INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS

Open Access, Refereed Journal Multi Disciplinary
Peer Reviewed

www.ijlra.com

ISSN: 2582-6433

DISCLAIMER

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Managing Editor of IJLRA. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of IJLRA.

Though every effort has been made to ensure that the information in Volume II Issue 7 is accurate and appropriately cited/referenced, neither the Editorial Board nor IJLRA shall be held liable or responsible in any manner what sever for any consequences for any action taken by anyone on the basis of information in the Journal.

ISSN: 2582-6433

EDITORIALTEAM

EDITORS

Dr. Samrat Datta

Dr. Samrat Datta Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Samrat Datta is currently associated with Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Datta has completed his graduation i.e., B.A.LL.B. from Law College Dehradun, Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand. He is an alumnus of KIIT University, Bhubaneswar where he pursued his post-graduation (LL.M.) in Criminal Law and subsequently completed his Ph.D. in Police Law and Information Technology from the Pacific Academy of Higher Education and Research University, Udaipur in 2020. His area of interest and research is Criminal and Police Law. Dr. Datta has a teaching experience of 7 years in various law schools across North India and has held administrative positions like Academic Coordinator, Centre Superintendent for Examinations, Deputy Controller of Examinations, Member of the Proctorial Board

Dr. Namita Jain

Head & Associate Professor
School of Law, JECRC University, Jaipur Ph.D. (Commercial Law) LL.M., UGC-NET Post Graduation Diploma in Taxation law and Practice, Bachelor of Commerce.

Teaching Experience: 12 years, AWARDS AND RECOGNITION of Dr. Namita Jain are - ICF Global Excellence Award 2020 in the category of educationalist by I Can Foundation, India. India Women Empowerment Award in the category of "Emerging Excellence in Academics by Prime Time & Utkrisht Bharat Foundation, New Delhi. (2020). Conferred in FL Book of Top 21 Record Holders in the category of education by Fashion Lifestyle Magazine, New Delhi. (2020).Certificate of Appreciation for organizing and managing the Professional Development Training Program on IPR in Collaboration with Trade Innovations Services, Jaipur on March 14th, 2019

ISSN: 2582-6433

Mrs.S.Kalpana

Assistant professor of Law

Mrs.S.Kalpana, presently Assistant professor of Law, VelTech Rangarajan Dr.Sagunthala R & D Institute of Science and Technology, Avadi. Formerly Assistant professor of Law,Vels University in the year 2019 to 2020, Worked as Guest Faculty, Chennai Dr.Ambedkar Law College, Pudupakkam. Published one book. Published 8Articles in various reputed Law Journals. Conducted 1Moot court competition and participated in nearly 80 National and International seminars and webinars conducted on various subjects of Law. Did ML in Criminal Law and Criminal Justice Administration.10 paper presentations in various National and International seminars. Attended more than 10 FDP programs. Ph.D. in Law pursuing.

Avinash Kumar

Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC – NET examination and has been awarded ICSSR – Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research methodology and teaching and learning.

ISSN: 2582-6433

ABOUT US

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANLAYSIS ISSN- 2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

ISSN: 2582-6433

AN ANALYSIS OF THE FACTORIES ACT AND THE OSH CODE, 2020: REGULATING HAZARDOUS PROCESSES IN INDIA

AUTHORED BY - CHYRIL KUMAR. MP & YUVASHREE. K
II year, LLM,
School Of Excellence In Law,
The Tamilnadu Dr. Ambedkar Law University, Chennai.

ABSTRACT

Industrialisation in post-independence India has significantly contributed to economic growth and employment, but it has also increased occupational hazards, particularly in chemical, petrochemical, pharmaceutical, and metallurgical industries. The Factories Act, 1948, was enacted to regulate working conditions, health, safety, and welfare of factory workers. However, traditional provisions were insufficient to address risks arising from hazardous processes, a gap tragically highlighted by the Bhopal Gas Tragedy of 1984.

In response, the Factories (Amendment) Act, 1987, introduced Chapter IVA, establishing a specialized legal framework for hazardous processes, including provisions on site appraisal, compulsory disclosure of hazards, worker responsibilities, emergency standards, permissible exposure limits, safety committees, and enforceable penalties. Judicial interventions, notably in M.C. Mehta v. Union of India and Union Carbide Corporation v. Union of India, reinforced the principles of absolute liability, corporate accountability, and the constitutional right to life, further strengthening occupational safety standards.

Despite these measures, challenges persist, including limited inspection capacity, fragmented regulatory coverage, low worker awareness, technical constraints in monitoring hazards, and insufficient integration with environmental laws. The Occupational Safety, Health and Working Conditions (OSH) Code, 2020, consolidates multiple labour laws, broadens the scope of hazardous workplaces, standardizes safety compliance, enhances worker participation, and strengthens enforcement mechanisms, representing a shift toward a proactive, integrated, and technology-driven occupational safety regime.

ISSN: 2582-6433

This paper analyses the evolution of hazardous process regulation in India, evaluates the effectiveness of existing legal provisions, examines judicial contributions, and highlights challenges and potential reforms for fostering safer and hazard-resilient industrial environments.

Keywords: Factories Act 1948, hazardous processes, industrial safety, OSH Code 2020, occupational health,

INTRODUCTION

Industrialisation has been the cornerstone of economic growth in post-independence India, generating employment and transforming the socio-economic landscape. However, industrial expansion has also created environments of significant risk for workers, communities, and the environment. Factories dealing with chemicals, petrochemicals, pharmaceuticals, and metallurgical processes often expose workers to hazardous substances that, if not properly regulated, can result in catastrophic accidents. This duality—economic progress accompanied by potential danger—has shaped the need for strong legal safeguards in India's industrial laws.[1]

The Factories Act, 1948 was enacted to consolidate and modernise earlier factory legislations that were primarily colonial in character.[2] It sought to regulate working conditions, health, safety, and welfare of workers employed in factories. At the time of its enactment, the Act largely focused on traditional manufacturing risks such as unsafe machinery, inadequate ventilation, and excessive working hours.[3] However, the post-independence industrial boom introduced a different scale of hazards, particularly with the rise of chemical and process-based industries.

The inadequacies of the existing legal framework were tragically exposed by the ***Bhopal Gas Tragedy*** of December 1984, where a leak of methyl isocyanate gas from the Union Carbide India Ltd. pesticide plant caused the death of thousands and left generations affected with severe health problems.[4] Bhopal became a turning point in India's legal consciousness, highlighting the need for stronger regulatory mechanisms, community right-to-know

[1] P.L. Malik, The Factories Act, 1948 with Commentary (Eastern Book Company, 2012) p. 45.
[2] S.C. Srivastava, Industrial Relations and Labour Laws (Vikas, 2016) p. 210.
[3] S.N. Mishra, Labour and Industrial Laws (Central Law Publications, 2020) p. 412.
[4] Upendra Baxi & Amita Dhanda, Valiant Victims and Lethal Litigation: The Bhopal Case (Indian Law Institute, 1990).

ISSN: 2582-6433

provisions, and strict accountability of industrial occupiers.

In direct response to Bhopal, Parliament enacted the ***Factories (Amendment) Act, 1987,*** inserting ***Chapter IV-A*** into the 1948 Act. This chapter created a specialised legal regime for "hazardous processes" by defining the term, imposing special duties on occupiers, requiring disclosure of information to workers and authorities, establishing Site Appraisal Committees, and ensuring workers' participation in safety management. The amendment reflected the shift in Indian law from a purely welfare-oriented factory regime to one that recognised the unique dangers of hazardous industries.

Against this backdrop, the safety provisions and hazardous process regime under the Factories Act remain a vital subject of discussion. They represent the State's attempt to balance industrial progress with worker protection and community welfare. However, evolving industrial technologies, recurring accidents, and international obligations such as those under the International Labour Organization's Occupational Safety and Health Conventions demand that the law be continuously re-examined and updated.[5]

Thus, the regulation of safety and hazardous processes under the Factories Act, 1948 is not merely a statutory subject, but a live socio-legal issue that continues to test India's industrial governance framework. This article attempts to revisit these provisions, assess their efficacy, and situate them within the broader narrative of industrial safety and labour rights in India.

HISTORICAL BACKGROUND OF THR ACT

The factory legislation in India has a bearing with the factory legislation of England. In England and other Western countries, the "laissez-faire philosophy in the 19th century resulted in the emergence of new problems and new evils inside and outside the factories. New regulations became inevitable to improve the lot of the workers and to eradicate the miseries and other defects faced by the workers in the factories. A few employers under the leadership of ***Robert Owen*** regarded themselves as the trustees of the employees employed in their factories and started a massive movement to better the conditions of work and other interests of the workers. Coupled with this, the agitations and demands compelled the Government to evolve many new legislations which were passed to remedy the existing abuses and provide better conditions of

[5] ILO Convention No. 155 : Occupational Safety and Health, 1981

ISSN: 2582-6433

work.

In India also, for the first time, public attention was drawn to the miserable conditions of factory workers in a report published in 1873.[6] ***The Factory Act 1881*** was first passed by which children were allowed to work for 9 hours a day from the age of 8 onwards. ***The Factory Act, 1911*** further improved the situation by securing one weekly holiday for all the workers in factories and fixing a maximum 11 hours work a day for women with one and half hours' rest. It also prohibited the work of women and children at night and raised the age of children permitted to work in the mills from 8 to 9 years with maximum 7 hours' work a day,

The 1911 Factories Act was replaced by ***the Factories Act, 1934*** as the former was found to be inadequate to satisfy the growing needs of labour. The emergence of the International Labour Organisation in 1919 and the consequent investigations by many commissions regarding the conditions of labour in the industrial undertakings in many countries including India, demanded new solutions and new legislations, Hence, the 1934 Factories Act of India provided for various matters.

However, this Act was also found to be quite inadequate. The sweeping changes in the social and economic conditions and conscience of the workers legislation in the factories further demanded the growing comprehensive the 1934 Act. The provisions relating to the safety, health and welfare of the to mitigate the drawbacks and weaknesses found in more workers provided in the 1934 Act were found to be quite inadequate and unsatisfactory and further the ambit and scope of the Act did not extend to the large mass of workers employed in work places. This demanded for a more comprehensive legislation like the existing not covered by the Act. Thus ***the Factories Act, 1948*** was enacted.

The object of the Act is to protect the human beings from being subjected to unduly long hours of bodily strain or manual labour. It also provides that the employees should work in healthy and sanitary conditions so far as the manufacturing processes will allow and that precautions should be taken for their safety and for the prevention of accidents. The Act was intended to consolidate and amend the law regulating labour in factories.

[6] Report on the 'Administration of Bombay Cotton Development' 1873

ISSN: 2582-6433

It is a beneficial piece of legislation focussed to achieve social reforms to the workers working in factories. It was passed in response to some urgent social demands and provide immediate and visible impact on social vices by co-operating more directly to achieve the social reforms.[7] The act is enacted mainly with the object of protecting the workers employed in factories against industrial and occupational risk. It seeks to impose upon the owners and/or occupiers certain obligations to protect the workers and also to secure for them employment in the conditions conducive to their health and safety.[8]

It has been rightly observed by the Supreme Court of India in ***J.K. Industries Ltd. and others v. Chief Inspector of Factories and Boilers***,[9] that the Act is an act to consolidate the law regulating factories. It is a piece of social welfare legislation enacted primarily with the object of protecting workmen employed in factories against industrial and occupational hazards. It seeks not only to ensure that workers would not be subjected to long hours of strain but also that employees should work in safe, healthy and sanitary conditions and that adequate precautions are taken for their welfare and safety.

It has been nicely observed by the Supreme Court in ***Barat Fritz Werner Ltd. v.. State of Karnataka[10],*** that the Supreme Court said that the main aim of the Factories Act, 1948 is to make sure there are enough safety measures in place and to improve the health and well-being of factory workers. The Act brings in various measures to ensure that safety, health, and welfare standards are met at all workplaces.

It has been observed by the Supreme Court that the Factories Act was intended to consolidate and amend the law regulating labour in factories, It is probably true that all legislation in a welfare State is enacted with the object of promoting general welfare, but certain types of enactments are more responsive to some urgent social demands, and also have immediate and visible impact on social vices by operating more directly to achieve social reforms. The Factories Act belongs to this category, and, therefore, demands an interpretation liberal enough to achieve the legislative purpose without violence to the language. Thus Factories Act is a social enactment to achieve social reform and must receive liberal construction.[11]

[7] R.S, Sharma V, State of Rajasthan, AIR 1993 Raj 117
[8] BY Kashyatriya Ltd, V. Union of India, AIR 1963 SC 1591
[9] 1997 SCC (L&S) 1
[10] 2001 SCC (L&S) 752.
[11] Works Manager, Central Rly. Workshops, Jhansi V Vishwanath, AIR 1970 SC 488.

ISSN: 2582-6433

HAZARDOUS PROCESS UNDER THE ACT

Industrialization in India has historically been accompanied by occupational hazards and industrial accidents. With rapid growth of chemical industries, the potential for accidents involving toxic and hazardous substances also increased. The turning point came in 1984 with the Bhopal Gas Tragedy, where the leakage of methyl isocyanate from Union Carbide's pesticide plant killed thousands and left long-term environmental and health consequences. This tragedy exposed glaring inadequacies in the then-existing Factories Act, which had no special provisions for the handling of hazardous processes.[12]

Responding to this, the ***Factories (Amendment) Act, 1987*** introduced a new set of provisions in ***Chapter IVA*** (Sections 41A to 41H), specifically dealing with hazardous processes. These provisions aim to ensure workers' safety, protect the environment, and impose stricter obligations on occupiers.[13]

The concept of a "hazardous process" was not originally part of the Factories Act, 1948. It was only introduced after the Factories (Amendment) Act, 1987, as a response to the ***Bhopal Gas Tragedy of 1984,*** which exposed the inability of the earlier legal framework to address industrial disasters involving toxic chemicals.

Section 2(cb) of the Factories Act defines hazardous process as:

"Any process or activity in relation to an industry specified in the First Schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, by-products, wastes or effluents thereof would—

(a) cause material impairment to the health of the persons engaged in or connected therewith, or

(b) result in the pollution of the general environment."

Thus, the definition is deliberately wide, covering not only substances directly handled by workers but also by-products and effluents that could harm the environment or community.

i) SITE APPRAISAL COMMITTEE

Section 41A of the Factories Act, 1948 empowers the State Government to appoint a ***Site***

[12] V.V. Giri National Labour Institute, Occupational Safety and Health in India: An Overview (NLI Research Studies Series 2002) 67.
[13] M.C. Mehta v. Union of India, (1987) 1 SCC 395

ISSN: 2582-6433

Appraisal Committee for considering applications relating to the initial location or expansion of factories involving hazardous processes. The Committee is chaired by the Chief Inspector of Factories of the State, and includes representatives from the Central and State Pollution Control Boards, the State Department of Environment, the Meteorological Department of India, an occupational health expert, and the Town Planning Department. Additionally, up to five co-opted members may be included, such as a scientist with expertise in the hazardous process, a representative of the concerned local authority, and other experts as the State Government deems fit.

The Site Appraisal Committee plays a crucial role in evaluating applications for establishing or expanding factories involving hazardous processes. Its primary function is to examine such proposals and submit recommendations to the State Government within ninety days of receiving the prescribed application. If the proposed factory is owned or controlled by the Central Government or a public sector undertaking, a Central Government nominee must also be included in the Committee.

The Committee is empowered to seek any information necessary from the applicant to ensure that all safety, environmental, and planning factors are properly considered. Once the State Government grants approval based on the Committee's recommendations, the applicant need not obtain separate clearances from the Pollution Control Boards under the Water or Air (Prevention and Control of Pollution) Acts, thereby eliminating procedural overlap.

In essence, Section 41A establishes a comprehensive pre-establishment screening system that integrates multidisciplinary expertise to assess industrial proposals involving hazardous processes. This ensures that industrial safety, environmental safeguards, and public health considerations are addressed before the factory becomes operational.

ii) COMPULSORY DISCLOSURE OF INFORMATION BY THE OCCUPIER

Section 41B of the Factories Act, 1948 places a legal duty on occupiers of factories engaged in hazardous processes to maintain transparency and accountability. It mandates disclosure of information on dangers and health risks from the manufacture, storage, and transport of hazardous substances to workers, authorities, and nearby residents signifying a shift from industrial secrecy to the public's right to know.

ISSN: 2582-6433

Occupiers must submit and periodically update a comprehensive health and safety policy, detailing the nature, quantity, and disposal of hazardous wastes. They are also required, with the Chief Inspector's approval, to prepare on-site emergency and disaster management plans, which must be communicated to employees and local communities. Prior notice to the Chief Inspector is compulsory before starting or expanding any hazardous process, and failure to comply may result in licence cancellation and penalties. The provision promotes a preventive and precautionary framework for industrial safety, inspired by lessons from the Bhopal Gas Tragedy.

In ***Consumer Education and Research Centre v. Union of India***[14], the Court recognised workers' right to know about occupational hazards as part of their fundamental right to life under Article 21. These cases collectively establish that Section 41B is not just a statutory duty but also a reflection of constitutional and environmental principles such as the Precautionary Principle and Polluter Pays Principle.

In essence, Section 41B transforms industrial regulation by emphasising prevention, transparency, and community protection, ensuring that hazardous industries operate with accountability to both workers and society at large.

iii) RESPONSIBILITY OF WORKERS

Section 41C of the Factories Act, 1948 establishes that safety in hazardous industries is a joint responsibility of both employers and workers. While Section 41B places duties on occupiers to disclose hazards and adopt preventive measures, this section imposes a corresponding obligation on workers to actively participate in maintaining workplace safety. Workers in factories handling hazardous processes must take reasonable care for their own health and that of their co-workers. They are required to follow all safety instructions, use protective equipment properly, and cooperate in safety drills and emergency procedures. Additionally, they must not tamper with or misuse any safety devices provided for their protection, reinforcing the idea of shared accountability in industrial safety.

The judiciary has reinforced this principle of shared responsibility. In ***M.C. Mehta v. Union of India***[15], the Supreme Court observed that both employers and employees must function with a

[14] (1995) 3 SCC 42.
[15] AIR 1987 SC 1086

ISSN: 2582-6433

heightened sense of responsibility in hazardous industries. Similarly, in ***Consumer Education and Research Centre v. Union of India,***[16] the Court underlined that workers' right to know about hazards must be accompanied by a duty to comply with safety norms, thereby linking rights with responsibilities.

While the occupier must disclose and implement safety measures, the workers are equally required to cooperate, follow safety procedures, and avoid negligent or reckless behaviour that could endanger themselves or others. In essence, the provision reinforces the idea that industrial safety is a collective responsibility, requiring active participation from both management and labour.

iv) POWER OF CENTRAL GOVERNMENT TO APPOINT INQUIRY COMMITTEES

Section 41D of the Factories Act, 1948 empowers the Central Government to take a proactive role in ensuring the safety of factories engaged in hazardous processes. Recognising that State authorities alone may not always have the technical expertise or resources to evaluate complex industrial hazards, it allows the Central Government to appoint an ***Inquiry Committee*** to examine the standards of health, safety, and environmental compliance in any factory involving hazardous operations.

The Inquiry Committee acts as an independent expert body tasked with assessing whether the occupier's safety measures meet legal standards and adequately protect workers and nearby communities. It collects data, inspects factory operations, and recommends necessary improvements. Its recommendations are binding on the occupier and assist the State Government in ensuring compliance.

This provision is crucial as it establishes central oversight and promotes uniform safety regulation across India. By enabling national-level intervention, it ensures consistency, scientific accuracy, and accountability in managing industrial hazards. Essentially, Section 41D enhances the regulatory framework by introducing a proactive monitoring mechanism for hazardous processes, ensuring strict adherence to safety norms and complementing related provisions like Sections 41A and 41B on site approval and hazard disclosure.

[16] (1995) 3 SCC 42

ISSN: 2582-6433

v) EMERGENCY STANDARDS

Section 41E of the Factories Act, 1948 authorizes the Central Government to issue emergency safety standards for factories handling hazardous processes, especially when existing regulations are insufficient or new risks emerge. This provision enables prompt regulatory action in response to industrial accidents, technological changes, or unforeseen hazards, ensuring worker safety and environmental protection without waiting for lengthy legislative procedures.

The Central Government may issue binding directions requiring occupiers to adopt specific measures to control risks, limit exposure to toxic substances, and safeguard workers' health. These standards are proactive and preventive, promoting preparedness in high-risk industries. Courts have linked this provision to the constitutional right to life under Article 21, emphasizing that workers are entitled not only to information about hazards but also to enforceable safety measures. By enabling swift government intervention, Section 41E strengthens India's industrial safety regime and serves as a vital mechanism for rapid preventive action against emerging industrial threats.

vi) PERMISSIBLE LIMITS OF EXPOSURE OF CHEMICAL AND TOXIC SUBSTANCES

Section 41F of the Factories Act, 1948 authorizes the Central Government to set maximum permissible exposure limits (PEL) for workers involved in hazardous processes using chemical or toxic substances. Its purpose is to protect employees from exposure levels that could harm their health or safety. These limits are scientifically determined based on medical and industrial hygiene research, considering both short-term and long-term effects. The provision places a duty on occupiers to regularly monitor and control workplace exposure through adequate ventilation, use of personal protective equipment (PPE), and adherence to safety protocols. Compliance with Section 41F is vital to prevent occupational diseases, chronic illnesses, and fatalities in high-risk sectors like chemical, pesticide, and metal industries.

In ***Occupational Health & Safety Association v. Union of India***[17], the Supreme Court stressed that enforcing permissible exposure limits is integral to protecting workers from occupational hazards, and that failure to comply could render the occupier liable under statutory and

[17] (2014) 3 SCC 547.

ISSN: 2582-6433

constitutional principles. Similarly, in ***M.C. Mehta v. Union of India***[18] , the Court emphasised that industries must proactively maintain safe levels of toxic substances to prevent accidents and health hazards.

Section 41F complements other provisions of Chapter IVA by providing quantitative thresholds that occupiers must not exceed. By establishing clear legal limits, the law ensures both preventive industrial safety and accountability, reducing the likelihood of occupational illnesses and environmental contamination. Ultimately, it exemplifies a scientifically informed regulatory approach to hazardous industries, integrating technical standards into the broader legal framework of worker safety and environmental protection.

vii) WORKER'S PARTICIPATION IN SAFETY MANAGEMENT

Section 41G of the Factories Act, 1948 emphasizes worker participation as an essential component of safety management in hazardous industries. While the occupier is primarily responsible for implementing safety measures under Sections 41B and 41F, this provision empowers workers to share responsibility for maintaining a safe workplace. It requires the formation of safety committees or similar consultative bodies in factories handling hazardous processes, enabling workers to voice concerns, propose safety improvements, and monitor compliance. This ensures that workers directly exposed to risks become active participants rather than passive recipients, fostering a culture of shared responsibility and proactive industrial safety.

Judicial authorities have emphasised the importance of workers' involvement in safety management. In ***Vishaka v. State of Rajasthan***[19], while primarily addressing sexual harassment, the Supreme Court acknowledged that worker participation in policy implementation is critical to the enforcement of protective measures in any workplace. Similarly, in ***M.C. Mehta v. Union of India***[20], the Court highlighted that proactive engagement of employees in monitoring and emergency preparedness can prevent accidents and mitigate industrial risks.

The legal framework under Section 41G also promotes occupational democracy, aligning with

[18] AIR 1987 SC 1086
[19] (1997) 6 SCC 241
[20] AIR 1987 SC 1086

ISSN: 2582-6433

principles of industrial justice recognised under ILO conventions on occupational health and safety. By institutionalising workers' participation, the law ensures that safety protocols are practical, responsive, and regularly reviewed, reflecting both the management's perspective and the frontline experience of workers. Ultimately, it strengthens the collective responsibility approach in hazardous industries, recognising that effective prevention of industrial accidents is a shared duty between employers and employees.

viii) PENALTIES

Section 41H of the Factories Act, 1948 gives enforceable authority to the safety provisions under Chapter IVA. It holds the occupier, manager, or any responsible person liable for violations such as failure to disclose hazards, neglect of safety measures, non-compliance with emergency plans, or breach of exposure limits, imposing penalties including fines or imprisonment based on the gravity of the offence. This ensures that safety obligations are legally binding and violations carry real consequences. For example, failure to disclose hazards under Section 41B can lead to licence cancellation along with penalties, while breaches of exposure or emergency standards under Sections 41F and 41E invite strict punitive action, thereby promoting accountability and deterrence.

In ***Union Carbide Corporation v. Union of India***[21], the Supreme Court held that legal sanctions are necessary to deter negligence in hazardous industries, noting that the absence of strict penalties contributed to the scale of the Bhopal Gas Tragedy. Likewise, in ***M.C. Mehta v. Union of India***[22] , the Court emphasised that non-compliance with statutory safety provisions should attract immediate consequences to protect workers' rights and public safety.

Section 41H thus completes the regulatory framework for hazardous processes by linking duties with enforceable sanctions. It ensures that all parties the occupier, management, and workers are aware that lapses in safety, disclosure, or emergency preparedness are legally actionable. By combining preventive measures with punitive consequences, Chapter IVA of the Factories Act fosters a comprehensive approach to industrial safety, integrating accountability, transparency, and worker protection.

[21] (1991) 4 SCC 584.
[22] AIR 1987 SC 1086

ISSN: 2582-6433

UNDER THE NEW OSH CODE, 2020

The Factories Act, 1948, particularly Chapter IVA, was the first legislative attempt in India to regulate hazardous processes, setting out obligations on occupiers, responsibilities of workers, emergency preparedness, and penalties for non-compliance. The framework emphasised site appraisal, disclosure of hazards, permissible limits of exposure, emergency plans, and workers' participation, complemented by judicial reinforcement from landmark cases such as M.C. Mehta v. Union of India and Union Carbide Corporation v. Union of India. While effective, the provisions were fragmented, specific to factories, and lacked integration across other hazardous workplaces, limiting their applicability to newer industrial sectors.

The Occupational Safety, Health and Working Conditions Code (OSH Code), 2020, consolidates and modernises 13 labour laws, including the Factories Act, Mines Act, and Dock Workers Act, creating a single statutory framework for workplace safety and health.[23]In contrast to the Factories Act, the OSH Code defines a "hazardous process" more broadly and applies to all establishments employing 10 or more workers in hazardous sectors, thereby extending regulatory reach beyond traditional factories. It also requires occupiers to formulate safety policies, maintain records of exposure, conduct regular safety audits, and implement emergency preparedness plans, aligning closely with Sections 41B and 41E of the Factories Act.[24]

Key improvements in the OSH Code include:

I. ***Broader Scope and Coverage:*** While Chapter IVA applied mainly to factories notified under the Act, the OSH Code applies to all establishments across sectors, including construction, ports, and warehouses, providing universal coverage for hazardous workplaces.

II. ***Integrated Compliance Framework:*** The OSH Code introduces a single registration and inspection system for safety compliance, replacing multiple approvals required under Section 41A (Site Appraisal Committee) and related state-level approvals under the Factories Act.[25]

[23] Occupational Safety, Health and Working Conditions Code, 2020, Ministry of Labour and Employment,GOI
[24] Ibid, Sections 17–23
[25] Comparison of Section 41A under Factories Act with centralized registration and inspection system under OSH Code.

ISSN: 2582-6433

III. ***Enhanced Worker Participation:*** The Code mandates the constitution of Safety Committees in all hazardous establishments, ensuring structured worker participation similar to Section 41G, but with broader applicability and standardized representation.

IV. ***Strengthened Emergency Preparedness:*** While Section 41E of the Factories Act allowed the Central Government to prescribe emergency standards, the OSH Code obliges occupiers to prepare on-site emergency plans, conduct drills, and maintain records with oversight from a central or state inspectorate, thereby strengthening enforcement and monitoring.

V. ***Penalty and Compliance Mechanisms:*** The OSH Code simplifies enforcement by introducing graded penalties for contraventions, providing for both fines and imprisonment, similar to Section 41H of the Factories Act, but with clearer procedures for inspection, reporting, and penalty imposition.

The OSH Code, however, depends largely on yet-to-be-framed rules and regulations, which may lead to varied enforcement across states. Although it broadens the scope of hazardous workplaces, the monitoring of exposure limits still follows outdated Factories Act standards and needs regular revision to match technological progress. Overall, the OSH Code modernizes the hazardous process framework of the Factories Act by retaining key principles of disclosure, safety, worker participation, and accountability, while expanding coverage, simplifying compliance, and aligning with global safety norms. It effectively shifts India's industrial safety regime from a reactive and fragmented model to a proactive and integrated system of occupational health governance.

CHALLENGES IN IMPLEMENTING HAZARDOUS PROVISIONS UNDER THE FACTORIES ACT

Despite the progressive framework introduced by Chapter IVA of the Factories Act, 1948, the implementation of hazardous process provisions in India faces several challenges. These challenges span legal, administrative, technical, and social dimensions, limiting the effectiveness of the statutory regime.

i. ***Limited Enforcement and Inspection Capacity:*** One of the primary challenges is the lack of sufficient inspection staff with specialized knowledge in chemical and hazardous processes. State Inspectorates often face resource constraints, making it difficult to monitor compliance with disclosure obligations, emergency

ISSN: 2582-6433

preparedness, or permissible exposure limits. As a result, many hazardous factories operate without adequate oversight, increasing the risk of industrial accidents.

ii. ***Fragmented Regulatory Framework:*** While the Factories Act covers factories engaged in hazardous processes, it does not extend to other hazardous workplaces, such as construction sites, ports, or warehousing. This fragmentation has historically led to gaps in coverage, allowing certain high-risk establishments to escape rigorous safety scrutiny. The Site Appraisal Committee, intended to approve new factories, also faces coordination issues between central and state authorities, delaying approvals and creating enforcement gaps.

iii. ***Inadequate Worker Awareness and Participation:*** Although Sections 41C and 41G promote worker responsibility and participation in safety management, low awareness among workers often undermines these objectives. Many workers are illiterate or lack training on hazard recognition and emergency protocols, limiting their ability to comply with safety instructions or report unsafe practices.

iv. ***Technical and Scientific Challenges:*** Prescribing and monitoring permissible exposure limits for chemicals and hazardous substances requires continuous scientific assessment, sophisticated instrumentation, and laboratory testing. In practice, many factories, especially small and medium enterprises, lack the technical infrastructure to comply with exposure monitoring or emergency planning, resulting in violations or underreporting.

v. ***Poor Disclosure and Transparency:*** Section 41B mandates disclosure of hazards to workers and the surrounding community. However, many occupiers do not fully comply, fearing public backlash or reputational damage. This lack of transparency can prevent early detection of risks and limits the ability of authorities or residents to take precautionary measures.

vi. ***Legal and Procedural Delays:*** Penalties under Section 41H are effective only if enforcement proceedings are timely. In reality, legal and procedural delays often result in minimal deterrence, as prosecutions may take years and fines are sometimes insufficient to compel compliance.

vii. ***Integration with Environmental Norms:*** Hazardous processes often overlap with environmental regulations under the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981. While Chapter IVA requires coordination through the Site Appraisal Committee, practical integration between occupational safety and environmental authorities is often

ISSN: 2582-6433

weak, leading to gaps in monitoring chemical discharges, toxic emissions, and industrial effluents.

Judicial interventions have highlighted these challenges. In ***Union Carbide Corporation v. Union of India***[26]**,** the Supreme Court noted that inadequate enforcement and fragmented regulatory oversight contributed to the catastrophic consequences of the Bhopal Gas Tragedy. While Chapter IVA of the Factories Act offers a comprehensive framework for managing hazardous processes, its implementation faces hurdles due to limited enforcement capacity, lack of technical expertise, low worker awareness, inadequate transparency, and poor coordination with environmental laws. Effective enforcement demands stronger inspections, improved worker training, technological advancement, and better coordination between labour and environmental agencies objectives the OSH Code, 2020 aims to achieve through a more integrated approach.

CONCLUSION AND SUGGESTIONS

The hazardous process provisions under Chapter IVA of the Factories Act, 1948, represent a landmark legislative attempt to regulate industrial safety in India. These provisions emerged in response to industrial disasters like the Bhopal Gas Tragedy, reflecting the necessity of strict occupational safety norms, hazard disclosure, emergency preparedness, and worker participation. They laid the foundation for modern occupational health governance by institutionalising mechanisms such as the Site Appraisal Committee, hazard disclosure, emergency planning, permissible exposure limits, worker participation, and penalties for non-compliance.

In ***M.C. Mehta v. Union of India***[27], the Supreme Court evolved the principle of absolute liability, holding that enterprises engaged in hazardous industries bear a non-delegable duty to ensure that no harm results to anyone. This was a significant departure from the earlier English principle of strict liability in ***Rylands v. Fletcher***[28], which allowed for exceptions. The Court in Mehta declared that industries engaged in inherently dangerous activities must bear the costs of any accidents, irrespective of fault. Similarly, in the ***Union Carbide Corporation v. Union***

[26] (1991) 4 SCC 584.
[27] AIR 1987 SC 1086.
[28] (1868) LR 3 HL 330

ISSN: 2582-6433

of India[29], popularly known as the Bhopal settlement case, the Court emphasised corporate accountability in mass-tort situations, though its approach to compensation has been widely debated.

Subsequent cases, including ***Indian Council for Enviro-Legal Action v. Union of India*** [30], further strengthened the jurisprudence by applying the polluter-pays principle, thereby holding industries liable not only for damages but also for remediation costs. These judicial interventions complemented the legislative framework of the Factories Act, reinforcing the idea that safety in hazardous industries is not merely a statutory requirement but a constitutional necessity linked to the right to life under Article 21.[31]

Despite legal reforms, industrial accidents remain frequent in India, exemplified by the 2020 Vizag gas leak, boiler explosions in thermal plants, and recurring fires in small chemical factories, highlighting the persistent gap between law and practice. Weak enforcement, insufficient inspection staff, poor worker training, and low awareness often undermine the Factories Act, while many small and medium enterprises handling hazardous processes escape regulatory scrutiny. Key implementation challenges including limited inspection capacity, technical constraints in monitoring exposure limits, fragmented workplace coverage, and delays in legal enforcement further reduce the provisions' effectiveness, emphasizing the need for a more integrated, technology-driven, and worker-focused approach to industrial safety.

The ***Occupational Safety, Health and Working Conditions (OSH) Code, 2020,*** addresses many of these gaps by consolidating multiple labour laws into a single statutory framework.[32] It expands the coverage of hazardous processes beyond factories, mandates structured worker participation through safety committees, integrates emergency preparedness protocols, standardises inspections, and strengthens enforcement mechanisms. The Code represents a progressive shift from reactive regulation to proactive occupational safety governance, aligning India's legal framework with international best practices and ILO standards.

[29] AIR 1990 SC 273.
[30] (1996) 3 SCC 212.
[31] Francis Coralie Mullin v. Administrator, Union Territory of Delhi, AIR 1981 SC 746.
[32] Occupational Safety, Health and Working Conditions Code, 2020, Ministry of Labour and Employment, GOI

ISSN: 2582-6433

Some of the measures for the effective implementation of theses provisions are,

i. ***Strengthen Inspection and Technical Capacity:*** State and central authorities should be equipped with adequate technical personnel and resources to monitor compliance with hazardous process provisions, including measuring exposure levels and evaluating safety audits.

ii. ***Enhance Worker Awareness and Training:*** Workers must be provided continuous education and training on hazard recognition, safe handling of toxic substances, and emergency protocols, ensuring they can actively participate in safety management as envisaged under Sections 41C and 41G.

iii. ***Improve Disclosure and Transparency:*** Occupiers should adopt digital reporting and real-time disclosure systems for hazardous materials, emergency plans, and exposure records, allowing both authorities and nearby communities to stay informed.

iv. ***Integrated Enforcement with Environmental Laws:*** Occupational safety regulations should be harmonised with environmental compliance, ensuring that chemical discharges, effluent treatment, and air emissions are simultaneously monitored under labour and environmental statutes.

v. ***Leverage Technology for Safety Monitoring:*** Adoption of IoT devices, real-time sensors, and automated reporting systems can help maintain exposure limits, alert workers to hazards, and facilitate inspections.

vi. ***Periodic Review of Safety Standards:*** The Central Government should periodically revise permissible exposure limits and emergency protocols to reflect technological advancements and emerging industrial risks.

In conclusion, while Chapter IVA of the Factories Act laid the legal groundwork for hazardous process regulation, the OSH Code, 2020 provides a more comprehensive, integrated, and forward-looking framework. Effective implementation will require collective action from occupiers, workers, and regulatory authorities, ensuring that industrial growth does not compromise occupational health, worker safety, or environmental integrity. With sustained commitment, India can create hazard-resilient workplaces, minimizing industrial accidents and fostering a culture of proactive safety management.