

Chapter 5 → Health and Safety

Audit Objective 4

To verify whether health and safety of workers was as per the requirements of Indian Factories Act 1948 and in accordance with the provisions laid down in the manuals of Indian Railways.

Health and safety of the employees is an important aspect of an organisation for enhancing productivity, minimizing potential work-related injuries, illnesses and increasing the quality of products or services rendered. Occupational Health and Safety (ISO18001) demands adoption of structured approach for identification of hazards, their evaluation and control of risks in the organisation. In addition, the Factories Act 1948 also laid various provisions to ensure welfare of workers.

Audit examined compliance of workshops, sheds and PUs with health and safety requirements prescribed under Factories Act and Indian Railway Medical Manual. This chapter highlights the approach of IR in dealing with health and safety of employees of workshops, sheds and PUs.

5.1 Ventilation and Lighting

A carefully drafted layout plan of workshops, sheds and PUs ensures health and safety of workers and prepares an organisation for any disaster. This also ensures a clear demarcation of risk areas and facilitates access of emergency services to the workers. As per Section 13 of the Factories Act, effective and suitable provision shall be made in every factory for securing and maintaining adequate ventilation for circulation of fresh air in every workroom. Section 17 of the Act also provides that suitable lighting, natural or artificial, or both should be provided in work spots.

Scrutiny of records of the selected units revealed the following:

- I. Adequate ventilation and lighting was available in all the workshops and sheds test checked. However, 23 workshops and 47 sheds in eight ZRs⁹² did not get their layout plan of the workshops and sheds approved by the

⁹² ECoR, ECR, ER, NCR, NER, NR, SER and SR

Director/Inspector of Factories. Initiative was not taken by the workshops to get their layout plan approved (June 2014);

- II. In six PUs test checked, layout plan of the units was approved by the Director/Inspector of Factories. Adequate provision was made for ventilation and lighting.

Thus, though adequate care was taken for proper ventilation and lighting, there was lack of initiative on the part of the authorities of workshops and sheds in obtaining approval of the layout plan from the competent authority.

5.2 Healthcare facilities

Indian Railway Medical Manual provides that the Physician/ Medical Officer⁹³ should frequently visit the shop in order to acquaint himself / herself with the various aspects of the working environment⁹⁴, manufacturing processes and occupational physiology⁹⁵. Recommendations should be made to the Works Manager concerned to prevent accidents and diseases likely to emerge from the physical and chemical hazards of the working environment and also to ensure that the recommended safety measures were in place.

Scrutiny of records of selected units relating to periodical inspections of Doctors or Medical Officers and the status of implementation of their recommendations revealed the following:

- I. The periodical inspection by doctors was carried out only in nine workshops and nine sheds (13 *per cent*) over eight ZRs⁹⁶. Periodic inspection by Doctors was not conducted in the remaining 40 workshops and 80 sheds;
- II. Monitoring of implementation of the recommended safety measures was done in 10 workshops and 7 sheds (12 *per cent*) over seven ZRs⁹⁷ ;
- III. Health Unit (HU) was attached to 46 workshops and 77 sheds across ZRs. In the remaining 3 workshops and 12 sheds over five ZRs⁹⁸ HU was not attached. HU was attached to three⁹⁹ PUs.

⁹³ Para 1522 (4 and 5) of Indian Railway Medical Manual

⁹⁴ temperature, lighting, ventilation, humidity, dust, fumes, gases, noise, vibration, air pollution and sanitation

⁹⁵ occurrence of fatigue, shift work, weight carried by the workers, etc

⁹⁶ ECR, ER, NER, NCR, NFR, NR, SCR and WCR

⁹⁷ ECR, ER, NCR, NER, NFR, NR and SCR

⁹⁸ ER, NCR, NR, SECR, SWR

⁹⁹ ICF, RWF and DLW. One First Aid Post attached to workshop of CLW unit.

- IV. Out of six PUs, periodic inspection during 2011-12 was carried out only at RWF, Yelahanka. Monitoring of implementation of the recommended safety measures (including recommendations made during the previous years) was done in two PUs (DLW/Varanasi and RWF/Yelahanka).

Health Directorate of RB stated (December 2013) that the recommendations to prevent accidents and diseases likely to result from physical and chemical hazards of the work environment were being made to the Works Manager from time to time. RB further added that the extant instructions on the subject had been reiterated to the ZRs and PUs. However, the fact remained that the periodic inspection by doctors was not conducted in 40 workshops and 80 sheds (87 *per cent*).

Thus, the instructions laid down in the IR Medical Manual with regard to periodic inspections by Medical Officers to ensure the health and safety of the employees of the workshops sheds and PUs were not complied with.

5.3 Maintenance of Medical Records

Indian Railway Medical Manual¹⁰⁰ provides for proper maintenance of workers health record and occupational disability record for future planning, development and efficient operation of occupational health services.

Scrutiny of maintenance of health records of workers in selected units revealed that out of 46 workshops and 77 sheds (89 *per cent*) where health units were attached, medical records of workers were maintained in the health units attached to 10 workshops and 15 sheds (20 *per cent*) over seven ZRs¹⁰¹. HUs attached to PUs, maintained medical records of employees.

Health Directorate of RB stated (December 2013) that the preventive medical examination of all the employees was being carried out as per the laid down frequency in Indian Railway as per Medical category. It was also stated that records were being maintained with the Assistant Medical Officer of the employee. Contention of the Health Directorate is not acceptable as only 20 *per cent* of the health units attached to the workshops and sheds maintained medical records of workers.

5.4 Occupational Safety

Working environment such as temperature, lighting, ventilation, humidity, dust, fumes, gases, noise, vibration, air pollution and sanitation in workshops, sheds

¹⁰⁰ Para 1522 (6) of Indian Railway Medical Manual

¹⁰¹ CR, ECR, NCR, NER, NFR, NR and WCR

and PUs have an important bearing on the worker's health. The primary concern to the safety of the workmen should be addressed through use of appropriate personal protective equipment (PPE). Section 41 of the Factories Act stipulates that PPE are to be provided to workers to safeguard them from the hazards involved.

Audit conducted survey among workers of 30 workshops and 61 sheds over eleven ZRs¹⁰² and six PUs. Survey revealed that while in three ZRs, the percentage of employees provided with PPE was less than 43 *per cent*, it ranged between 43 and 62 *per cent* in four ZRs. In the remaining four ZRs, the percentage of employees provided with PPE was between 78 and 97 *per cent*. Regarding use of PPE, more than 80 *per cent* of the employees of workshops and sheds across seven ZRs¹⁰³ stated that they were using PPE. During joint inspection with the Railway officials, following deficiencies were, observed in four ZRs:

- I. None of the workers at Car shed/TBM (SR) were wearing PPE. In SR, most of the employees of EWS/AJJ, DLS/TNP and CD/BBQ were also not wearing safety gadgets.
- II. In CRW/BBS (ECoR), some of the workers were not wearing any safety gadgets provided to them.
- III. Though the workers of Signal Workshop/KGP/SER stated in the survey questionnaire that they use PPE, spot verification revealed that the workers were not using PPE.
- IV. In NFR, workers at Diesel Shed/New Guwahati were not using the PPE.



Scrutiny of records relating to accidents during 2007-12 in selected units revealed that:

- There were 10,420 accidents occurred in 16 ZRs (*Appendix VI*). Of them, 5339 accidents (51 *per cent*) occurred in 12 workshops and 18 sheds over three ZRs (CR, ER and NR).

¹⁰² ECoR, ER, ECR, NFR, SCR, SER, SWR, WCR, WR, SECR and NCR

¹⁰³ ER, NEFR, SCR, SER, SWR and WCR

- Workshops which registered high number of accidents were Kanchrapara/ER (1098 accidents), Jagadhari/NR (943 accidents) Jamalpur/ER (807 accidents) and Parel/CR (602 accidents).
- 9747 employees were injured across all ZRs. Of them, 4119 employees (42 *per cent*) were injured in eight workshops and 12 sheds over CR and ER.
- Out of 49 deaths, 11 occurred in WR. In PUs, 775 accidents occurred resulting in death of five workers¹⁰⁴ and injury to 773 workers.

Thus, the safety of workers was compromised due to non supply of PPE and monitoring its use by workers. Though the number of accidents during the review period showed a decreasing trend, instances of death and injuries were high particularly in four zones (CR, ER, NR and WR) which indicated deficiencies in workshops, sheds and PUs in complying with provisions related to the safety of workers.

¹⁰⁴ ICF (3), RCF (1) and CLW (1)