the contract. In case of delay in commissioning of the machine on the part of Contractor, the Purchaser shall be entitled to recover and the Contractor shall be liable to pay pre estimated liquidated damage. After expiry of stipulated period from the date of default i.e. from the date of commissioning provided in the contract, purchaser may invoke the Performance Guarantee bond submitted by the supplier.

During commissioning or immediately thereafter, some defects/teething problems do occur when machines are put into operation. Most of the problems are rectified on the spot by the firm engineer. Purchaser/Consignee co-ordinates with the firms to attend/rectify the machines. If firm does not respond, penal actions are taken by the purchaser as per contract conditions."

## PART-II

### OBSERVATIONS / RECOMMENDATIONS OF THE COMMITTEE

#### INTRODUCTION:

1. The Indian Railways has been playing a crucial role in connecting people and facilitating the transportation of goods across the Nation and is moving ahead in the right trajectory and achieving its objectives. Post independence, Indian Railways entered into technical agreement with American Locomotive Company (ALCo) and a diesel locomotive manufacturing unit was established at Varanasi. The Diesel Loco Modernization Works was established in the year 1981 in Patiala (now PLW) with a view to undertaking the upgradation and mid life rehabilitation of ALCo engines. During 1999-2000, Indian Railways entered into understanding with General Motors of USA for manufacturing state-of-the-art two stroke Electro-Motive Diesel (GM-EMD) locomotives at Diesel Locomotives Works (DLW), Varanasi. These high powered EMD engines received wider acceptance due to low fuel consumption, better haulage capacity, increased maintenance periodicity and higher reliability.

2. The Committee note that in the year 2011-12, DMW (now renamed as PLW) was engaged in mid-life rebuilding of old diesel locomotives as its primary activity. The process required rebuilding of the engine blocks, which are actually the heart of the diesel engines. During the rebuilding process of old engine blocks, all the distorted and worn-out surfaces are rebuilt by depositing metal through welding process, following which the welded areas are machined on sophisticated CNC machines to create accurate mating surfaces. For this machining activity the PLW had one machine at that point of time, which was a replacement of an old machine. Nevertheless, due to excessive workload, Patiala Locomotives obtained permission from the Railway Board to continue using the old machine till December 2011 with limited capacity and both these machines were able to machine about 160 engine blocks in a year, by following a 3-Shift working. With the phasing out of the old machine from service, the capacity of the



one new machine would have come down to 10 blocks per month only (i.e. 120 blocks per year). In 2010-11, as per the information furnished, out of the total production of about 160 blocks, 109 blocks were being used internally for rebuilding of old diesel locos and the balance quantity of engine blocks were being sent to Zonal Railways to meet their maintenance requirements. Therefore, these machines were not only meeting the internal requirement of PLW but also the Zonal Railways' maintenance requirements. Further, in the year 2010, the Railway Board advised PLW to create capacity for manufacturing about 100 new ALCo diesel locomotives per annum.

The capacity of the existing machine being grossly inadequate to meet the enhanced requirement, the proposal for procuring the new machine was made under M&P Program of Railway Board. With the addition of the new machine, the combined targeted capacity was anticipated to be 22 engine blocks per month (10 old + 12 proposed machine), which would translate to 264 engine blocks per year. The Committee are surprised to note that in 2010, Railway Board advised PLW to create capacity for manufacturing 100 new ALCo diesel loco engines per annum when more efficient GM-EMD engines were already being manufactured in India. The Committee would therefore like to be apprised of the reasons for the Railway Boards directive to increase the capacity to build new ALCo engines instead of the more efficient EMD engines.

3. As for the reasons for PLW not reviewing its procurement plan in 2014 following the Railway Board's directive to stop production of mainline ALCO Locomotives; and not reconsidering the decision to procure the CNC machine, the Committee note from the information furnished that although the Railway Board had advised discontinuing manufacturing of new locomotives in 2014, the proposal for procuring the new machine was not dropped, because of the huge requirement of new engine blocks for replacing old engine blocks in the Zonal Railways. The fresh demand for new engine blocks was so high that even following the decision to stop manufacturing new Diesel locomotives, the new machine would have been fully utilised for manufacturing of the new engine blocks, required by Zonal Railways. The Railway Board had sanctioned a total of 1077 new engine blocks between 2012-13 and 2017-18 under various annual

rolling stock programs and PLW was entrusted with the responsibility of supplying of the new engine blocks to Zonal Railways. PLW had to procure a total of 1318 new engine blocks from private firms between 2013-14 and 2020-21 by following an arduous process of developing new sources. The Committee find that this had become imperative because the machining capacity available with PLW was inadequate and the commissioning of the new machine was getting delayed due to technical deficiencies. As for the manner in which PLW adapted to the policy change communicated by the Railway Board in June 2014, which called for stopping production of mainline ALCo Locomotives and whether the issue of going ahead with the procurement of the new CNC machine was assessed, the Committee note that the matter was well considered by PLW. While acknowledging the context in which the initial decision of procuring the CNC machine was taken, it is also evident that with the changing policy landscape, as communicated by the Railway Board in 2014, a thorough review of the procurement plan was a necessity. The Committee therefore, do not find the reasons afforded by the Ministry for going ahead with the proposal for procuring the machine despite the changed policy dimension to be convincing; and recommend that the Ministry should own responsibility for the failure to review the proposal for purchasing the CNC machine in light of the change in policy. The Committee also recommend that the Ministry should establish a mechanism for periodic review of procurement policies in line with evolving directives to prevent recurrence of such infructuous expenditure in future.

The Committee in this regard also recommend in no uncertain words the Ministry to strengthen their due diligence at all stages of the decision-making process, from placing the initial request for procurement to commissioning and to implement measures to ensure efficient utilization of resources in alignment with the changing requirements. This may, inter-alia, involve periodic reassessment of production targets and reallocation of resources to areas of higher priority and need. It would be pertinent to also bring out here that the Ministry should invariably assess the necessity and relevance of machinery prepared for being procured in light of evolving policies. Further, the Committee express concern over the lack of documented internal discussions within PLW regarding the changing requirements following the Railway Board's directive in

2014. Hence, the Committee recommend the Ministry to improve its internal communication channels which should encompass thorough documentation and decision-making processes. This will aid in transparency, accountability, and better understanding of the rationale behind critical decisions. The Committee also desire to be apprised of the cost benefit analysis that may have been done by the Ministry to adjudge whether it would have been economical to procure a CNC machine or directly procure additional new engine blocks from private firms.

4. The Committee note that the significant delay of over two and half years in the installation, commissioning and prove-out test of the CNC machine has been attributed entirely to the supplier and initially one of the trucks carrying machine parts in a container, met with a road accident in November 2016 in which some critical parts were damaged and had to be replaced; following the commencement of machining trials, it was found that the tooling used for machining of Serrations was not as per actual requirement; and subsequent to the commissioning, it was found that the machine was not able to achieve specified process capability requirements (Cpk parameter, which is basically repeated accuracy of machining over multiple operations). Later, PLW sought to transfer the CNC machine to some other Railway Unit and within six months of the commissioning i.e., in November, 2020 rejected the machine with the remarks 'no replacement required'. As far the reasons that prompted these steps, the Committee note from the information furnished that till 2019-20 PLW was continuing to manufacture old engine blocks at full capacity. The requirement however came down abruptly, in view of decision taken by Ministry of Railways for 100% electrification. Consequently, PLW had to realign its working as per changed scenario and the attempt to offer the machine to some other workshop production unit through COFMOW, where it could be put to alternate use was made. Further, as the supplier could not meet the technical requirements of the contract even after repeated attempts, following the commissioning of the machine, the decision to reject the machine had to be taken in November 2020. As seen from the information furnished, there was no interest shown by any Indian Railway unit in accepting the machine. What the Committee find to be surprising is the fact that PLW sought to transfer the machine to some other workshop when it was already proven that it was incapable of obtaining the

process capability requirements as prescribed in the contract and the same defect of process capability was popping up again and again, which could not be resolved. The Committee in this regard, would like to be apprised of the objectives that could have or were intended to be achieved by PLW by transferring a defective machine to some other workshop.

5. The delays and deficiencies in the commissioning of the CNC machine being attributable to the supplier, the Committee desire that the Ministry establish a robust 'supplier oversight mechanism' so as to ensure timely delivery, adherence to technical specifications, and prompt resolution of any issues that may arise during the commissioning process of the machinery/equipment that may be procured. This will help in mitigating the risk of project delays and financial losses. The Committee also express the need for developing and implementing comprehensive contingency plans to address potential disruptions in project timelines, including mechanisms to expedite the replacement of critical components in case of accidents or unforeseen circumstances. Further, considering the experience of the delay in the commissioning of the machine, the Committee recommend that the Ministry improve the modalities of documentation of deficiencies identified during commissioning, including specific details on how these deficiencies impact the functionality of the machine. Clear and comprehensive documentation will aid in the resolution of issues and facilitate a better understanding of the challenges faced during the commissioning process.

6. From the information available, the Committee note that 80% of the payment towards procuring the CNC machine was made to the supplier before the actual shipment. The Committee wish to be apprised of the reasoning behind agreeing to this payment schedule, and safeguards, if any, that may have been put in place to protect the Ministry's interests in the event of non-compliance by the supplier. As regards action initiated and taken to mitigate the loss caused, the Committee note that COFMOW had encashed Performance Bank Guarantee (PBG) for Rs. 2,55,55,519/- submitted by the firm on 22.09.2023 and gave an advisory for recovering the cost of the machine. Considering the information furnished by the Ministry, the Committee are appalled to observe that instead of taking measures for returning the defective machine directly and claiming the

entire refund from the supplier, COFMOW sought to transfer the defective machine to some other Railway unit and issued an advice for recovering the costs. The Committee are of the view that atleast now the COFMOW should take recourse to legal measures for reclaiming the whole amount paid to the supplier, directly. The Committee also recommend that, especially in case of transactions involving suppliers outside India, the Ministry ought to review the 'agreement clauses' with a view to ensuring the financial interests are adequately protected in case of delay or deficiencies attributable to the supplier. The Committee also recommend that, in future procurements, the Ministry considers all viable options and selects the most suitable solution to meet its manufacturing or maintenance needs, and minimizing the risk of encountering deficiencies or delays. The Committee also feel that it would be appropriate for the Ministry to establish a comprehensive supplier developing and handholding programme for identifying, developing and providing technological support for Indian suppliers so that they could be an integral part of the 'Make in India' supply chain system.

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NEW DELHI:  
05<sup>th</sup> February, 2024  
16 Magha 1945 (Saka)

ADHIR RANJAN CHOWDHURY  
Chairperson,  
Public Accounts Committee.