

## **Chapter 5 – Signal and Telecommunication**

The Signal and Telecommunication (S&T) department is headed by Member (Electrical) at Railway Board and by Chief S&T Engineer at the Zonal level. This department is responsible for efficient maintenance/ upgradation and installation of all signalling and telecommunication equipment over the Railways.

The total expenditure of the Department during the year 2009-10 was ₹1639.31 crore. During the year apart from regular audit of vouchers and tenders etc., 132 offices of Signal & Telecommunication Department were inspected. This chapter incorporates one major audit observation highlighting inadequate planning in upgrading signaling systems.

### 5.1 Eastern Railway: Infructuous expenditure on mechanical signaling system in Bolpur –Ahmedpur Section

Awarding of contract for Mechanical Signaling work without approval and subsequently converting the same to Multi Aspect Coloured Light Signaling (MACLS) with Panel Interlocking by dismantling the earlier arrangement cost the Railway Administration an avoidable expenditure of ₹ 1.11 crore

The doubling work of Bolpur-Ahmedpur Section was sanctioned in 2000-01 as a part of the Khana-Sainthia Doubling work. Based on the existing signaling system in adjacent sections, a detailed estimate for the doubling work, framed on Semaphore Signaling (Mechanical Signaling), amounting to ₹ 51.88 crore was sent (February 2001) to the Railway Board for approval. The Railway Board desired (May 2001) that the Railway Administration should re-submit the proposal keeping in view the signaling system proposed on the adjoining section from the point of view of uniformity. Accordingly, the Railway Board was informed (June 2001) that signaling with MACLS had been proposed because provision of MACLS in an adjoining section was already planned. In view of the Railway's explanation, the Railway Board sanctioned (October 2001) the detailed estimate for doubling of Bolpur-Ahmedpur section at a cost of ₹ 54.80 crore including sub-estimate for signaling work at a cost of ₹ 7.04 crore.

The Railway Administration awarded a contract to M/s Perfecto Electrical in January 2003 for Mechanical Signaling work in Bolpur-Ahmedpur section at a cost of ₹ 1.28 crore followed by another contract for the work of Panel Interlocking to M/s Param Enterprises at a cost of ₹ 3.49 crore (August 2003) in connection with the doubling work of the same section. The doubling work with Mechanical Interlocking at different stations in Bolpur-Ahmedpur section was commissioned during the period from March 2004 to June 2004 while the Panel Interlocking was commissioned from March 2005 to May 2005.

The Railway Administration incurred an expenditure of ₹ 1.09 crore for Mechanical Signaling work and then incurred a further expenditure of ₹ 3.34 crore for replacement with Panel Interlocking work in the same section. If the doubling work had been commenced with Panel Interlocking as sanctioned by the Railway Board, the infructuous expenditure of ₹ 1.09 crore could have been avoided. The Railway Administration further incurred an expenditure of ₹ 0.02 crore for dismantling the Mechanical Interlocking arrangement. Thus, awarding of contract for Mechanical Signaling work without approval and subsequently, converting the same to MACLS with Panel Interlocking by

dismantling the earlier arrangement, resulted in the Railway Administration incurring infructuous expenditure of `1.11 crore (`1.09 crore + `0.02 crore)

The matter was taken up with the Railway Board (August 2010). They accepted (February 2011) that the processing of Panel Interlocking tender was delayed. If the Panel Interlocking tender had been done a few months in advance, non-availability of critical Civil Engineering items. i.e. Points and Crossing and Panel Building would have more than offset the saving of ` 1.11 crore and the earnings of ` 2.48 crore, which was realized from early commissioning of doubling work, would not have accrued. The reply was not acceptable. Instead of awarding the contract for Panel Interlocking within a reasonable time after receipt of approval (October 2001), the Railway awarded (January 2003) the contract for Mechanical Interlocking after more than one year followed by Panel Interlocking, six months thereafter. If the contract of Panel Interlocking had been awarded in due time, the signaling work with Panel Interlocking could have been completed within the target date of commissioning (31 March 2004) with attendant benefits and Railway could have saved the expenditure of `1.11 crore.