



Labour Codes Strengthen Modern Safety and Welfare Framework for Pharma Industry

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Key Takeaways

- The Pharmaceutical sector has evolved to include **high-potency drug synthesis and advanced processes**.
- The Occupational Safety, Health and Working Conditions (OSHWC) Code, 2020 replaces fragmented legacy rules with a **unified, single cohesive safety and health governance framework**.
- New standards emphasise advanced **risk management protocols** through scientific risk assessments, biosafety systems, surveillance, and specialised medical examinations.
- **Competency-based certification**, safety committees, and transparent reporting strengthen worker readiness and build a participatory safety culture.
- The **Social Security Code, 2020** offers ESI coverage, disease recognition and a comprehensive **health-economic safety net for the pharma workforce**.

Introduction

The Indian government has taken a landmark step in labour regulation by notifying the **four consolidated Labour Codes: Occupational Safety, Health and Working Conditions Code, 2020 (OSHWC Code), Code on Social Security, 2020, Industrial Relations Code, 2020 and Code on Wages, 2019**. These Codes **rationalize 29 existing central labour laws**, ushering in a more streamlined, coherent legal framework for worker protection and compliance.

Under these reforms, the drugs and pharmaceutical sector is placed under a unified and comprehensive regulatory framework. Through the newly notified Occupational Safety, Health and Working Conditions (OSHWC) Code, 2020 and the Social Security Code, 2020, the sector now operates within strengthened safety, health, and social-security governance, supported by **capacity building and competency-led framework**. Risk-based oversight, documented safety systems, periodic medical surveillance, and an evolving inspector-cum-facilitator model collectively **promote scientific hazard management and prevention-focused governance**.

Together, these new Labour Codes lay the foundation for a **safer, smarter and prevention-driven regulatory ecosystem that strengthens the pharmaceutical sector's growth while ensuring protection for its workforce**.

The Evolving Sector

The **Drugs and Pharmaceutical sector**, notified as a **hazardous process industry under the Factories Act, 1948**, historically operated under **fragmented regulatory mechanisms** that primarily emphasized chemical hazards, industrial ventilation, and accident prevention in conventional manufacturing environments. These provisions mandated site appraisal committees, disclosure of chemical hazards, safety audits, on-site emergency planning, worker training, and specialized medical examinations.

Over time, **the pharma sector has evolved** into high-potency drug synthesis, complex chemical reactions, sterile biologics production, cytotoxic oncology compounds, vaccine manufacturing, recombinant DNA technology, biosafety labs, and solvent-intensive process units. **The existing framework created the need for a more comprehensive system capable of addressing integrated chemical-biological-radioactive-process risks, occupational exposure limits, and modern clean-room biosafety requirements.**

The Occupational Safety, Health and Working Conditions (OSHC) Code, 2020 strengthens, unifies, modernizes, and expands the existing scattered provisions into a single cohesive safety and health governance framework. The Code incorporates and **enhances the earlier hazardous process regime** supported by detailed rules and schedules, ensuring continuity of statutory protections **while broadening regulatory scope to cover emerging pharma hazards** such as biological agents, mutagenic and teratogenic compounds, AI-driven manufacturing lines, robotics, nano-material handling, and sterile barrier monitoring systems.

Strengthening Pharma Safety Standards

Risk Management & Surveillance

Under the new framework, the pharma industry operates with **advanced risk-management protocols including scientific risk assessments, chemical safety dossiers, biosafety containment strategies, process hazard analysis (PHA), exposure monitoring systems, environmental surveillance, and digital health-record systems.** **Pre-employment, periodic, post-incident, and free annual medical examinations are mandatory** for all workers handling hazardous materials to enable early detection and prevention of occupational diseases such as hepatotoxicity, reproductive disorders, respiratory sensitization, and dermatological conditions.

Compliance & Emergency Readiness

Employers benefit from single-window clearances, risk-based inspection mechanisms, centralized licensing, and digitized returns, reducing compliance complexity while strengthening accountability, workplace hygiene, and process discipline. **Emergency preparedness is reinforced** through On-Site Emergency Plans, periodic mock drills, incident command structures integration, chemical and biological spill-response systems, and occupational hygiene units. This elevates pharma industrial safety to global regulatory benchmarks, reducing downtime, accidents, and business interruption risks.

Worker Competency & Safety Culture

The OSHWC Code introduces competency-based certification for personnel handling hazardous chemical and biological substances, ensuring that trained, skilled, and medically fit workers operate clean-rooms, pressure-cycle reactors, isolators, biosafety cabinets, and microbial fermentation systems. **Mandatory accident reporting, workers' participation in safety committees, and safety-officer empowerment contribute to a transparent and participatory safety culture.**



Women's Safety Provisions

The regulatory shift also supports women's participation in modern pharma manufacturing by providing statutory safeguards, biological hazard protections for pregnant and lactating women, and safe deployment in clean-room automation environments, analytical labs, formulation units, and sterile zones.

Social Security Provisions

Parallely, **the Social Security Code, 2020 ensures universal ESI coverage, occupational disease recognition, disability compensation, dependents' benefits, and maternity protections**, creating a comprehensive health-economic safety net for the pharma workforce.

Conclusion

These reforms mark a transformative shift in India's Drugs and Pharmaceutical sector and reinforces its role as the global pharmacy, vaccine hub, and forefront biotechnology manufacturing destination. **The OSHWC Code transforms industrial governance from a reactive compliance model to a proactive prevention-driven, data-supported, worker-centered and technology-enabled safety architecture**, enhancing bio-risk control, chemical safety, clean-room sterility assurance, process safety integration, emergency readiness, workforce well-being, and global competitiveness.

Collectively, the reforms place India on a clear trajectory to ensuring safer workplaces, healthier workforce, higher productivity, reduced occupational morbidity, improved investor confidence, and world-class regulatory adherence.

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