

(PREVIEW)

HANDBOOK ON FUNCTIONAL REQUIREMENTS OF INDUSTRIAL BUILDINGS (LIGHTING AND VENTILATION)

FOREWORD

Users of various civil engineering codes have been feeling the need for explanatory handbooks and other compilations based on Indian Standards. The need has been further emphasized in view of the publication of the National Building Code of India in 1970 and its implementation. The Expert Group set up in 1972 by the Department of Science and Technology, Government of India carried out in-depth studies in various areas of civil engineering and construction practices. During the preparation of the Fifth Five Year Plan in 1975, the Group was assigned the task of producing a Science and Technology plan for research, development and extension work in the sector of housing and construction technology. One of the items of this plan was the production of design handbooks, explanatory handbooks and design aids based on the National Building Code and various Indian Standards, and other activities in the promotion of the National Building Code. The Expert Group gave high priority to this item and on the recommendation of the Department of Science and Technology the Planning Commission approved the following two projects which were assigned to the Indian Standards Institution:

- a) Development programme on Code implementation for building and civil engineering construction, and
- b) Typification for industrial buildings.

A Special Committee for Implementation of Science and Technology Projects (SCIP) consisting of experts connected with different aspects was set up in 1974 to advise the ISI Directorate General in identifying the Handbook and for guiding the development of the work. Under the first project, the Committee has so far identified subjects for several explanatory handbooks/compilations covering appropriate Indian Standards/Codes/Specifications which include the following:

Design Aids for Reinforced Concrete to IS : 456-1978 (SP : 16-1980)
 Explanatory Handbook on Masonry Code (SP : 20-1981)
 Explanatory Handbook on Codes of Earthquake Engineering (IS : 1893- 1975 and IS : 4326-1976)
 (SP : 22-1982)
 Handbook on Concrete Mixes (SP : 23-1982)
 Explanatory Handbook on Indian Standard Code of Practice for Plain and Reinforced Concrete (IS : 456-1978) (SP : 1983)
 Handbook on Causes and Prevention of Cracks in Buildings (SP : 25- 1984*)
 Summaries of Indian Standards for Building Materials (SP : 21-1983)
 Concrete Reinforcement and Detailing*
 Water Supply and Drainage with Special Emphasis on Plumbing*
 Functional Requirements of Buildings
 Functional Requirements of Industrial Buildings
 Timber Engineering*

Foundation of Buildings
Steel Code (IS : 800 - 1984)
Building Construction Practices
Bulk Storage Structures in Steel
Formwork
Fire Safety
Construction Safety Practices
Tall Buildings
Inspection of Different Items of Building Work
Loading Code
Prefabrication

One of the handbooks suggested is the Functional Requirements of Industrial Buildings. This Handbook covers the requirements relating to lighting and ventilation. The handbook is expected to provide explanation regarding various provisions given in Indian Standard relating to lighting and ventilation for industrial buildings. This also gives typical worked out examples, design aids and charts to enable the designer to use them directly in the design according to the existing code and recommendations.

The Handbook, it is hoped, would provide useful guidance to architects, engineers and other agencies dealing with lighting, ventilation and illuminating engineering aspects of industrial buildings.

The Handbook is based on the draft prepared by Shri B. J. Ramrakhiani, Retired Deputy Director General, Directorate General of Factory Advice Service and Labour Institute, Ministry of Labour (Government of India). The draft Handbook was reviewed by Shri S. Roy Choudhary, Peico Electronics & Electricals, Bombay; Shri M. S. Lulla, Engineering Consultant, Madras; Shri L. G. Bartake, S. F. India Limited, Bombay and Dr B. K. Saxena, Central Building Research Institute, Roorkee who had offered valuable comments, and their views have been taken into consideration, while finalizing the Handbook.

*Under print