

# ILLNESS AND ACCIDENT REPORTING IN INDUSTRY

## A Review of Statistics and Legislation in India

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*Abuse of workers' well-being at their workplace is a characteristic feature of industrial capitalism, especially backward capitalism, where workers' consciousness about health rights is submerged under the burden of immediate survival. The problems and manipulations associated with reporting (in fact gross under-reporting) of occupational accidents and diseases, the inert nature of laws pertaining to health and safety at the workplace, the collusion between the management protectors and enforcers of the laws and the medical profession; and the workers' and their unions' apathy towards this issue are highlighted by the authors who are members of the Health and Safety Unit, Bombay.*

While the deaths in the communal riots in Bhiwandi, or the casualties in Punjab, shock the country and emphasise the horror of events, the fact that every-day, at work, many are wounded and some people die, due to industrial accidents and occupational diseases (IA and OD) produces few headlines and no danger signals. The workplace is becoming a battle-field, with casualties as severe as many a modern war; and despite this genocide of so many workers, the problem of health and safety at work is far from being a front line area of social and political concern and action in India. Exploring possibilities for action thus becomes necessary.

The first step in acting on a problem is to know about it, and understand its dynamics correctly. It is important, therefore, to know the extent of IA and OD in the country, the reasons for its occurrence, and the perceptions and attitudes of the government, public bodies, industry, workers and unions to the problem.

In this article we attempt an examination of the statistics available with the government, make an estimate of accidents and diseases actually occurring and identify and discuss the reasons for their occurrence. However, in the absence of an organized health and safety movement by workers in India, the poverty of documented information on the same is inevitable. Our perceptions of the problem are thus tentative and impressionistic as they are based on a limited number of observations and interviews with workers.

### Occupational Accidents and Diseases : A Statistical Profile

Every year, in India, 3-4 lakh people are injured and about 800 of them lose their lives due to industrial accidents. Table I shows these figures for 6 years. From these figures it becomes obvious that for this period, 1126 persons were injured and 3 persons lost their lives daily, due to industrial accidents.<sup>1</sup> In Maharashtra alone, one fatal accident

occurs on the average every two days, while in Uttar Pradesh, once in three days.

Accidents cause an absence from work due to temporary disablement. For a sample year 1980, on the basis of available figures, accidents resulted in 3,322,829 (3.3 million) mandays absence from work due to disablement (ILYB 1981). Whereas 21.3 million man-days were lost due to strikes and lockouts (industrial disputes) during this period. (PBLs, 1982, 1983)

This means that there is a daily absenteeism of 11,076 workers due to industrial accidents, and on an average it takes 10 days for a person to recover from his accident. And the above figures pertain only to industrial accidents, those occurring in factories, excluding those workplaces like ports and docks, Railways and Mines. Table II shows casualties occurring to employees in Mines, Railways and Ports and Docks. Including these casualties makes the picture far more alarming raising the daily toll to almost 5 fatalities and 1228 injuries.<sup>2</sup>

Certain states have a larger incidence of accidents. Six states Maharashtra, West Bengal, Gujarat, Madhya Pradesh, Tamil Nadu and Uttar Pradesh, with 62.5% of total factory employment, accounted for over 80% of the injuries. Rather than conclude that industries in these states are more hazardous, the statistics probably reflect a relatively better rate of reporting. But it is clear, however, that injuries themselves are on the rise. In Maharashtra, which today has the highest share of injuries, while employment rose by 40% during 1961 to 1978, injuries rose by over 100% (Nair, 1982).

Different industries have different rates of accidents, some industries being inherently more hazardous. Five industries, textiles, basic metal and metal products, machinery (manufacture), chemicals and transport equipment, with just about 60% of the total factory employment, account for over 80% of the

injuries. Textiles, the oldest industry in the country, with 24% of the total employment has the highest share (54%) of the injuries. In fact, injuries in the textile industry have increased by 626% between 1951 and 1978, while in that period, employment has grown by only 38% (Nair, 1982).

Nair's article shows that both fatal and non-fatal industrial accidents have been rising over the last 30 years. Fatal injuries rose by 225% from 248 in 1950 to 806 in 1980 and non-fatal, even more sharply by 393% from 76,000 in 1950 to more than 355,000 in 1980. He argues further that this cannot be explained as a result of industrial expansion alone, as accidents have increased relative to the rise in persons employed and increase in the number of factories. While the number of factories has increased by 388% from 32,000 in 1951 to 125,000 in 1978 average daily employment has risen by only 120% from 3000,000 in 1950 to 6500,000 in 1978 (Nair, 1982).

A comparison of rates of accidents in India and other countries is also revealing. During 1976, the number of accidents per 100 workers employed in all manufacturing industries was India (60.2) UK (34.8) and USA (24.74) (CLI)

While some statistical experts challenge the validity of the above due to different methods for reporting accidents in different countries, comparison of fatal accident rates reveals the same trend. The figures of number of fatal injuries per million man hours worked during 1979 and 1980 are (PBLs, 1982, 1983)

	1979	1980
USA	0.03	—
UK	0.03	0.03
Japan	0.02	0.01
Yugoslavia	0.07	0.08
India	0.15	0.15

Thus accident rates in India are far more than many industrialised countries.

This alarming magnitude of accidents is according to various experts, however, a gross under-estimation to say the least, in view of the numerous cases that go unreported.

### Occupational Diseases :

Accidents are only one of the industrial killers. Occupational diseases are another one and compared to accidents are far more insidious in their onset and therefore often just not perceptible. And yet, in terms of damage to health, they are as fearsome, perhaps more so.

Turning to the disease chart, Table III, shows the number of cases of occupational diseases reported all over India for the period from 1960 (last year for which statistics are available). 639 cases have been reported during these 21 years giving an average of a paltry 30 cases a year.

Table IV shows the break-up of the 98 cases of diseases reported during the period 1976 to 1980 (detailed statistics only available for this period). Out of 22 types of occupational diseases notifiable, only 11 of these have been reported during this period. Of those un-reported are such well known killers like Byssinosis, Brownlung which all textile workers are prone to, and Carbon disulphide poisoning (in rayon plants) which, as Padmanabhan's study (Padmanabham, 1983) "the Gas Chamber of the Chambal" showed, affected many workers. Noise induced hearing loss, one of the commonest and most widespread disorder has also gone unreported. And among the reported diseases only one case of asbestosis was reported in five years, when during this very period, an American asbestos company John-Mansville went bankrupt due to successful compensation suits filed against it by its workers. (Castleman and Vera, 1982).

The geographical spread of these cases indicates that out of the 22 states and Union territories, only 8 states report any cases at all. There are no cases from industrially advanced states like Tamil Nadu and Andhra or from Madhya Pradesh, Uttar Pradesh and Kerala.

Table V shows the number of cases reported under the Workman's Compensation Act 1923 for the years 1966 to 1979. A total of 1159 cases were reported during these 14 years, an average of 83 cases reported a year. For the 10 years for which break-up is available, of the 710 cases reported, 303 people died and 395 were permanently disabled. These cases cover only five states out of the 22 states in the country, implying that no compensation for OD had been paid during this 14 year period in states like Maharashtra, West Bengal, Tamil Nadu or Uttar Pradesh. Of the 6 states from which there are reports, Kerala and Orissa report in 1 year only, Madhya Pradesh twice, Andhra Pradesh in 7 years. Karnataka is the only state reporting every year. In fact 90 percent of the OD reports are from Karnataka.

There are 22 types of diseases which are compensable under the Workman's Compensation Act 1923, for the period in question, though this has been raised to 34 since July 1984. For the years 1972 to 1980, during which period detailed statistics are



available, all 642 cases reported are that of silicosis. 638 of them are from Karnataka. The other 21 diseases therefore, have never been reported or compensated.

Table VI shows the incidence of various notifiable and compensable diseases identified in the Indian environment by research studies, and indicates that 6% to 44% of workers under study are affected by various OD. To overcome the complete absence of data on national incidence of diseases an attempt is made to estimate the same from the studies done. Even conservative estimates of a few diseases from a few workplaces reveal that thousands of workers have been affected. For one disease in one industry only (silicosis in potteries) we get an estimate of 1845 cases, which is itself more than the total number of cases, reported for all diseases (1798) under both, the Factories, and Workmen's compensation acts for the relevant periods under study.

Let us consider the cases of asbestosis, lead poisoning and byssinosis - 3 dreaded and rampant diseases separately.

**Asbestosis :** Our estimates indicate about 1500 workers suffer from this disease nationally among those working in manufacture of asbestos cement and its products alone. Thus, workers handling finished products in other locations are also affected by disease, for which no estimate has been made yet. Only one case is reported to date under the Factories Act. In the West, because of the campaign by workers, supported by the general public, detection of asbestosis cases have increased and working conditions have been improved and yet in 1978 US Health authorities estimated 5000 new cases of asbestosis due to past exposure would be detected annually till the end of this century. (Audyogik Jeevan 5 March, 1982)

**Lead Poisoning :** Our estimates indicate over 500 workers to be suffering from this disease nationally in one industry alone-storage battery manufacture (Chakravarti and Dhar, 1981) Since the industry uses 40% of the total consumption of lead in India, the total figure for lead poisoning itself are likely to be much higher. Only 10 cases have been reported from Bihar, while not a single case has been reported from any of the factories or states where the study (Table VI) was carried out.

**Byssinosis:** Our estimates reveal that 37 thousand people are affected by this disease from cotton textile manufacture in the organised sector alone. Those working in cotton ginning, power looms and

other types of textiles are excluded from this estimate. Their inclusion would raise the figure still higher and yet not a single case of byssinosis has ever been reported.

All these are but a few cases of positive 'death on the job' the proportion and intensity of which is reaching astronomical dimensions.

### Why Does This Happen ?

The decapitated worker that emerges from impoverished and dehumanising work and living conditions is the legacy that industrial capitalism has handed down to us. That the wheels of such a system are propelled by profit, needs no further elaboration. In its competitive bid for survival and capital accumulation, newer production processes and products are introduced with 'cost-criteria, gaining an edge over 'health, safety and worker welfare criteria.' The increasing monetary stress, fatigue, decreased creativity, skill and control of newer work processes are evidences of the above. The numerous toxic-chemical agents, biological agents (fungi, bacteria, parasites), physical agents (noise, extreme temperatures and humidity, radiation, abnormal airpressure, weightlifting, repeated motions, shocks and vibrations) and mechanical agents, which are callously introduced at the workplace lead to further impoverishment of a worker's life. All this again is consistent with the principle of generalized commodity production, where the worker is perceived as a commodity and his capacity to labour commanding a price. Hence in a labour surplus capitalist economy, any depreciation in the health and wellbeing of a worker, arising out of his work and living conditions and leading to a drop in his efficiency and productivity at work, may be overcome by a replacement from the industrial reserve army.

### Attitudes to Health and safety : The State Workers Unions and Management

It is a paradox that though the Directive Principles of State Policy guarantee the health, safety and well-being (including occupational health and safety) to every citizen, government's attitude to the problem has been callous. There is no well established Industrial Health Service Agency for occupational diseases in India. While the objectives and policy measures of government health programmes have been geared towards control and eradication of communicable diseases, curative and preventive health services in rural areas via Primary Health Centres, training for medical staff, government's

treatment of occupational Health and safety has been stepmotherly. What is also worth noting is that very little emphasis is accorded to occupational health and safety in the medical syllabus and in the training of medical personnel.

The State's piecemeal treatment of the problem of occupational Health and Safety is further reflected in four pieces of legislation allegedly designed to ensure the health and wellbeing of the worker.

The law regarding health and safety of workers in India, like the law in any other country must be viewed from three angles :

(a) The underlying principles behind the whole gamut of health and safety laws (In India this is achieved through the Employer's Liability Act, 1926)

(b) A set of rules defining duties meant to be imposed so as to reduce the risks i. e. the preventive angle (The Factories Act, 1948, The Mines Act etc.)

(c) The instrument to secure forms of compensation for the employee in which the rules governing liability are formulated and interpreted largely after the event, to determine the fault and then to align damages or other forms of compensation, according to the measure of the injury, i. e. the curative aspect. (This is represented by the Employer's State Insurance Act, 1958 - ESI Act and the Workmen's Compensation Act, 1923). But ultimately, law is, what law does, and hence it becomes extremely relevant to examine these laws not only with respect to their scope and formulation, but also with respect to the extent and nature of their implementation. It is also necessary to determine the governing ideology behind these laws, the extent to which they protect the worker and changes that need to be made in these laws.

**The Employer's Liability Act 1926 :** Prior to 1926, the governing ideology, as reflected in laws, or lack of them, was that whenever an employee, a natural autonomous individual, chooses to enter into a contract of employment with an employer - another natural autonomous individual - the employee is presumed to accept all the risks involved in the employment. The natural consequence was that an employer could not be held liable for any injury suffered by the employee even if it was due to the horrendous and thoroughly unhygienic working conditions. A further underlying principle was that in case the contract of employment imposed some liability upon the employer, he could avoid it, if the injury caused had resulted from a co-

worker's or another person's negligence. This is what in legal parlance was known as the doctrine of common employment. The Employer's Liability Act abolished both these principles establishing a new and progressive principle that no employee could be presumed to have accepted any risk involved in any employment. The Act does not stop here but further prohibits any Agreement which puts even partial responsibility of an employment risk on the worker. The act also abolished the concept of common employment. The resulting consequence of this Act quite simply is that the risks involved in Employment are altogether the employer's responsibility and neither a contrary agreement with the workmen nor the negligence of a co-workman can change this position.

Though the Act as such is a radical departure from the earlier concept, it still leaves much to be desired. It is curative in nature, as it lays down the principles regarding the remedies available to the workers subsequent to the infirmity or disease but does not lay down any principle regarding the prevention of unsafe working condition. Guarantee of healthy working condition is not even laid down as a principle.

**The Factories Act, 1948 :** This is the only act of general applicability which is preventive in nature. It allegedly provides for positive action to be taken by the employer to ensure a safe place of work. The act however remains a paper tiger. It provides various facilities and protections to the workers at the shopfloor without affording either the worker or the Unions a right to demand the same. The workers cannot directly take a factory owner to court even if he violates all the provisions of the act. The grievances are funnelled through the Inspector of Factories. This a classic example of taking away with the left hand what is given by the right. The act and the rules which run into 300 pages or more do not contain guidelines for procedures in which grievances may be brought to the fore. There is no mention whatsoever as to how workers are supposed to demand what is due to them.

The officially recorded statistics on occupational accidents (O.A's) are based on accident reports received under the Factories Act, 1948 by the factories inspectorate, while that of occupational disease (O.D's) are based on reports received under the Workmen's Compensation Act, 1923 and the Factories Act, 1948.

The introduction to the Section on O. D. in the Labour Year Book (Compiled by the Labour Bureau,



Simla), reproduced with monotonous regularity every year, notes in a tone of bureaucratic statistician's irony- "The available information regarding the incidence of O.D's is rather scanty". Horrifying though the figures for accidents are (see Tables I and II), these statistics present a picture far from the true one. The reporting of OD's has actually declined over the years while 267 cases were reported during the five year period 1960-64, only 98 cases were reported during the five year period 1976-80 (See Table III). This occurs despite the fact that the Factories Act, 1948 lists 22 O. D's which are notifiable under Section 89, making it obligatory for the factory managements to furnish information of O.D's contracted by their employees to the Chief Inspector of Factories (CIF). This section of the Act also requires any medical practitioner attending on persons suffering from such cases to the CIF concerned. However, the above mentioned facts do not represent a decline in the incidence of O.D's but rather the increased inefficiency, ineffectiveness and corruption among those responsible for reporting cases and implementing the Act, right from the doctors to factory managements and Inspectors.

The character of the Factory Inspectorate and theESIS is best exemplified by the stand taken in the case of Rajagopal, a worker from the Asbestos Company, Hindustan Ferodo, a subsidiary of the British Multinational Turner and Newall (CED, 1983). While Rajagopal was clearly found to be suffering from asbestosis by Sion Hospital, Bombay, ESI and various private practitioners found him to be suffering from Asthma while the verdict of the Medical Inspector of Factories (MIF) Maharashtra was that he was suffering from "acute bronchitis" (Behara, 1983). When a writ petition was filed in the Bombay Highcourt, he only obtained the additional relief of a freshly formed ESI Medical Board, not even composed of specialists in OD's, which gave a verdict of 'Chronic Bronchitis' (CED, 1983), and this during a period when a research study of CLI (See Table VI) showed a 36.5% Percent incidence of asbestosis.

The Directorate General of Factory Advisory Services (DGFAS) says "Many of the Factory Inspectorates are not in a position to effectively discharge their functions". This contention bears truth.

The Medical Inspector of Factories (MIF) and Certifying Surgoen (CS) are two authorities under the Factories Act charged with the responsibility of monitoring occupational health, among other functions. In particular they are responsible for medically exam-

ining workers, working in 20 scheduled hazardous operations - approximately corresponding to work places where workers may contact the notifiable diseases.

Of the 26 States and Union Territories for which statistic (1980-81) are available, 10 have no MIF at all while the remaining 16 have only 29 MIF'S totally. (Industrial Safety Chronicle, 1984). Of the 21 States and Union Territories for which figures (1980 81) are available, 12 have no CS's at all, while the remaining 9 have 15 CS's. (ILYB, 1982). While understaffing clearly indicates government's apathy, considering the technical incompetence and inefficiency of these authorities, one is uncertain about what purposes the mere appointment of additional inspectors will serve. Furthermore, the meagre remuneration too inhibits the incentive to honest work.

It is no wonder then that in 1979 out of 1,22,931 registered factories 79,258, i.e. 64.47 percent were inspected. (ILYB, 1982)

Again the channels for the Factory Inspector to come to know of infringements like underreporting are non-existent since workers or unions do not have any statutory right or responsibility to report accidents. Where the Factory/Medical Inspector come to know of such cases informally, there are more lucrative methods of tackling the situation. This is evidenced by the fact that only a fraction of the anyway very few prosecutions are about under-reporting of CD and OA (See Table VII).

There are those factories too who submit no annual returns at all (about 35% according to one estimate) and therefore do not report OA's or OD's. (ILYB, 1982) Here too prosecutions are unheard of. Apart from this, the penalties provided for erring employers are so meagre, that even the employers who are brought to book continue to blatantly flout the law. Not only does the implementation of the Factories Act leave much to be desired, its scope and formulation too is ridden with infirmities.

A factory as defined under the Act includes those places employing 10 or more workers and having a manufacturing process with the use of power, or places employing 20 or more workers without power. Thus with the large extent of sub-contracting in India, there are an increasing number of small scale industries which do not fall within the purview of the Act. They are not statutorily bound to comply with the act and therefore do not report OAs or ODs. The construction and Transport Industries too do not report OAs under the Act, though they are

the most hazardous and accident prone. The definition of a "factory" thus excludes a major portion of the working class in India from the scope of the Act.

The act extensively deals with cleanliness, lighting, protection from dust, fumes etc. But in most of these categories the reasonably practical measures to be taken are left to the management's discretion. This extends even to the fencing of machinery, where in spite of numerous detailed provisions being laid down it is the management that ultimately decides what is practicable and reasonably safe.

The Act also lists 22 diseases, now raised to 34, since July 1984, as notifiable diseases. The diagnosis of a notifiable disease has to be reported to the concerned authority who must ideally act immediately. However, the act provides only for curative measures. The worker has to wait till he actually and indisputably contracts a disease, which at times may even be fatal. Nothing can be done if merely symptoms of the disease, howsoever strong, are observed. Again numerous diseases, like skin diseases are excluded from the schedule of notifiable diseases. Problems like strain, backache and the like are not taken into account as they are not considered to be serious occupational hazards.

Furthermore, the State Governments are invested under Section 90 of the Factories Act, with wide powers to direct an enquiry into any case where a notifiable disease has been or is suspected to have been contracted in a factory and "may, if it thinks fit, publish, this report or extracts from it." These powers have rarely been exercised and when they have, the Government taking advantage of the 'may' in the provision, has "thought it fit" to let such reports gather dust on shelves.

Thus due to the way the law is structured and the ineffective structure existing for its implementation, it remains a toothless monster, guaranteeing little or no protection to a worker's health and safety.

**The Workman's Compensation Act, 1923:** This Act is designed to provide compensation for OA's and OD'S.

That labour power in a capitalist society is a commodity is most sharply evident in the Workmen's Compensation Act. A table in the act stipulates a measured sum of money to be paid for various injuries. The human body is clinically divided into various organs and sections of organs and predetermined amount is provided as compensation for the loss of each section (See. Table VIII).

This may appear to be a detailed and minute synthetic analysis of the loss of earning capacity of a workman. But this analysis indicates a totally dehumanising and utilitarian approach towards the workman. Each small tip and portion of his body is valued purely in monetary terms. Each part of his body contributes a stipulated amount to his earning which was to be equally compensated if he loses that part. The worker is thus viewed not as a human being but as a factor of production. In the event of an accident, which ideally should never occur, the employer must be compelled to provide alternate employment to the worker in addition to monetary compensation. Further the employer must be made penally liable for every accident that occurs. But above all there must be a stringent enforcement of safety norms. These suggestions arise from the content and manner in which the Workman's Compensation Act is implemented, because, under the present framework, the labour power of a worker is considered only as his means to economic survival and not as a life activity which distinguishes a human being from other living beings. Even with respect to the monetary aspect, all workers are considered together regardless of the peculiar life situation of individual workers. Monetary compensation is paid irrespective of their family needs, nature of job, promotional prospects etc.

Again a workman is entitled to compensation only if he is bedridden for a minimum of three days leaving numerous other injuries which affect the worker during the course of employment beyond the pale of this Act. The thinking behind this provision appears to suggest that a workman is injured only if he is unable to produce commodities; on the other hand, if the injury does not hamper the production of commodities, it is no injury.

Under this Act an employer is not held responsible or liable if a worker wilfully removes his personal protective equipment or any other safety mechanism provided. This is of special importance in Indian Factories, where in a few factories that provide safety equipment the equipment is often of a sub standard quality or unfit for use. It is often even found to cause further occupational hazards-for instance masks provided are often times so clumsily and badly designed that within no time of wearing them, the worker begins feeling uncomfortable or breathless.

Again the reportings of OAs and ODs for compensation under this Act is grossly short of actual occurrences. In 1979, 91 cases of OD's were



reported under this Act. They were all silicosis, cases from Karnataka. Two of the 91 workers who died as a result were compensated with Rs. 8000 each, while the other 89 workers who were permanently disabled were paid Rs. 1890 each. (ILYB, 1982)

This serious under-reporting is once more indicative of the lethargy, incompetence, and inadequacy of the enforcement agency, the corrupt collusion between factory managements and the lacunae in channels for collection and compilation of data and the definition of injury in the Act.

**The Employees State Insurance Act :** The Act provides an employee with sickness, maternity, disability, benefits and the like. It applies to factories using power and employing 20 or more workers. Even in these factories, it covers only those employees earning less than Rs. 1000/- per month. The Act does not apply to seasonal factories and of the factories that remain, the Government is vested with the power to grant exemptions. Thus like the Factories Act, it excludes a large section of the workforce from its purview.

An Employee State Insurance Board, acting like 'the big brother', is formed under the Act. A Standing Committee and other local boards are further constituted under this. The Board consists of 40 members five of which are surprisingly worker representatives. This is comprehensible in view of the fact that they are not elected even by a farcial contest, but nominated by the Central Government. The 40 members include two medical persons as well, nominated by the Central Government; so much for an act that deals purely with medical aspects.

The Act provides for a joint contribution by the employee to be paid into a common fund. All employees governed by the ESI act must be compulsorily insured. Four types of benefits are available to them viz (1) maternity benefit, (2) disablement benefit (injury or disease in the course of employment), (3) dependants benefit (in case of death of an employee due to injury in the course of employment), and (4) medical and funeral benefit. The funeral benefit of course cannot exceed Rs. 100/-.

These benefits however cannot be availed of unless an employee has contributed for atleast 13 months to the common fund. In the event of an injury in the course of employment, occurring within 13 months, for instance, of his employment, he is not entitled to any benefits under the Act.

The Corporation is empowered to demand more money from an employer if it believes that an unhy-

gienic factory environment or violation of health regulations is raising the incidence of ill-health to a proportion higher than what it should be. It, ofcourse, has no right to enforce the stipulated health and safety norms. Again medical benefits which are paid in cash require indisputable proof of illness. Evidence beyond a doctor's certificate is needed to establish that a worker was ill.

Also benefits under different heads cannot be claimed simultaneously. What this implies is that if a woman on maternity leave falls ill, she has to choose between the maternity benefit or the sickness benefit. She cannot encash both. Further, a worker entitled to benefits under this Act, cannot claim them under any other Act, including the Workmen's Compensation Act. Besides, prolonged illness of a worker may result in his employer dispensing with him lock, stock and barrel.

In the case of a dispute, various courts have been constituted under this Act. Red tape, nepotism and bureaucratic delays are all that the functioning of these courts offer to employees.

Finally the ESI Scheme functions with little or no infrastructure to provide even basic medical treatment. Most workers thus regard it as good for obtaining a bogus medical certificate but useless to cure any illness, let alone occupational disease. A perusal of these acts reveals that they do not even perform the role of paper tigers. A bare reading of them suffices to indicate (a) that they exclude a major portion or segment of the workforce from their scope (b) Workmen are not granted sufficient rights to enforce the privileges occurring to them, (c) the privileges themselves are few and far between (d) the personnel in the enforcement department are not socially committed, nor are they technically equipped or numerically adequate to grapple with problems.

Furthermore, corruption and a management-oriented ideology that permeates the enforcement agency, prevents the rights and privileges of the workers from becoming a reality. Within the management frame of thought, a worker is perceived as a machine who must keep on functioning. In a country like India where the supply of such a 'machine' outstrips demand, the enforcement agency does not care a straw to ensure the functioning of 'the Machine' nor does it care for its breakdown.

To conclude one may assert that though the laws are far from adequate, there are certain rights and

privileges granted to a workman, which if enforced can help ameliorate their situation. The irresistible conclusion is that in a country like India the struggle for enforcement of these rights is as important as the struggle for better laws.

Let us now turn our attention to workers and management who are directly concerned with the problems of occupational health and safety.

### Workers

Workers' perceptions and responses to the problem of occupational health and safety is noteworthy. Consistent with the notion that oppressed groups adopt the ideological formats and practices of the oppressor, workers and unions too, have internalised Management concepts and values concerning health and safety. Health is viewed by them as the absence of disease rather than general physical fitness and well-being. It is perceived as a private issue dependent on each individual being's physiological and psychological makeup and the unique ways in which they respond to disease-causing agents like germs and microbes. The vehement emphasis by management on a worker's unsafe action as the primary cause for workplace accidents also individualises the issue of safety. Cure, within this framework, for the injury or the malfunctioning organism is supposed to restore health. This too becomes privatised. Again health and health services are not recognized as rights but commodities whose availability depends on the individual's purchasing power. All this only serves to mask the social and political roots of health, shifting the onus of health and safety to the individual worker. Collective struggle by workers for better health and safety conditions, facilitating greater worker control over the work process and thus upsetting the balance of power between labour and capital within the overall political struggle is thus curbed.

Worker's internalisation of such a perspective cannot be merely attributed to a management conspiracy. It serves to also create for workers possibilities and guidelines for human action giving rise either to an attitude of peace and acceptance or to struggle against existing health and safety conditions. Workers response to occupational health and safety thus covers a wide spectrum ranging from stark ignorance to powerlessness, apathy, individualism and consumerism rising consciousness and a desire to struggle.

In a third world country like India, the combined effect of a dust-infested work environment together with poverty, malnutrition, insanitary living conditions, environmental pollution, alcoholism, smoking

and drug-intake, brings about a synergistic effect, causing so called classical occupational disease like pneumoconiosis in coal miners and asbestos workers, byssinosis in cotton textile workers and bagassiosis in sugar-cane crushers. A worker thus often finds it difficult to discern between ill-health caused due to poor living conditions and his occupational environment. For example, at a recent workshop on occupational health in Bombay, the comment of a socially conscious trade union activist working in a Kanpur textile mill is telling "We definitely feel uncomfortable working amidst cotton fibre and high relative humidity. Many of us have T.B., which we always assumed was due to our living in slums and poor living standards. But only after this doctor here told us of byssinosis do we know that it is the cotton fibre which is disabling us".

Again certain occupational diseases like cancer are slow and insidious in their onset, and manifest themselves after a long time, often towards the end of the worker's career span or after he retires. He thus remains unaware of the damage done to him in the course of his work, eliminating all possibilities of struggle.

The worker is often ill-informed or ignorant of the products and materials he handles and hence unaware of the impact it is likely to have on his health. Even if he is mildly conscious that his work environment is responsible for the deterioration of his health, he lacks precise knowledge regarding the specific nature and extent of damage to his health or the medical remedies he can resort to. He thus, for instance, succumbs to milk or poly-vitamin prescriptions by managements as a panacea for respiratory problems caused by inhalation of zinc fumes and dust. Due to his own backwardness or his preemption from technical and engineering know-how regarding industrial health and safety, he is not only unaware of the precise health and safety, status of his work place but also the available pollution control measures, possible safety mechanisms and safer substitute materials that management can very well introduce. He thus swallows the management bait, particularly that advocated by the chemical industry management that work hazards and pollution is inevitable and bearing with one's lot is the only alternative.

Again in the wake of unemployment and tight economic constraints, acquiring and maintaining a job is of foremost importance to a worker, regardless of health hazards at work, even if he is aware of them.



In the much exploited unorganised sector, the demand for unionisation and higher wages assumes precedence over health and safety. The fear of termination of services in the event of being declared medically unfit by the medical inspector of factories often inhibits workers from demanding medical examinations or raising health demands.

The organised and better paid workers though in a more objective position to take up health and safety issue, have by and large failed to do so. If an incentive scheme (productivity linked wage or piece rate) is under operation the workers may themselves not report minor injuries and just continue working, sometimes even without first-aid. If there are group incentives for production or even safety (award for million man-hours worked without an accident), group anxiety to acquire the bonus may pressurise the injured worker not to report the accident but to resume work as soon as possible after first-aid. Health and safety is thus preempted from being taken up as an issue.

Workers also fear plant shut-downs to rectify hazardous conditions in the work environment. This inevitably implies a loss of wages and a cut in overtime payment if any. They thus refrain from raising health and safety demands.

Finally, it is only when facilities consequent on an accident (i. e. paid special leave and compensation for disablement) are significant financially that workers make a particular effort to at least report accidents, however small. In most companies, however, accident prevention facilities are not particularly good.

For the above reasons a number of health hazards never enter the official records of even the factory, in the first place, let alone being raised as an issue by workers.

Health and safety action has however been observed in certain dust prone chemical and engineering industries because of the high and severe incidence of diseases like asbestosis, silicosis and lead-poisoning or serious injuries and deaths resulting from work place accidents. These occurrences have shaken workers into realising the gravity of the situation and the danger to their health and lives.

The workers have resorted to an aggressive propaganda on a specific incident and the hazardous work environment through posters, pamphlets, news-items, gate-meeting and personal talks

with other workers. The Unions have raised demands for medical examination of all workers, inspection and assessment of work environment and the right to obtain medical and factory assessment reports. Pressure has also been put on the management to control pollution and provide workers with personal protective equipment like respirators, masks, goggles, gloves, overalls and safety boots. Safety guards and fencing for machines have also been demanded. Workers have also pressurised the management to set up a Safety division and safety committees within the factory. Even in these industries where health and safety has been taken up as a struggle issue, it has often been translated into a monetary demand in the form of compensation or a hazard allowance. It is interesting to observe that workers in an engineering industry did not use the gloves and protective equipment provided. They sold good quality protective footwear or wore it out of the work environment. Safety guards were removed from machines to complete production quotas in shorter periods and escape from work place. This is symptomatic of the discomfort caused by protective equipment through the long hours of work, lack of adequate awareness regarding safety, habituation to sparse clothing and working in slippers, the prestige and status of using shoes out of work, and an alienation, monotony and boredom which preempts getting away from work as soon as possible even at the risk of one's safety.

Workers and their unions are thus permeated by the corporate culture. They are steeped in individualism, economism, consumerism and bureaucracy. Workers and their unions perceive man as an 'economic man' rather than envisaging the total intellectual, emotional, political and socio-cultural development of the human being. They have also internalised management attitudes and values to health and safety. This coupled with the deteriorating economic situation has prompted unions into preoccupation with day to day problems of workers like wages, leave, reinstatement and the like. Traditional unions have failed to take stock of technological and work process changes that bring in their train new problems and open up new areas of demands. Even if unions are aware of this, a tear from economic demands to health and safety issues would involve demands like change in plant outlay, use of substitute products, installation of safety devices and pollution control equipment. This would mean a greater control over the labour process, essentially a political demand which managements would fight tooth and nail, against

unions who would refrain from stamping too hard on management's toes. Defeat on such demands or neglect of every day problems of workers who have not yet perceived health and safety as an issue could mean loss of workers support or losing out to a rival union. Unions would refrain from this risk.

Health and safety action therefore wherever initiated has been sporadic and timely, coinciding with the occurrence of the catastrophe and petering out with the meeting of demands. It has not yet become a consistent and cohesive class-based movement.

### Management

Management's response to the problem of occupational health and safety is broadly governed by cost considerations and the strength of the union. Action has spanned from flagrant abuse of health and safety stipulations of the Factories Act, collusion with officials to punitive measures against workers, to sophisticated ideological and institutional co-optation, to progressive measures which work in the interests of management and appease workers.

Non-registration of factories, failure to submit returns and records to the factory inspectorate, flouting of TLV limits for dust, toxic chemicals, and physical agents, absence of appropriate pollution control measures, use of hazardous materials and obsolete machines, non-provision or provision of substandard personal protective equipment, absence of safety guards and fencing for machines, lack of proper canteen, sanitation and clean drinking water facilities, poor plant layout and bad housekeeping, absence of periodical medical check-ups for workers or regular inspection of factories are but a few open transgressions of the law. This is indeed effected with the active connivance of the factory inspectorate officials through personal and political favours and backdoor cash receipts.

Furthermore, management withholds from workers information regarding the process of production, materials used in production and their effects on health, number of accidents, hazardous locations, pollution control records, toxicity levels, investigative reports of accidents, factory assessment and medical reports and recommendations for improvements made by the factory inspectorate and government agencies.

Health and safety demands are often met with management's emphasis on the inevitability of

works hazards. collusion with medical personnel to give inaccurate medical reports or refrain from attributing a worker's ill health to his occupational environment is yet one more method of containing the workers. placating ignorant workers with medicaments and beverages, or monetizing the demand with a paltry compensation or hazard allowance and cash incentives for accident-free records are often resorted to by managements. Transfers, plant shutdowns, or retrenchment of workers on medical grounds after a medical examination is an oft used preventive measure. Isolationist tactics like transfer of workers, keeping worker off from the plant premises by sponsoring them for out of plant training courses in health and safety, preventing workers from entering other plants during rest intervals or lunch breaks to discuss problems on health and safety is another means employed to thwart worker initiative.

A 1976 amendment to the Factories Act 1948, provides for the appointment of a safety officer in factories employing 1000 workers or more. In Maharashtra, out of 224 undertakings required to appoint safety officers, only 97 officers have been appointed to date. This amendment has brought about a shift in management perspective by incorporating safety in to the structure of the Corporation, thus avoiding too much interaction with outside authorities.

The safety departments which by and large consist of safety officers, assistant safety officers, assistant safety engineers, and other safety assistants are empowered to receive accident reports, investigate causes for accidents and prescribe corrective action. Often these departments lack sufficient and competent personnel. Although the inspection rounds and the issuing out of safety equipment are by and large the only occasions for contact with the workers, safety officers are often prevented from going to the shop floor and communicating with workers. They rarely record workers' complaints during their infrequent rounds. Nor do they investigate specific complaints of workers and unions.

Reporting of accidents occurs in two phases. The first is from the worker and his supervisor to the management. The second is the reporting of the accident by the factory to the FI and the ESIS. Suppression of reports takes place at both levels as we shall see.

When a worker is injured within the factory, he gets first aid from the dispensary or the first aid centre on the premises. A written report of the



accident is sent to the authority in the factory assigned the task of collecting reports i.e. fire office, personnel or Safety department where it exists.

Certain non-external injuries like back-aches or sprains may not even be complained of by the worker, and even when he obtains first-aid and fills up a report, this may not be accepted, the authorities questioning the existence of the injury as well as whether it happened at work. Where the injury is minor supervisors may not allow the workers to leave the shop. The supervisor may even refrain from reporting an accident if he is likely to be hauled up. Often first-aid may be provided in the shop and the worker asked to continue his work. In all such cases accidents are not even reported and hence not recorded. Incentive schemes, group incentives for production and safety may often prevent a worker from reporting injuries. Though in most companies accident benefits are rare, the existence of these may prompt reporting. A number of work place accidents, therefore, never enter official factory records.

On the next stage too, i. e. reporting of accidents to the Factory Inspector and ESI, there is suppression of reports, both by just not reporting certain cases, as well as by toning down the seriousness of the injury or the event, thus falsifying the report. This happens because managements are keen not to have absenteeism, to avoid payment for compensation as well as avoid prosecutions for negligence under various acts; or for even more prosaic reasons like keeping down accident rates to win national or international awards for safety performance. In the absence of statutory rights of workers to report accidents, as well as the non-submission of annual returns by managements, reportage of accidents and hence prosecutions on the same are unheard of. If the Factory Inspector is aware of the occurrence of accidents more often than not he is silenced with bribes of various kinds.

Then at the time of compilation of the OA statistics, only 'reportable' accidents (these resulting in more than 2 days disablement) are included and according to figures for one engineering company, only about 1 accident in 10 is "reportable". Thus millions of minor nicks and cuts, burns, foreign particles in eye, lumps and sprains, with less than 2 days disablement, though reported in the factory go unrecorded in the official statistics.

There is an even more severe under-reporting of diseases as compared to accidents, the causes

lying both in the detection and diagnosis of causes. Accident injuries are directly perceptible and their existence cannot be denied. Secondly, their instantaneous occurrence clearly ascertains the cause and effect relationship between accident injuries and work. On the other hand, diseases are usually systematic malfunctioning, detection of which is time-consuming, the existence of which can be doubted. Since they are slow acting, the occupational origin of a disease, or when this is accepted, its link with a particular work place can easily be denied. Government authorities point out lack of expertise as a cause. This again has its origin in the lack of emphasis on study of diagnosis and treatment of OD in medical education, and in that most doctors, in any case, lack clinical experience of detection of such cases.

As regards reporting of cases to the FI, the responsibility lies with the factory managements and doctors. Factory managements have no interest in detecting OD's and would be keen that such information does not reach the FI or their workers. Medical practitioners are statutorily required to report cases of occupational diseases they detect. The paltry penalty for non-compliance extending to a maximum of Rs 50/- proves no disincentive to any doctor, though needless to say no such penalty has ever been awarded. With those being the agencies statutorily responsible for reporting, it is no surprise that so few cases are reported.

With certain categories of medical practitioners other considerations operate. Doctors employed by factory management function in the interest of managements, and even if cases are detected these are only disclosed in confidential memo to top managements. In such case, particularly in larger companies, hazardous operations may be transferred out to the small scale sector. Other Industrial health or medical consultants are reluctant to certify any illness as occupational diseases, since this may antagonise the company involved and result in his removal from the companies approved panel of doctors and consequent loss of business.

- The example of Rashtriya Chemical Fertilizers (RCF) a Public Sector Chemical concern, for instance, raises questions on 'management-medical collusion'. A medical examination in 1983, of 113 of workers of the nitric Acid plant by Dr. S R, Kamat, chest disease expert of KEM Hospital, revealed that 51% of these workers had severe basal scars on their lungs. Dr. Kamat attributed this probably to the occupational environment. A subsequent examin-

nation of more than 600 workers from different plants in the RCF by Dr. Kothari of Bombay Hospital (Rao and Kothari) 1984 showed that only 10 workers had damaged lungs. There was no trace of carboxyhaemoglobin and methaemoglobin in the blood samples and strangely the damage to the 10 workers was attributed due to smoking. This is in glaring contradiction to the previous report. Further Dr. Kothari was a person of management's choice, the latter having succeeded in circumventing the union's demand of a medical panel chosen by both workers and management.

### **Safety Programmes of the Safety Department**

The safety programmes initiated by the Safety Department stress on unsafe worker action as the cause of accidents. Worker carelessness, lack of precaution, and dare-devil tactics attributed to workers are said to be the root to accident causation. In view of raising safety consciousness, safety schemes for workers are actively advocated, thus absolving industry of blame and responsibility and averting demands for workers control over the work process.

While normal medium sized managements resort to minimum compliance with the law, if they cannot bribe the factory inspector, the larger more progressive management, particularly in chemical, petro chemical and engineering industries, are more sensitive to health and safety issues as precautionary measures. The primary focus is on the safety of equipment in order to avoid losses that can accrue from accidents. Expert personnel and agencies may even be invited by management to undertake research studies on the health and safety conditions in the plant and make suggestions for improvement. The reports however remain the management's private property. Competing trends in industry to have accident free records and thus merit national safety council awards are another motivation to improve health and safety conditions.

It must however be noted, that though technical solutions like fencing of machinery and fitting of guards is resorted to with swiftness, basic restructuring of the work environment and work processes is rarely done from the safety point of view. In the final analysis health and safety action by Management is undertaken at management's pace, under management initiative and control, with professional management appointed personnel on the job thus smothering worker initiative at every stage.

Thus tens of thousands of workers are injured in work place accidents. Several more suffer from occupational diseases and keep dying, while no one bothers to notice.

### **Conclusion**

It is thus necessary for unions to begin questioning their management-oriented conceptions of occupational health and safety and begin to clearly locate the roots of occupational diseases and accidents, link with pro-worker specialists and institutions/centres on health and safety in India and abroad as well as workers in other industries in India or abroad must be created. This will help the acquisition of information with respect to one's own industry as well as other industries. It also helps build support structures and co-ordination between workers of various industries prior to and during a struggle. Furthermore, a struggle for stringent implementation of the laws needs to be made. The demand for a comprehensive law specifically relating to health and safety may also be raised. The law must be changed to involve workers and their unions in the process of detection and reporting and providing direct access from them to the factory inspectorate and other public agencies and institutions concerned with occupational health and safety. It is necessary for workers to demand formally created channels in their unions to monitor accidents and ill health at work and demands for personal protective equipment, safety mechanisms or even basic restructuring of the work process may be raised (whenever and wherever possible).

Finally, it must be stated that a meaningful change can only come about through a revolutionary transformation of the capitalist social order and the constitution of a 'genuine workers' "State" that will ensure safe working conditions and a disease-free work environment. The formation of such a state is however a long term goal, the movement towards which can in part be initiated by certain concrete short term actions on health and safety here and now. This can become the the springboard for a consistent and consistent and consolidated health and safety movement in India within the framework of a generalised revolutionary struggle for health and safety.

*( See tables overleaf )*



TABLE I

Year	No. of industrial injuries	No. of Fatal accidents
1976	300,319	831
1977	316,273	690
1978	347,016	776
1979	316,481	852
1980	356,341	806
1981	390,783	843
Annual Average during this period	337,869	799

Source : Indian Labour Yearbook 1977-81.

TABLE II

	Total for period 1976-1981	Annual Average
<b>MINES</b>		
Fatal	1686	281
Serious	16936	2823
<b>RAILWAY</b>		
Fatal	1823	304
Non-Fatal	155041	25840
<b>PORTS &amp; DOCKS</b>		
Fatal	124	21
Non-Fatal	10397	1733
<b>TOTAL</b>		
Fatal		606
Non-Fatal		30396

Source : ILYB 1977-81; PBLs 1982-83

TABLE III

Cases of Occupational Diseases Reported Under the Factories Act, 1948 for the years 1960 - 1980

Year	No. of cases	Year	No. of cases	Year	No. of cases	Year	No. of cases
1980	32	1975	27	1970	42	1964	17
1979	12	1974	19	1969	38	1963	30
1978	19	1973	14	1968	22	1962	76
1977	23	1972	17	1967	37	1961	106
1976	12	1971	3	1966	50	1960	38
				1965	5		

Compiled from Indian Labour Book, 1967-1982, figures being obtained from reports of Factory Inspectorates of the States.

**Table IV**  
**Cases of Occupational Diseases Reported Under the Factories Act, 1948**  
**During the years 1976-1980**

Name of disease	NAME OF STATE								TOTAL
	Maha	Punj	Hary	Karn	Bihar	Rajas	West Beng	Oris	
1. Chrome Ulceration/ Poisoning	—	22	3	—	—	—	2	—	27
2. Silicosis	1	—	—	13	—	—	—	1	15
3. Halogen Poisoning	11	—	—	—	—	4	—	—	15
4. Benzene Poisoning	12	—	2	—	—	—	—	—	14
5. Lead Poisoning	—	—	—	—	10	—	—	—	10
6. Toxic Jaundice	—	1	4	—	—	—	—	—	5
7. Toxic Anaemia	—	—	4	—	—	—	—	—	4
8. Dermatitis	—	—	2	—	—	—	2	—	4
9. Phosphorus Poisoning	2	—	—	—	—	—	—	—	2
10. Asbestosis	1	—	—	—	—	—	—	—	1
11. Nitrous Poisoning	1	—	—	—	—	—	—	—	1
<b>Total</b>	<b>28</b>	<b>23</b>	<b>15</b>	<b>13</b>	<b>10</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>98</b>

Compiled from Indian Labour Year Books for the years 1977 to 1982, published by Labour Bureau, Simla.

**Table V**  
**Cases of Occupational Diseases Reported Under The Workmen's Compensation Act, 1923**  
**for the years 1966-1979**

Year	Temporary Disability	Permanent Disability	Deaths	Total No. of cases	States form which reports
1979	—	89	2	91	Kar
1978	—	86	2	88	Kar-84; AP
1977	—	NA	NA	102	Kar
1976	NA	NA	NA	107	Kar
1975	—	—	91	91	Kar
1974	—	—	96	96	Kar
1973	—	—	33	33	Kar
1972	—	—	34	34	Kar
1971	—	10	14	24	Kar; MP; AP
1970	51	59	13	73	Kar; AP; MP; Ker
1969	10	67	14	91	Kar; AP; Ori
1968	1	84	4	89	Kar; AP
1967	NA	NA	NA	125	Kar; AP
1966	NA	NA	NA	115	Kar; AP

Compiled from Indian Labour Year Books 1967-1982

Kar : Karnataka; AP : Andhra Pradesh; MP : Madhya Pradesh; Ker : Kerala; Ori : Orissa.



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6. Toxic Jaundice	—	1	4	—	—	—	—	—	5
7. Toxic Anaemia	—	—	4	—	—	—	—	—	4
8. Dermatitis	—	—	2	—	—	—	2	—	4
9. Phosphorus Poisoning	2	—	—	—	—	—	—	—	2
10. Asbestosis	1	—	—	—	—	—	—	—	1
11. Nitrous Poisoning	1	—	—	—	—	—	—	—	1
<b>Total</b>	<b>28</b>	<b>23</b>	<b>15</b>	<b>13</b>	<b>10</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>98</b>

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1973	—	—	33	33	Kar
1972	—	—	34	34	Kar
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1967	NA	NA	NA	125	Kar; AP
1966	NA	NA	NA	115	Kar; AP

Compiled from Indian Labour Year Books 1967-1982

Kar : Karnataka; AP : Andhra Pradesh; MP : Madhya Pradesh; Ker : Kerala; Ori : Orissa.

Table VI

## Estimates of Incidence of Occupational Disease based on Sample Studies

Disease	Occupation	Year	Sample Size	Percentage affected	Size of Workforce (for this industry nationally)	Estimate of Disease
Silicosis	Potteries	1953	808	16	23,060	1845
Silicosis	Foundries	1970	464	33	66,000	10560
Byssinosis	Cotton Textiles	1976 (ICMR)	899	14-Carding 10-Spinning 11-Weaving	743 630	37181
		1967	1989	7.8		
Asbestosis	Asbestos	1981 (CLI)	900	6.5 (p) 30.0 (P)	8,210	258 1231
Lead Poisoning	Storage Batteries	1981 (CLI)	363	9.1	11,230	511
Silicosis	Slate Pencil	1979	151	57		
Carbon Disulphide poisoning	Rayon	1958	270	27		
Silicosis	Gold mining	1947	7655	43.8		
Pneumococcosis	Coal mining	1961	950	19		
Manganese poisoning	Ferro-manganese manuf.	1961	179	24		
Chrome Ulceration on skin	Dichromate Manufacture	1963	631	20		

(D) : Definite Asbestosis (P) : Possible Asbestosis

Data on Sample studies from Indian Journal of Occupational Health and Central Labour Institute, Bombay.

Table VII  
Prosecutions under the Factories Act for the year 1979

Type of conviction	No. of Convictions	Percentage
1) Non-compliance with Provisions of Notices, Registers and returns.	4679	31.4
2) Convictions for long hours of work and employment of women in hazardous occupations.	2133	14.3
3) Violation of Health and safety provisions.	2090	14.0
4) Violation of health, sanitary and welfare Provisions.	1617	10.8
5) Others	4383	29.5
6) All convictions	14902	100.00

Source : Compiled from Indian Labour Year Book, 1982

Table VIII

Description of Injury	Percentage of loss of earning capacity.
1. Loss of thumb	30
2. Loss of thumb and its metacarpal bone.	40
3. Amputation from 20.32 cms from tip of acroman to less than 11.43 cms. below tip of olecranon.	70
4. Amputation below hip with stump not exceeding 12.70 cms. in length measured from tip of great trechanter.	80
5. Crullotiné loss of tip of middle finger without loss of bone	4

Source : Workmen's Compensation Act, 1923

### Notes

1. It is assumed that there are 300 working days to the year. For this period on an average 8 persons died every 3 days. The number of deaths in Maharashtra and Uttar Pradesh respectively over these 6 years is 866 and 639.
2. For all fatalities i.e. 1405 per year, works out to average of 14 deaths every 3 days.
3. The large number of cases in Karnataka are those of silicosis from the gold mines at Kolar gold fields, where studies as early as 1947 showed a high incidence (44%) of workers affected by silicosis. The fact that a large number of cases are reported and compensated shows how widespread the disease is, as well as indicates an active workers' organisation and a functioning occupational health faculty. Further investigation is called for.
4. Estimate of this for this industry nationally = Workers employed in this industry x 0.5 x % of workers affected in sample study ÷ 100.

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