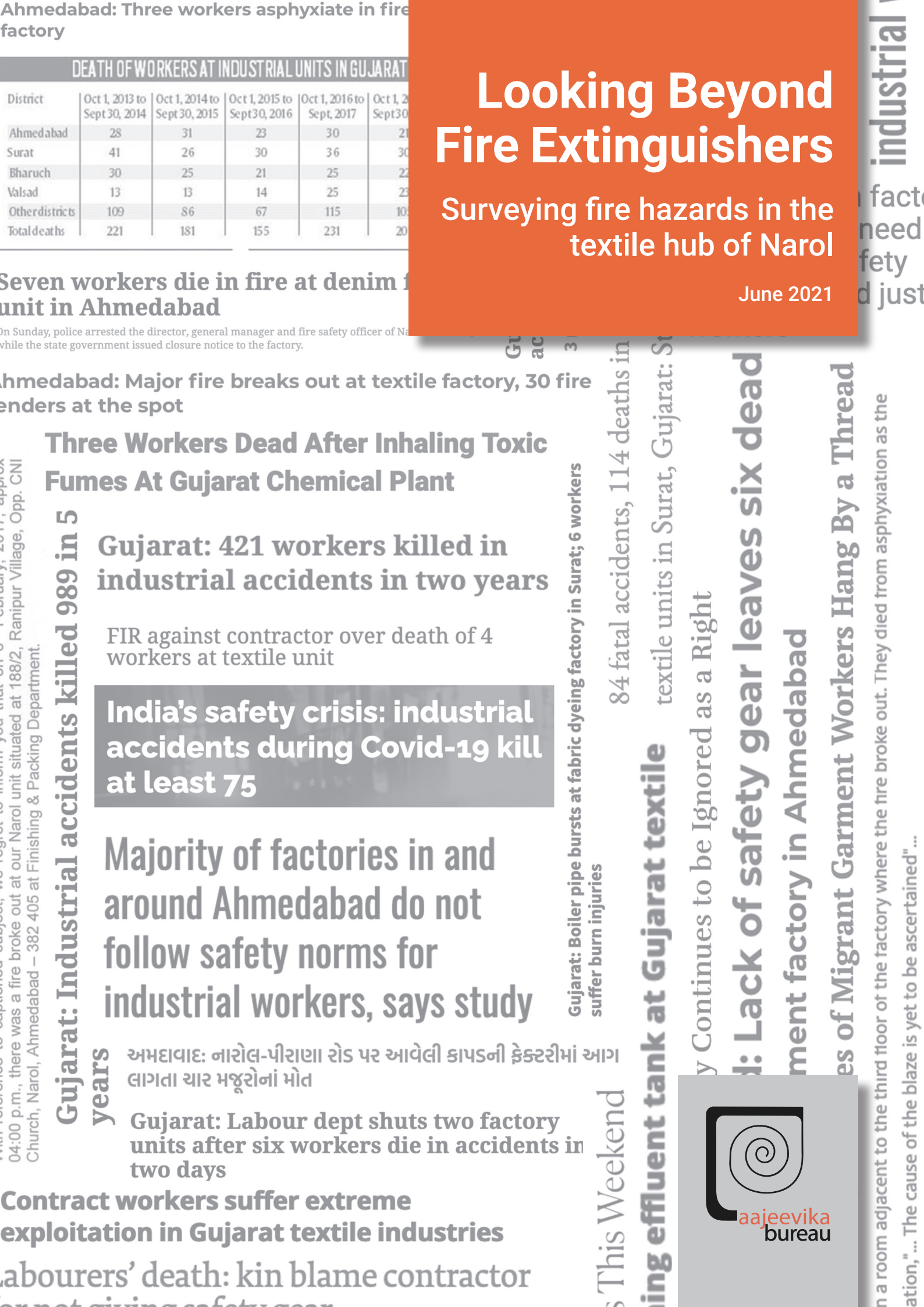
Looking Beyond Fire Extinguishers

Surveying fire hazards in the textile hub of Narol

June 2021



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Background

Narol is a major hub for the textile and garment industry of Ahmedabad. A study by Aajeevika Bureau (2017) estimates this industrial cluster to be spread in about 2,000 units, out of which 35 are large-sized factories.[1] The rest are small and medium-sized establishments that perform a variety of specialised tasks, such as dyeing, chemical washing, stitching and weaving, interlinked through subcontracting and outsourcing relations to one another and the large-sized factories. This labour-intensive industry does not rely on advanced technology or a highly skilled workforce, but runs on cheap labour provided by migrant workers who are classified by Jain and Sharma (2018) as a 'super-exploited' workforce. The units in Narol are dominated by male migrant workers. Their caste identities dictate their occupational roles and mobility within these units, with SC and ST category workers deployed to the low-end echelons (Aajeevika Bureau 2020). The growth of this industry has been marked by informalization of labour (Mahadevia et al 2014). Factories hire workers through a variety of contractual arrangements and depute them to work with hazardous substances and processes without prior training or any protective equipment. This results in injuries and fatalities, but rarely do they result in action against the factories. The practice of relying on subcontracting and outsourcing of work allows blame-shifting and makes it difficult to pinpoint non-compliance on paper. Fire outbreaks are also a frequent occurrence in the factories in Narol, some of which have also resulted in the death of workers.

One such catastrophic fire outbreak took place on February 8, 2020 during the operational hours of the factory of Nandan Denim Limited.[2] The factory is one of the biggest in Narol, employing over 2,000 payroll workers and hundreds of contract workers. The fire started in the shirting division on the roof of one of the factory buildings where around 250 workers were present.[3] The workers found it impossible to exit their floor as well as the two-storied building. Only one door at the topmost floor was accessible by a single ladder. This exit quickly became impassable as the fire engulfed the building.

Water on the premises was insufficient to douse the flames. So, 55 fire tenders had to be called into action. However, since the door on the topmost floor was the only opening into the factory, the fire tenders faced a difficult time dousing the flames. To make matters worse, the packed fabricated shed structure of the factory took considerable time to break down. The blaze lasted for 22 hours. As a result, seven workers died of burns and asphyxiation.

The investigation of the Forensic Science Laboratory and Fire department exposed serious lapses in fire-safety measures in the factory premises. Those lapses included unsafe building design, no windows or ventilation, only one door for an entire building, obstruction of exit passage, no fire alarm, inadequate fire-fighting equipment and lack of fire proofing (Indian Express, 2020, Hindustan Times, 2020). Three fire outbreaks were revealed to have occurred in the recent past. It was also reported that the factory's fire NOC had expired a month prior to the accident and had not been renewed. All these observations were centred around the failure of the structural safety of the factory. Given the scale of media coverage, in a knee-jerk response, the Labour and Employment department of the Government of Gujarat, issued a closure notice and sealed the premises pending a review of its safety aspects. On the recommendations of the Fire department, several alterations were made in the factory such as installation of monkey ladders, emergency exits, and fire hydrants. An FIR was lodged and the general manager, a mid-level director and the safety officer were arrested (Indian Express, 2020). The top-level management of Nandan Denim Limited filed overnight applications for anticipatory bails in the Gujarat High Court, which resulted in the following directions: "…No coercive steps shall be taken against the applicants. However, the investigation shall go in accordance with law".[4] Further, the families of the victims were paid a king's ransom as 'compensation' by the factory management and sent away. However, despite the purported actions, seven months later, another fire broke out in the same premises (Times of India, 2020).

This case, however, must not be treated as an anomaly since it is only one among the 322 industrial accidents that have occurred within the last two years in Gujarat (The New Indian Express, 2021). The frequency of accidents reveals the absence of even basic safety for workers and compliance to workplace safety law (i.e., the Factories Act, 1948). The objective of the enforcement machinery under the Factories Act, 1948, is to prevent accidents and ensure safe and healthy working conditions. However, it seems to have been reduced to operating on the back foot, responding only to sensational events (Patel, 1999). The reactionary interventions such as the ones in the aforesaid case, limited to fire preventive designs and equipment, reflect a lack of understanding of the everyday hazards and pervasive unsafe practices that manifest themselves on the factory floor (Ashraf Hasan, 2017). Ignored, these routines persist and sometimes produce tragic events, such as the ones mentioned above, that are then framed as exceptional cases to be pursued.

Occupational safety and health of workers in the factories in Ahmedabad is an under-researched area, particularly the identification of everyday fire hazards. Moreover, studies relating to exploitative and unsafe practices in the textile and garment industry more often focus on manufacturing workers than on those engaged in ancillary activities.

Therefore, this study, geographically focused on Narol, where Aajeevika Bureau and Karkhana Shramik Suraksha Sangh (KSS) have built their operational presence, was initiated to gain a grounded understanding of the prevalent labour practices that lead to fire accidents in textile processing factories in Narol. In this process, the study endeavours to achieve the following objectives:

- Studying processing factories that are less studied than manufacturing factories and workers
- Focusing on fire hazards as part of the safety of workers by examining factory floor realities with the provisions under the Factories Act, 1948
- Foregrounding the perspectives of safety held by workers

Design

The survey for this study began in October 2020. It was initiated with focus group discussions (FGDs) first with workers, who were members of KSS, and then more specifically with workers, who had been living and working together in the same factory. In both FGDs, it was noticed that the workers were hesitant to openly talk about hazards faced by them at their work premises. So, it was decided to conduct semi-structured interviews and follow-up discussions with them on a one-on-one basis. The selection of participants was shaped by the KSS network and progressed on a purposive snowball sampling method, cross-classified by three key indicators: status of employment (payroll or contractual), department (processing, packing, housekeeping, maintenance) and role (helper, operator, master, supervisor). We decided to focus on those employed at large-sized factories run by registered companies, thereby situating this study within the organised sector.[5] Moreover, there is an assumption of a higher level of compliance to the law by such factories. A questionnaire was prepared to guide these informal one-on-one discussions (excerpt in Annexure-1). A perusal of the questionnaire will bear out that it contains open-ended questions to record the workers' descriptions of the occupational, operational and labour practices prevalent at their workplace. It also contains two checklist-styled tabular representations of basic workplace facilities and fire safety norms collated from the applicable laws and rules, the Factories Act, 1948, and Gujarat Factories Rules, 1963, which prescribe detailed standards for safe working conditions. These are further divided into hard and soft parameters to gauge the gap between on-paper and real compliance. The division of parameters was inspired by the categorisation in Zia et al (2014), wherein they undertook a risk-indexing based investigation into fire hazards in garment manufacturing factories in Dhaka, Bangladesh, that compromise the on-paper compliances.

The interviews commenced from mid-October 2020. It was planned to conduct 4-6 interviews in a week and conclude the exercise by the end of November, keeping in mind workers' availability, either at their residence, outside their workplace, at the Rangoli Nagar TB centre or at the KSS office at Narol.

Only 10 interviews were conducted between October 14, 2020 and November 26, 2020. Since it was difficult to contact the workers as the factories were witnessing a seasonal increase in orders during that time. An interim report was made based on those interviews. The findings of that report were also based on one factory visit made on November 20, 2020.

To confirm the findings of the interim report, it was decided to undertake further questionnaire-based interviews (see Annexure-2). This time, 85 factory workers were surveyed between December 28, 2020 and January 6, 2021 while observing Covid-19–appropriate behaviour. Packing, maintenance and housekeeping workers were under-represented. The surveyed workers were in the 19-60 age range and were all men since the workforce in the textile processing units in Narol is overwhelmingly male. Female workers are employed mainly in smaller specialised non-factory units involving stitching, thread-cutting or home-based labour (Jayaram and Varma 2020; Mahadevia et al 2014). Female workers are also employed for boiler or housekeeping work in factories. Boiler workers, security guards and similarly placed workers are, however, not directly part of this inquiry since the living and working conditions they are subjected to differ from those of processing workers. Prior consent of the respondents was obtained to document their responses. The survey team also agreed to not reveal their names and workplaces in this study.

Simultaneously, RTI applications were also filed to obtain information relating to factory fire outbreaks from the Director Industrial Safety and Health (the labour and employment department, Government of Gujarat) and the Fire department (Ahmedabad Municipal Corporation). However, the insufficient and incomplete responses did not result in information that could contribute to the study.

The report centres on the provisions of the Factories Act, 1948 and the Contract Labour (Regulation and Abolition) Act, 1970 (hereinafter referred to as the CLA) since the Occupational Safety, Health and Working Conditions Code, 2020, (hereinafter referred to as the OSHWC Code) has not been enforced in Gujarat so far. A perusal of the code bears out that detailed prescriptions that informed the scheme of the Factories Act, 1948, have been relegated to rules and standards left to be prescribed later by the appropriate government (see Section 18, occupational safety and health standards). The right to workplace safety available under provisions of the Factories Act has been whittled down to principles illustrated by provisions such as Sections

23 and 24. The OSHWC Code betrays the same widespread pattern of shifting the onus of workers' health, safety and well being from the factory to the worker (see Section 11, duty of employee). Further, many provisions of the Factories Act, 1948, and the CLA that are relevant to this study have been reproduced in the code. For the sake of clarity, the OSHWC Code provisions have been mentioned wherever applicable.

Structure of the Report

The study is based on the participation of 95 workers, two factory visits and a parallel legal assessment of the findings. It is divided into five sections: (1) A profile of the workers, (2) Conditions and hazards at workplaces, (3) Lack of fire compliance, (4) Occupational practices and (5) Labour management practices.

The first section presents findings on the three key indicators mentioned above (viz., status of employment, department and role) while the second section presents those on the working conditions and hazards ordinarily confronted by workers. The perspectives of the workers guide these sections; these perspectives are contextualised mainly in the framework of the CLA and Chapter III of the Factories Act, 1948.

In the third and the fourth sections, the workers' perspectives and experiences of routine hazards are examined under Chapter IV of the Factories Act, 1948, and fire-safety prescriptions of Gujarat Factories Rules, 1963. The fourth section looks specifically at practices such as exposed electrical apparatus, accumulation of fabric dust, stocking of materials in front of exits and stairwells, and spillage of flammable substances on factory floors, which reflect commonly faced hazards.

The fifth section offers insight into normalised workplace dynamics and contractual engagements that manipulate the ability of workers to raise safety issues. This section also highlights deficiencies in the worker participation mechanisms under the Factories Act, 1948.

Limitations

The study does not cover similar factories in other areas of Ahmedabad—such as Khatrej and Kalol—which are also known to be textile industry clusters. Moreover, the highlighted practices are likely to differ from unit to unit on the basis of their position in the chain of subcontracting and outsourcing.

Packing, maintenance and housekeeping workers came to be under-represented. Therefore, the findings are skewed towards those engaged in processing work.

The inquiry does not focus on legal options exercised by the workers. It also does not discuss the role played by trade unions in workplace safety issues.

Had the COVID-19 restrictions not been implemented, the survey team would have had more flexibility and time for factory visits, personal interviews and follow-up discussions with workers.

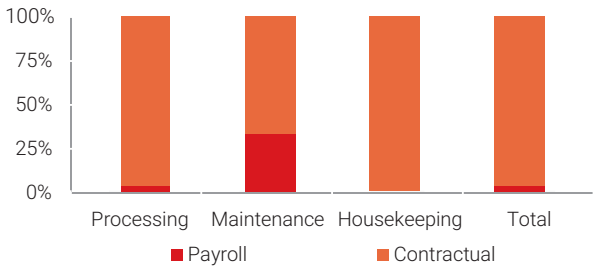
Findings

A Profile of the Workers

Contract Labour

4% of the surveyed workers described themselves to be on the payroll of the factories. They were also employed in higher roles as supervisors, as masters, and as maintenance staff. The remaining 96% were recruited through a myriad of contractual arrangements (see Chart 1). Many of those on contract had been engaged on a casual basis.

Chart 1. Distribution based on type of employment and department



Workers in higher roles also tend to double up as petty contractors who hire contract workers for the process, operations or machines handled by them in their factories. The number of hired workers, however, does not exceed 20, which is the threshold that triggers the application of the CLA. Mezzadri and Srivastava (2015) term such contractors as 'dummies' that are used to disguise the actual workforce in the factory since workers hired in this way are not the direct responsibility of the factory employer. They do not appear on the rolls of the factory and can be fired at will.

External contractors,[6] who bring their own workers along with them, are employed to carry out such tasks as operatIng boilers and effluent treatment plants, housekeeping, etc. Such contract workers are kept segregated from other workers. While reflecting on the treatment meted out to him and his colleagues by his employer, a housekeeping contractor of a factory said, "Despite being engaged to do this job for several years, we are not allowed to use the toilets [in the factory]. Those are reserved only for permanent workers. We are only allowed to enter the premises when the *maalik* calls us inside." The housekeeping contractor and his workers enter the factory through a back gate; the permanent ones enter their biometrics or mark their entry/exit at the main factory gate. Many such contract workers are not provided with basic facilities or even adequate shelter. As a result, they are compelled to live within or immediately outside the factory premises in self-constructed shacks and make their own arrangements for water, sanitation, etc. This is common in Narol, especially among those engaged to operate boilers.

Wages were calculated on a daily or a piece-rate basis and paid out in cash either daily or weekly—referred to as *kharchi*—though few did mention being paid monthly at a fixed date. Those who described themselves to be on the payrolls of the employer were paid monthly as well after deducting contributions towards their provident fund (PF). However, they were unsure of whether the deducted contributions were deposited into their PF accounts.

The Contract Labour (Regulation and Abolition) Act, 1970, (CLA) regulates the employment of contract labour. The CLA prohibits employing contract labour in necessary and perennial jobs ordinarily done by the regular workforce. Only genuine labour contracts are permissible. It mandates the registration of establishments and licensing of contractors engaging 20 or more contract workers for any sort of work. According to the CLA, the contractors must maintain records of labour and ensure adequate working conditions, accommodation, payment of wages and provision of health and welfare facilities. If the contractors don't do so, the onus of fulfilling those tasks falls on the principal employer. Otherwise, the principal employer is only mandated to supervise the payment of wages through a representative.

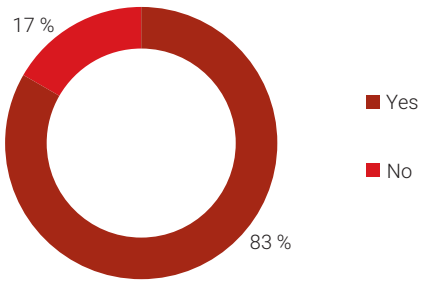
Contract workers hired through employees (that double up as petty contractors) to camouflage their direct relationship with the principal employer are entitled to the appropriate relief of absorption onto the payrolls of the factory. This calls for further study and intervention towards these potential claims. The other type of hiring practice through external contractors prevalent in what are thought to be non-core or ancillary activities—such as housekeeping, cleaning and sanitation—are permissible under the act.[7] Their working conditions and well being are, therefore, also governed by the provisions of the CLA. Such workers are entitled to healthy working conditions—specifically drinking water, toilets, washing arrangements, and amenities such as creches and shelter rooms—under the CLA at standards prescribed by the rules issued thereunder. However, this duty has to be borne by the contractor.[8] Subcontracting and outsourcing enable factory occupiers[9] (or principal employers) to disguise employer-employee relationship and transfer the responsibility of the health, safety and well being of the workers onto the contractor. These contractual practices leave contractors with very low margins in a highly competitive market that cripple them into not fulfilling this duty. That, in turn, results in the denial of safety, health and well being to contract

workers as contemplated by the CLA. In any case, where the aforesaid provisions are not made within the prescribed period, the liability passes onto the principal employer.[10] That, however, remains unrealised in reality.

Social Security

Factory workers, whether on payroll or contractual, regular or casual, are covered by the two main social security laws: the Employees' State Insurance Act, 1948 (hereinafter referred to as the ESI Act) and the Employees' Provident Funds and Miscellaneous Provisions Act, 1952 (hereinafter referred to as the EPF Act). The applicability of these laws is subject to an income ceiling of INR 21,000 and INR 15,000, respectively. Contributions are collected monthly and deposited twice a year. The ESI Act provides for the health and well being of workers through its network of clinics and hospitals and for a number of other benefits, including for sickness, maternity, injuries, disablement and dependents. The EPF Act provides for provident fund, pension and life insurance. Workers, who reported deductions (17%, see Chart 2), did not seem very concerned about their PF or ESI accounts. They lose track after changing jobs and are unaware whether the deducted contributions will be accessible to them later on. There is, generally, a low level of awareness about its benefits and procedures. Moreover, in case of injuries, supervisors or *thekedaar* (contractors) prefer to take their workers to private clinics and hospitals. The treatment costs are recovered from the workers' wages. Workers even prefer going to their hometowns for treatment, and in some cases, they are sent away.

Chart 2. No. of workers enrolled PF/ESI



Work Shift

Time duration of a work shift is an unknown concept for those paid on a daily or piece-rate basis; their working hours are dictated by order deadlines, and they are often called by their employer at random times. While discussing working hours with one such worker, he stated, rather proudly, "I can pull off 24 hours". Another, who is a monthly paid worker, reported 'flexibility' in timings, stating that, "I am allowed to leave any time; I may be called to work any time as well." Another worker mentioned having done double shifts to meet order targets, which in his case, meant 24 hours. Twelve-hour shifts were the norm (Table 1), and the day split between two 12-hour shifts while machines kept running throughout. Under the Factories Act, a period of work in a day can spread only over 10.5 hours, including rest intervals. The Factories Act also stipulates a maximum of 48 hours in a week with one off-day and a limit of 9 hours of work per day.[11] No worker reported working within this legally permissible duration. Moreover, a spill-over of 30-45 minutes at the end of the shift is not accounted for. This was reported by 40% of the workers (see Table 1). Any overtime invites compensation at twice the wage rate,[12] which if not paid, makes the factory owner directly liable; as principal employer, the owner must ensure payment of wages.

Table 1. - Work-shift of the surveyed workers

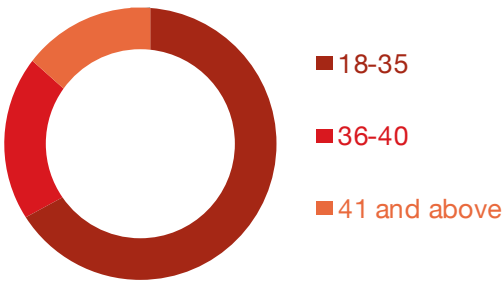
Heading	Affirmative Responses
12 hours work shifts	98%
Overtime	40%

Many male migrant workers who have migrated alone (unaccompanied by any family members) are, however, indifferent to their working hours. Their sole purpose is to maximise their earnings in the city to remit their savings back home. Such extended working hours have an effect on the health and well being of the workers. In the short run, they cause physical exhaustion and deprive workers of adequate rest time.

Age Distribution

33% of the surveyed workers were found to be older than 35 years and only 13% were older than 40 (see Chart 3). A workforce predominantly younger than 35 (67%) points to the practice of not only shedding older labourers (Jain and Sharma, 2018) but also the accumulation of long-term health impacts of working in such arduous jobs (Sharma et al, 2014). Those above 35 years of age become contractors themselves and pass on their labour burden to younger and newer workers.

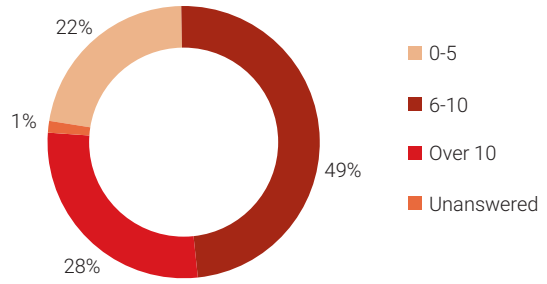
Chart 3: Age distribution



Employment Period

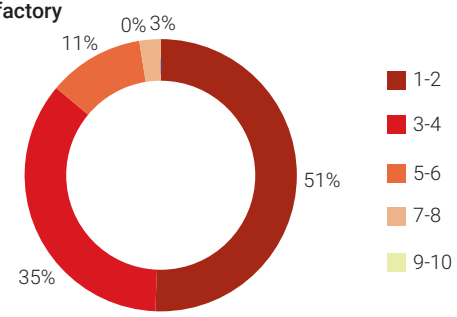
Among the surveyed workers, 22% had been employed in the same line of work as their present job for less than five years; 49% had been in the industry for six to ten years whereas 28% had been working for more than ten years (see Chart 4).

Chart 4. No. of years workers have been employed in the textile industry in Ahmedabad



However, workers reported having spent far lesser time in their current jobs. Many mentioned changing jobs as the only means of earning higher wages. 15% of the workers were in their present job for less than a year, also suggesting seasonal and flexible hiring practices. Only 14% of the workers had been at their current workplace for over 5 years. This makes them eligible for gratuity, the payment of which is the liability of the principal employer). 71% of the workers were in the same job for a period ranging between one and five years, showing scope for a claim of permanence (see Chart 5). Subcontracting and outsourcing also allow employers scalability and flexibility in the size of the workforce, they being able to hire and fire at will. Workers able to prove continuous service for a year can claim protection against such arbitrary layoffs under the Industrial Disputes Act, 1947.[13]

Chart 5. No of years workers have been employed in the same factory



Conditions and Hazards at the Workplace

Working conditions are regulated by the provisions of the Factories Act, 1948. The act provides measures for ensuring safe and healthy working conditions free from hazards and injuries. It mandates the registration of factories employing 20 or more workers at any given time of the year. It recognises the duty of the factory occupier to (1) maintain overall safety, specifically in the use and handling of articles or substances, and ensure absence of risks to health of the workers in the factory premises, (2) train and supervise workers, (3) maintain and monitor provision of welfare facilities. For this purpose, the act has prescriptions for such aspects as cleanliness, dust and other impurities prevention, ventilation, temperature control, noise levels, and thresholds for hazardous substances. It also contains detailed provisions for ensuring fire safety.

88% of the workers reported that their workplace was equipped with fans and 50% mentioned exhaust fans as well. However, all of them complained of having to work in intense heat (see Table 2). The packed fabricated shed with which the walls of the factories are constructed causes temperatures to be higher than that outside. Machines operate at high temperatures and emit a lot of heat. Moreover, this intense heat gets even more extreme during summers as many factories lack proper ventilation. Reflecting on this, two workers said, “fans are useless in the dry heat of Ahmedabad.” The excessive heat inside the factory premises is indicative of the absence of adequate temperature regulation measures to ensure reasonable conditions of comfort and to protect workers from injury. Section 13 of the Factories Act, 1948, also mandates factories to provide for adequate ventilation and regulate temperatures in every workroom. In processes that involve production of excessively high temperatures, measures such as insulation of the machines must be adopted.

Furthermore, 96% of the workers reported dust pollution in their department (see Table 2). Emission of fabric dust and fumes from running machines is one of the main health risks to textile processing workers. Another cause of concern is exposure to hazardous substances. Many workers said that they routinely came in contact with substances such as hydrogen peroxide, bleach, sulphuric acid, ammonia, and caustic soda, which resulted in reactions ranging from skin and eye irritation to cuts and burns on their hands and feet.

Regarding precautions, 62% of the workers reported being provided with gloves and boots to prevent exposure to chemicals (see Table 2). This, however, may be a lot less prevalent, given that workers (especially helpers) perceive that such protective wear interferes with their ability to work and slows down their pace. Continuous inhalation of fabric dust and noxious fumes and exposure to chemicals result in skin problems and respiratory issues such as persistent cough and breathlessness, termed ‘chronic occupational lung diseases exposure (COLD)’ by Aajeevika Bureau (2014). This points towards a breach of provisions under Section 14 of the Factories Act, 1948, that requires factory employers to take effective measures to prevent inhalation of fumes and impurities.

Along with dealing with these hazards, 88% of the workers had to work in a highly noisy environment (see Table 2).

Table 2: Conditions and hazards at the workplace

Conditions and Hazards at the Workplaces	Agreed
High temperature	100%
Fans	88%
High humidity	88%
Exhaust fan	50%
High noise level	88%
Presence of dust	96%
Exposure to harsh chemicals	97%
Gloves and boots for handling chemicals	62%

Table 3: Relevant provisions of Factories Act, 1948 and the Gujarat Factories Rules, 1963

- Section 13 states that every factory must make effective and suitable provisions to protect workers and ensure reasonable conditions of comfort and prevention of injury to health of workers.
- Rule 18-A under Section 13 provides for a specific range of temperatures to be maintained inside factory premises and additional measures during summers.
- Section 14 states that effective measures shall be taken to prevent inhalation of fumes or other such impurities at work premises that are injurious to the workers.
- Section 41F and Schedule II prescribe the maximum permissible threshold limits of exposure of chemical and toxic substances in the manufacturing process even if the industry is not categorised as hazardous.
- Schedule XII, Manipulation of Acids and Alkalies, under Rule 102, that prescribes safety precautions and standards, is applicable wherever select acids and alkalies are manufactured, handled, stored or used.

Lack of Fire Compliance

Ignition Sources

71% of the workers reported having exposed live wires at their workplace (see Table 4). During an interview, in response to the question of exposed live wires, a worker recounted a dramatic short-circuit incident at his workplace that had occurred during a rain spell. Some of the exposed wires hanging from an electrical panel had short-circuited and given off sparks, resulting in a major power surge, forcing the factory employer to call the power company, Torrent, to cut off its power supply. This indicates absence or failure of the factory's fail-safe mechanism and exposes the level of risk the workers face on an ordinary day. Another practice recounted by a worker was frequent overloading of sockets due to which, he claimed, he had witnessed three short-circuit incidents at his workplace. Factories have an obligation to either exclude all electrical apparatus from areas where accumulation of flammable substances—such as fabric dust and chemicals—is inherent, or install and maintain them in a manner to prevent their becoming an ignition source.

Presence of Combustible and Flammable Material

97% of the workers confirmed the presence of combustible and flammable material—such as fabric dust, hazardous chemicals and cloth material—at their workplaces, acknowledging fire hazards at their work premises (see Table 4). This finding simply reaffirms the presence of several means for ignition in textile processing work with varying degrees of volatility. However, the unchecked practices of allowing exposed live wires and broken sockets in such areas where rampant accumulation of flammable and combustible substances is highly likely, not only disregards the Rule, but also aggravates the danger of fire, sealing the workers' fate. This demonstrates a breach of Rule 66-A(4) of the Gujarat Factories Rules, 1963 that has been formulated to tackle such situations and prescribes detailed preventive measures against ignition (see Table 5). 15 workers mentioned fire accidents having occurred at their workplaces because of these very oversights by their employers.

Fire-fighting Equipment

Regarding overt fire protection arrangements, 74% of the workers responded that their work premises were equipped with fire extinguishers (see Table 4). However, additional questions evinced these extinguishers were inaccessible. Two workers reported that only certain areas of their factories were equipped with extinguishers. One of them mentioned that these were present in only the exports processing section of his factory. The first intervention point to prevent outbreak of fire ordinarily involves use of fire extinguishers. These are to be mandatorily provided throughout the premises to allow ready and easy access for immediate use as per Rule 66-A(10) of the Gujarat Factories Rules, 1963 (see Table 5). Additionally, routine maintenance, inspection and testing of the fire-fighting equipment are also required by the Rule. 53% of the workers reported that those tasks were undertaken at their factory (see Table 4).

However, 92% of the workers claimed that their factories did not have fire hydrants and automatic sprinklers (see Table 4), indicating a contravention of Rule 66-A(13) and Section 38 of the Factories Act, 1948 (see Table 5). The facility for adequate water at the factory premises, fulfilled by these hydrants, is necessary for fire fighting.

Access for Fighting

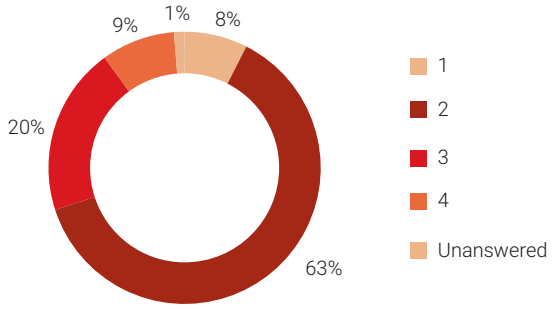
Discussions with workers also brought to light the contravention of Rule 66-A(2)(b) of the Gujarat Factories Rules, 1963 in relation to the closed structures of their work premises. Many workers said that their workplaces had insufficient openings for ventilation. Factory walls are usually made of fabricated sheds, which in the absence of sufficient exits, would impede access to the

factory floor in the event of a fire. This would hinder the efforts of the fire brigade, as was observed during the Nandan Denim fire disaster (Indian Express, 2020), and lead to a life-threatening situation for workers. Apart from this, sufficient ventilation is also necessary to reduce chances of spontaneous ignition (Rule 66-A5).

Fire Exits

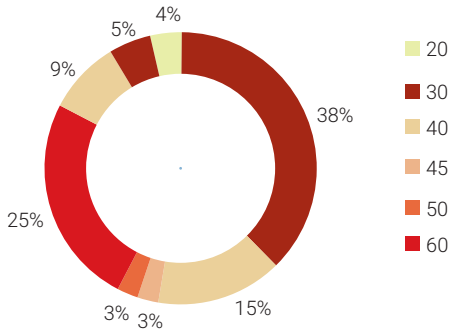
All workers reported that their vicinity had fire exits; they also mentioned to these to be unlocked, except for 5% of the workers. However, 44% of the fire exits were claimed to be routinely obstructed by lorries, stocked materials and chemical containers (see Table 4), violative of Rule 66 of Gujarat Factories Rules, 1963, and Sections 32(a) and 38(1) of the Factories Act, 1948, which require floors, passages, and means of escape to be unimpeded and continuous to the exterior of the building or an exterior open space (see Table 5).

Chart 6. No of exits in the vicinity of the worker



Moreover, 62.5% of the workers could only avail of two exits in their department (see Chart 6). Assuming the department to be a separate structure within the factory premises, two exits would be insufficient to bear the occupant load. These exits would have to be disproportionately shared between at least 250 workers incase of all of the respondents (since the departments were claimed to have at least 250 workers) and between 700 workers incase of 3 respondents. Rule 66A-(9) prescribes that the number of occupants on each floor determines the width of the exits; each unit of exit width must be 0.5 metres. The survey was unable to obtain information about the width of the exits.

Chart 7. Minutes taken to exit



However, 82% of the workers felt that they and their co-workers would take between 30-60 minutes to exit, i.e., evacuate from their respective workplaces to the outside of the factory premises (see Chart 7). Given this concerning estimate, the number of exits may, in fact, be inadequate to allow reasonably free and unobstructed passage to all the workers in case of a fire outbreak.

Four workers stated that they worked in a multi-storeyed structure equipped with a staircase that could be used for escaping, although one of them mentioned access to it being frequently blocked by stocks of raw material. The workplaces of the rest of the workers was at the ground level and so, did not require staircases.

Emergency Preparedness

Another worrying aspect was that the workers were unaware of protocols—such as finding the designated means of escape and how to operate a fire extinguisher—to be followed in case of a fire. This is because no training or mock drills were being held in the factories (see Table 4). In addition, 95% of the responses revealed that their work premises had no fire alarms to warn workers of fire outbreaks (see Table 4). The layout of factories is usually subdivided into different rooms that do not permit clear visibility of all parts for their occupants. Therefore, emergency announcements such as fire alarms are the only way to alert workers and trigger an evacuation of the factory. Familiarity with the means of escape can be built only through adequate training and practice, as per the requirement under Section 38(2) of the Factories Act, 1948, which makes it a crucial yet simple prescription to be complied with for any effective results in case of a fire.

Apart from this, 67% of the workers mentioned that first-aid was available at their workplace. 98% of the workers did not know the location of the main switch board of their work premises.

Table 4: Fire compliances

Sr. No.	Particulars	Particulars	Yes	No
		Ignition Source		
1		Exposed live wires	58	23
2		Broken sockets	52	29
		Presence of Combustible Material		
3		Chemicals	64	2
4		Fabric dust	79	3
5		Grey Material	All	-
	Hard Compliance	Soft Compliance		
6	Fire Extinguisher	Availability	66	23
		Training to operate	5	82
7	Fire-exit Sign		54	35
8	Fire Exit and Corridor	Unlocked condition	82	4
		Shutter type exit	83	
		Door type exit	2	
		Obstructions by material or machine	27	35
9	First Aid	Availability	59	29
10	Automatic Sprinkler		-	88
11	Fire Hydrant	Availability	7	82
		Training	5	80
12	On-site Emergency Plan	Announcement or alarm	4	78
		Practice of fire drill	2	79
		Time taken to exit your floor and factory	Most frequent response: 30 mins; Highest : 120 mins	
		Location of main switch board	83: Unknown; 2: at the office entrance	
13	Stairway	Available	3	1
		Accessible	3	-
14	Safety Committee		1	84

Table 5: Relevant sections and rules

- Section 32 states that all floors, stairs, passages must be kept free from obstructions.
- Section 38 mandates that workers must be adequately trained and made familiar with the means of escape in case of fire.
- Rule 66 under Section 38 provides for having “adequate”, “substantial”, “unimpeded” and “direct” means of escape and access to exits, passages and staircases in case of fire.
- Rule 66-A under Section 38 specifies precautions against ignition, fire exits, fire-fighting equipment, fire hydrants, automatic sprinklers, fire alarms, training, etc.
- Rule 68-F relates to the setting up a safety committee wherever 250 or more workers are employed. Safety committee is tasked with identifying hazards, looking into complaints by workers and suggesting corrective measures.
- Section 40B relates to the employment of safety officers in cases of 1,000 or more workers.

Occupational Practices

Obstruction to Means of Escape

The obstruction of pathways, corridors and doors by lorries loaded with materials, and by haphazard stocking and piling of materials on the factory floor is routine. Machines cannot operate continuously without immediate access to materials. 88% of the workers stated that, similarly, chemicals are also kept close by or in gallons and containers placed in passages (see Table 6), apart from keeping them in store rooms. These practices, confirmed to be highly prevalent in the factory premises of the surveyed workers, are in contravention of provisions under Sections 32(a) and 38(1) of the Factories Act, 1948 (see Table 9).

These practices must also be viewed in light of the finding in the preceding section: that in 62.5% of the cases, the workers reported that their vicinity had only two exits that had to be shared among several hundreds of them. Besides, 32% of the workers mentioned that their factory layout was complex (see Table 6), and 82% of them felt that escaping from their workplace to the exterior of the building would take between 30-60 minutes (see Chart 7). These practices will further impede unobstructed means to escape during a fire outbreak and are likely to contribute towards injuries and fatalities.

Table 6: Practices causing obstructions to means of escape

Practices	Agreed
Materials (such as grey material) found lying around machines, passages and doors	82%
High piles of stock	75%
Stocking and piling of materials in corridors	93%
Stocking and piling of materials in front of exits	75%
Chemical containers and gallons found lying around machines, passages and doors	88%
Complex spatial layout	32%

However, workers did not necessarily consider the aforesaid practices to be hazards on the factory floor. The workers' perceptions about hazards varied depending upon their role and the department they worked in.

Use and Handling of Chemicals

Processing workers consider chemical fumes and spills to be dangerous. Dyeing, printing and washing processes involve the usage of strong acids such as sulphuric acid, acetic acid; alkalis such as caustic soda, bleaches, dyes; and other hazardous chemicals in different stipulated quantities. Some of these chemicals can cause serious burns, scalds, and injuries, if they come in contact with skin, and irritation to the eyes, nose and throat if present in the vicinity above certain quantities. Inhaling their fumes causes serious headaches and nausea. Many of these chemicals are flammable by nature. They are bought in bulk and then kept in large drums on the factory floor. These drums are often casually placed outside assigned rooms on the factory floor, adjacent to machines and in passages for routine use. The quantity of required chemicals is decided based on the sample presented to the client or on the experience of the supervisor, who usually prescribes the quantities on a written slip to the machine operators. A helper pours out the concentrated chemicals from the drums into smaller gallons without using the appropriate equipment such as a beaker. Pouring them in fixed small quantities in a controlled way is very difficult. There is a constant threat of spillage and splashes on the hands and feet, and the floor. (This practice may differ from unit to unit wherein a storekeeper is assigned to do the task of dispensing concentrated chemicals, dyes and other agents.) The helper then carries them to the machine in which it is infused into tanks. Helpers carry these chemicals in smaller broken or corroded plastic gallons, without any gloves, overalls or aprons, work boots and eye protection. Spills on the floor can be found throughout the washing department of the factory, which was confirmed by 99% of the workers (see Table 7).

Since chemical spills appear watery and harmless, workers walk over them, disregarding their viciousness, and gradually develop noticeable burns, cuts, rashes and wounds on their hands and feet. Those occupying higher roles, however, appear to be more conscious of the health hazards—such as lung diseases that take hold over time without warning—in such practices. Workers, especially newer ones in the lowliest of jobs as helpers, learn about the chemicals used and their handling on their own over a prolonged period of time, picking up on others' behaviours and sometimes being rebuked and disciplined by their superiors or *thekedaars;* no prior training and information about the chemicals and dangers inherent in this work is provided. Workers are entitled to be informed of the nature of the substances, including the significance of different types of symbols and colours used on the labels on various types of containers, and must be adequately trained to deal with the ensuing hazards.

The survey also revealed that 98% of the workers felt that chemicals could be safely used (see Table 7) and that that would improve their health and safety conditions. However, their inability to do much is also apparent in their responses. "Risk is also present in riding a bike," is a common response by the workers when asked about the hazards of using chemicals. This indicated that the workers were aware of the hazards and had to deal with a constant 'trade-off' between making a living and safeguarding health, as put by Ashraf Hasan (2017).

Table 7: Use and handling of chemicals

Heading	Agreed
Chemicals found spilt on the factory floor	99%
Containers and gallons of chemicals in poor condition	45%
No provision of gloves and boots for handling chemicals	38%
Can chemicals be used in safer manner?	98%

Furthermore, the handling, storing and use of hazardous chemicals such as acids and alkalies in textile processing does not appear to have specific regulations comparable to those provided under Schedule XII of Rule 102, which is applicable only to manufacturing and manipulation of acids and alkalies. Assuming it were applicable in this case, then according to this rule, floors must be immediately cleaned as often as necessary. For this purpose, suitable protective wear for hands and feet is to be mandatorily provided. Workers mentioned that their work-premises were cleaned at least once a day. Housekeeping workers, who are employed for cleaning, were among the 38% that reported not being provided with gloves and boots. They also mentioned routine exposure to spills on the floor while sweeping and mopping.

Storage of hazardous chemicals, dyes and oxidising agents, without reasonable precaution, as uncovered in the survey, is also a serious fire hazard. This finding indicates a failure to take satisfactory steps to prevent leakages of flammable liquids on the factory floor in violation of Rule 66-A(7) of the Gujarat Factories Rules, 1963.

Accumulation of Fabric Dust

Fabric dust is perceived as a hazard by finishing workers. 99% of the workers reported accumulation of fabric dust at their work premises. A worker who supervises finishing work on denim—comprising whiskering, scrapping, scrubbing, tacking, tearing, sand blasting, and so on—mentioned particles being lodged at very high speeds in the eyes, nose and throat to be a common part of the process "because of the way the work had to be done". He added that "workers covered their noses and mouths with handkerchiefs" to cope with the amount of dust generated in this process. Further, "drinking chai to wash down the effects" is a common belief among workers.

Collection of fabric dust on wires, electrical panels, light fittings and high ledges, is also rampant to a degree that "the wires appear unrecognisable", as stated by a welder (maintenance worker). He added that he regularly carried around a bucket of water with him to immediately douse any sparks caught by the fabric dust as a result of welding. He stated that "fabric dust usually sticks all over the walls on everything." Since cleaning is accomplished by dusting and sweeping with brooms instead of dust collection machines, this dust merely gets blown about the premises. Moreover, it does not take care of the dust that settles on the electrical apparatus.

Removing accumulated fabric dust is undeniably not a deterrent measure in terms of the prescription under Rule 66-A(8) of Gujarat Factories Rules, 1963. The provisions thereunder mandate the prevention of accumulation of any such flammable waste material generated in day-to-day operations by taking suitable and effective steps beforehand. These waste materials are often flammable, susceptible to ignition by sparks, by short circuits in exposed live wires, by static charges generated on machine surfaces, by high surface heat, or by other electrical apparatus lacking proper earthing.

The interviews also conveyed other practices that contributed to the findings on the presence of fire hazards. A handful of workers pointed out that overloading of plug points and electrical panels caused motors of machines to catch fire. One of them, an operator in the denim-washing department, mentioned that welding on running machines was also common. He added that he had once witnessed a fire that had started when clothes and chemicals inside a running tumbler dryer had caught fire from welding sparks. This had been controlled immediately with a fire extinguisher. Another worker employed in the maintenance department described the problem of placing electrical panels in close proximity to jigger dyeing machines (that have open tanks for dyes) at his workplace. He explained that "jigger machine causes spillage on the panel as it takes the cloth in. The switches have to be covered with plastic to prevent short circuits." These practices disregard Rule 66-A of Gujarat Factories Rules, 1963.

Table 8: Occupational practices

Heading	Agreed
No safety gear or equipment	38%
Cleaning using brooms and mop	100%
Accumulation of fabric/ fibre dust	99%
Exposed wires	75%

Table 9: Relevant sections and rules

- Section 32 mandates that all floors, steps, stairs and passages must be kept free from obstructions and substances.
- Section 38 mandates that all practicable measures must be taken to prevent fire outbreaks and to provide safe means of escape for all persons in the event of a fire.
- Rule 66 under Section 38 provides for having "adequate", "unobstructed", "substantial", "unimpeded" and "direct" means of escape and access to exits, passages and staircases in case of fire.
- Rule 66-A under Section 38 covers precautions to be taken in case of processes involving serious fire hazards and cases with danger of ignition. It also contains specific provisions for effective fire exits and a layout that permits unobstructed egress.
- Schedule XII, Manipulation of Acids and Alkalies, under Rule 102, that prescribes safety precautions and standards, is applicable wherever select acids and alkalies are manufactured, handled, stored or used.

Labour Management Practices

Raising Safety Concerns

Workers engaged in hazardous processes have a right to bring any reasonable apprehension of imminent danger to their life or health due to any accident to the notice of the factory occupier, manager or in-charge of the factory or the concerned process. On receiving such a notice, the person notified is duty-bound to take remedial action and send a report of the action taken to the factory inspector.[14] This right has been repeated under Section 89 of the OSHWC Code.

A general right under Section 111A of the Factories Act, 1948, allows workers to obtain workplace health and safety-related information from the factory; workers can also raise issues relating to their health and safety. Inadequacies in provisions for the protection of their health and safety at the factory premises can be brought to the notice of the inspector, directly by the worker or through their representative, by making a complaint or representation.

According to Section 118A of the Factories Act, 1948, the factory inspector is obliged to treat complaints made by workers as confidential. The inspector cannot reveal the identity of the complainant to the factory employer or his representative during a resulting inspection of the named factory premises, unless the complainant provides his or her consent. However, the Gujarat Factories Rules, 1963, neither spells out how complaints under Section 111A are to be treated, nor makes it obligatory for the inspector to take action based on them.

This right has been trimmed down under Section 14 of the OSHWC Code. The worker cannot notify the inspector directly in the first instance without first notifying the issue to his employer. Further, doing so through a representative has been removed.

The survey did not obtain information on the operation of these mechanisms. However, they are rendered illusory by the prevalent labour management norms that have been described ahead.

Fear of Reprisal

Only a few among the surveyed workers were unaware of the fire at Nandan Denim Limited last year. The incident had instilled a sense of fear among workers about the lack of fire extinguishers at their workplaces. However, those working at Nandan Denim reported feeling safer after the outbreak. They reported that the owner had made several alterations at the factory, mainly to do with the installation of ladders, emergency exits, and fire hydrants. One of them stated that "fire extinguishers are visible everywhere in the factory now. There is a lot of monitoring at the factory." These changes happened as the incident on February 8, 2020 had exposed the factory to external scrutiny, which was followed by a swift implementation of visible structural solutions. The scrutiny, however, had no impact on the daily exploitative practices that impair the ability of workers to raise safety issues, or even openly talk about the incident. On this, a worker commented, "Even today such behaviour is discouraged by *seth* log (factory management). They will say don't come from tomorrow." A worker in the storage room for dyes added, "Workers attempting to unionise are immediately fired to make an example of them." Factories are highly fragmented spaces, with each process being run by separate specialised contractors, each with their own team of workers. This deepens the isolation of workers and is by no means conducive to unionisation.[15]

94% of the workers worried about their workplace safety and 92% could even identify places in the factory where they felt unsafe. Further, 69% of the workers believed that workplace safety was the responsibility of the principal employer and the contractor, yet 64% were unwilling to raise safety concerns with them (see Table 10) for fear of losing their jobs. A worker stated that *"agar kuch kahen toh ulta jawab milta hain. Karigar ka kahaan mantey hain."* (If we say something, we face retaliation; after all, who ever listens to a lowly worker?). Retaliation by employers is a common practice that instils fear among workers. Such action often takes the form of lay-off without notice and due wages, verbal abuse, intimidation, threats to life and limb and so on. Disappearance of workers is also not unheard of.

Employer-Employee Relationship Dynamics

Workers employed in the lower ranks, the ones who face hazards more frequently, are more reluctant to raise any concerns. Their direct employer is usually a worker higher up in the ranks or an external contractor who pays them a weekly or daily *kharchi.* There is also no pay slip involved, leaving workers with no trail of evidence to ever claim an employment relationship. Other evidence, such as the worker's attendance recorded at entry/exit points, is also not available with the worker. The Factories Act, 1948, has a very wide definition of 'worker' under Section 2(l), which recognises even contractual or casual engagements. However, because these work relationships are informal, social customs regulate them more and bind the worker's voice. Meagre earnings and migrant status of the workers make them particularly vulnerable to the forces in the city. Not raising their voice against their *thekedaar,* their only support in the city is a trade-off in exchange for livelihood, food and shelter. In some cases, the contractor is from their taluka, village or a distant relative.

This informality in work relationships also prevents those in higher roles from negotiating or complaining about working conditions and issues. There is also a reluctance to take these issues forward with the authorities, as argued by Jayaram and Varma, 2020. An operator narrated an incident wherein he suffered temporary blindness due to his floor master's negligence in handling bleach. Yet, he refrained from reporting the issue.

The floor master was trying to remove residual bleach from its drum with the help of a tube light instead of using an insulator material such as a wooden stick. On the spur of the moment, the operator looked into the drum as well. Under normal circumstances, he wouldn't have done so since it emits noxious fumes. Meanwhile, the temperature of the bleach rose because of which

the tube light exploded. The bleach spilled onto the master's clothes and some drops fell on the operator's face, instantly irritating his eyes and nose, causing minor burns on his face and temporary blindness. He immediately ran to wash his eyes and later visited a doctor at a private clinic near his room. The doctor was hesitant to take up his case because he would have to report it to the police. The operator did not want this and insisted against it as he felt that reporting it would lead to him losing his job. Eventually, the doctor agreed to treat him without reporting the issue.

These complex subcontracting and outsourcing arrangements also alienate the workers from their workplace. Apart from 21 workers who were regular employees and assigned higher roles, the rest of the workers did not know who their principal employer, factory managers, owners, and safety officers were and tended to have limited knowledge about the final product of their factories or its market.

Normalised Exploitative Practices

The safety committee is a mechanism to oversee workers' health and safety under the Factories Act, 1948. It enables workers' representation in the regulation of occupational safety and health at their workplaces. The constitution of the safety committee is applicable only to industries involving hazardous processes that have been notified under Schedule I of the act, or where hazardous substances are used or handled. Under the OSHWC Code, this mechanism has been relegated from a right to rule, obligating only those notified by the appropriate government to constitute a safety committee.[16] The safety committee is a bipartite participatory platform that is charged with, inter alia, identifying and rectifying occupational hazards faced by workers, building safety awareness amongst them and undertaking their training. It can also obtain workers' feedback on the measures in place. This is sought to be ensured by equal representation of workers on this committee. Workers' representatives are empanelled by election among workers; through them, workers would be able to voice their health and safety concerns. However, this also does not guarantee the representation of contractual or casual workers who have not made it to the rolls of the factory. It is pertinent to mention here that 99% of the workers were unaware of the existence of such a committee in their factories (see Table 4, No. 14), suggestive of this exclusion.

Employers abstain from engaging in the everyday issues of workers. The highly prevalent system of contractual employment (reported by 96% of the workers) allows them to do so. A fitter—a maintenance worker who fixes leakages in pipes that carry hazardous chemicals, hot water, hot oil and steam from the boiler—revealed that "getting burns on hands from residual content in pipes was common." He also added that his work is always treated as being on priority regardless of his break time or overtime or level of risk involved in the work. He stated that "engineer will say, 'Do it quickly', but I am the one bearing the risk of spills and burns." The burden of these hazards is shifted from the employer onto the worker. Injuries are treated as the worker's own fault.

Not surprisingly, 31% of the workers felt that personal safety was their own responsibility (as against that of the factory employer's or contractor's). In case of serious injuries or illnesses, workers rely on private clinics in their neighbourhood, or are sent back to their village, thus passing the burden to the worker's family. Research by Mezzadri and Srivastava (2015) on the garment industry in NCR exemplified this pattern. They found that workers, who lacked support from employers and state for accessing health service, had to rely primarily on their own ability to access private clinics.

Concerns beyond factory life—such as the choice of accommodation, access to sanitation and so on—that are directly dependent upon the worker's livelihood are the welfare obligations of marginally capable contractors.[17] As a result, workers hired through external contractors were especially not provided adequate shelter or facilities.

In the case of male migrant workers, who are not accompanied by family members, the *thekedaar* is often from the same region as them or a kinfolk, and assumes a paternal role. This connection is misused to subjugate the workers. As noted above in the section on use and handling of chemicals, helpers learnt of on-the-job hazards while doing their jobs by mimicking their co-workers' behaviours, from the rebuke of their supervisors or *thekedaar* and—sometimes—by inadvertently exposing themselves to injuries. 94% and 96% of the workers reported never having received any explicit prior information and never having received training on occupational hazards, respectively (see Table 10).

The assimilation of these norms is also visible in the fact that flexible 12-hour long shifts (98%) (see Table 1) and the unpredictability of daily tasks (84%) are predominant traits of this work. The profit margins of these factories depend largely on the maximum extraction of labour and on cost cutting with regards to provisions to workers. Consequently, workers' health and safety suffer, the brunt of which has to borne by the worker alone.

Table 10: Managerial practices

Headings	Agreed
Worried about safety	94%
Can identify places that feel unsafe	92%
Workplace safety can be improved	100%
Unwilling to raise workplace safety concerns	64%
Personal safety is own responsibilit	31%
Unpredictable daily tasks	84%
On-site living and cooking	18%
Lack of unambiguous information on hazards	94%
Lack of training	96%
Increased workload since unlockdown	73%
Increase in wages, if workload increased since unlockdown	2%

Conclusion

The report unpacks an oversimplified representation of industrial accidents and tries to shift the gaze towards routine labour practices that enable them. Its findings are drawn from interviews, focused group discussions and a questionnaire-based survey with 95 workers employed in the large-sized textile processing factories in Narol. The factories were found to be characterised by unsafe working conditions such as exposure to harsh and hazardous substances, high heat and dust pollution. In terms of fire safety, factories appear to have catered to it 'visually' by providing fire extinguishers and fire exits. However, a closer look reveals that the areas invisible to the outside are ill-equipped with even basic workplace safety. The factory floor is marked by an overwhelming presence of fire hazards: ignition sources such as exposed live wires and combustible and flammable materials such as fabric dust, hazardous chemicals. The level of risk faced by workers on any given day is alarming. Lack of training and familiarity of the workers with emergency protocols compounds this risk.

However, apart from the physical safety of workers, other unexceptional safety issues commonly endured by workers that turn factories into lethal sites have also been highlighted in the course of this inquiry. While it is tempting to look at the former since it invites swift solutions, the latter demonstrates the need to expand from the restricted 'visual' approach. Daily minor calamities have resulted in a widely shared notion of 'risk being omnipresent' among the workers. Structural solutions have no impact on the abusive conditions that workers are subjected to and that stifle their ability to raise concerns. The denial of safe and healthy working conditions to workers arises out of the multiple ways in which employers transfer responsibility of safety and health onto the marginally equipped contractor and, eventually, the worker. Regular employment in these factories also does not appear to be of much help to the workers either; consequently, absorption may not necessarily provide a solution to the problem of safety. The informality in work relationships prevents workers from negotiating safer working conditions. All of this translates to the workers finding themselves trapped alone with the burden of ensuring their own safety.

Implications

The conditions captured in this report demonstrate a daily infringement of the right of workers to safe working conditions, a right that was sought to be protected by the Factories Act, 1948. This examination of the textile processing industrial cluster at Narol establishes not only a mere compliance failure by the factories, but also a wilful disregard of the many safety prescriptions under the act by allowing such conditions to illegally persist. In such a compelling scenario, the statutory enforcement machinery cannot be countenanced to be set into motion only in response to catastrophic industrial accidents.

The persistence of such conditions in factories at large also displays the failure of the inspection machinery, particularly to discharge its duty of upholding the provisions of the Factories Act, 1948. Under Section 41D, an inquiry can also be ordered by the state into the standards of health and safety. Medical records kept by factories can also be investigated. Section 9 of the act grants very wide powers to the factories inspectors, including empowering them to enter any factory premises to inspect its conditions and take action. These also must be interpreted as functions that are not merely discretionary but carry an obligation to adequately discharge them. Despite all those measures that can be undertaken, these practices and conditions have been found to be the norm, rendering the provisions of the Factories Act illusory.

The state is under an obligation to prevent exploitation and maintain the prescribed health and safety safeguards for workers.[18] It must also doubly monitor and protect the interests of workers who are economically compelled to work in such dangerous conditions. Regarding this, Justice D.Y. Chandrachud, in *Mangesh G Salodkar v. Monsanto Chemicals of India Ltd & Ors.,* (2007 (2) BomCR 883) before the Bombay High Court noted that "economic necessity poses a serious constraint upon workers complaining about conditions of work. The choice is between economic death, as industrial law often describes the consequences of termination, or disease, debilitation and death caused by working in a hazardous environment. Prospective workers have no bargaining power to scrutinise working conditions. Present workers are chilled into silence. Past workers are lost in the oblivion of faded memories. The regulatory authority entrusted with the task of enforcing statutory standards designed to promote health, safety and welfare of workers, therefore, has a vital role to play in the achievement of statutory norms [19] ."

Similarly, the failure to discharge this duty can be argued to be an infringement of the right to health of workers, which is an integral part of their right to life under Article 21, as held by the Supreme Court of India in Consumer Education & Research Society v. Union of India (1995 SCC (3) 42).

Next Steps

The conditions unveiled by the report cannot loom at large and with such persistence without awareness of the principal employer. While they may not have the intent to cause injury, the employers have sufficient knowledge of the provable effects of their inaction. Moreover, any reasonable person can foresee that in such conditions, fire disasters, injuries and fatalities are likely to occur, putting the lives of their workers at a constant risk. The report can be employed to advocate for improved working conditions through collectively seeking protection of the right of workers to safe working conditions. The report can also be employed to advocate for the strengthening of individual claims for workers, who suffer as a result of inattention towards their occupational health and safety ordeals.

In case of listed companies, the corporate veil of the establishment must be pierced to ascertain and extend the onus of liability. Responsibility can also be extended along production networks and supply chains, particularly where the names of the retailers are well known. The buyers from these factories are complicit in the prevalence of these conditions. The exploitative practices revealed by the report are not isolated from market practices. Causes are made attributable to the technical issues rather than the terms maintained by the buyers. However, presently, knowledge on this aspect with respect to Narol is limited. As this cluster appears to be at the far end from consumers, where guilty factories have no public face and therefore no reputation to worry about, the state's vital duty to intervene to ameliorate the working conditions and safeguard the interests of workers must be reaffirmed.

1. 'Size' of a unit can be an indicator of its capital investment, turnover, production scale as well as its workforce. For the purpose of this study, we have chosen the size of the workforce to represent that of a unit.
2. The narration of the incident is reconstructed from news reports, reports from workers who survived the fire outbreak, other workers of the department and factory, and interactions with fire dept. officers.
3. Only payroll workers seem to have been accounted in the reported figures. Other workers of the factory, who also work in this department, report that a shift has around 250 workers.
4. Order dated 17 March 2020, Jyotiprasad Devkinandan Chiripal v. State of Gujarat, Cr.M.A. No.4655 of 2020, Gujarat High Court. For orders in other applications see, Cr.M.A. No.5801 of 2020, 3431 of 2020, 3435 of 2020, 3434 of 2020.
5. For the purpose of this study, we have chosen the size of the workforce to represent the 'size' of a unit. The study focuses on units employing roughly 500 or more workers and run by registered companies. These were largely identified by the survey team, leaders of KSS and the workers themselves. Factories are required to display their name, ownership status, nature of work and other information at their main gates that allowed confirming their identities.
6. Contractors that are engaged by the factory for the purpose of employing contract workers, as against workers who double up as petty contractors to hire 'helpers' or additional workers during peak seasons. See, Mezzadri and Srivastava (2015) who define 'external contractors' as a type of unregistered form of contracting where they 'command' a significant number of workers.
7. The OSHWC Code has expressly recognised the exclusion of housekeeping and sanitation work from the 'core activity of an establishment' defined under Section 2(p), therefore, continuing permissibility to employ contract workers in such activities.
8. See Sections 16, 17, 18 and 19 under Chapter V of the Contract Labour (Regulation and Abolition) Act, 1972. As per Section 53 of the OSHWC Code, 2020, the principal employer is liable to provide contract workers with welfare facilities. However, Rule 70(1)(c) OSHWC Draft Rules, 2020, meant to give effect is vague and inconsistently phrased.
9. Section 2(n) of the Factories Act, 1948, "occupier" of a factory means the person who has ultimate control over the affairs of the factory...."
10. Section 20 of the Contract Labour (Regulation and Abolition) Act, 1972; See also People's Union for Democratic Rights v. Union of India, 1983 SCR (1) 456.
11. Section 51 and 54 of the Factories Act, 1948.
12. Section 59(1) of the Factories Act, 1948.
13. See Sections 25B (definition of continuous service) and 25F (conditions precedent to retrenchment of workmen) of the Industrial Disputes Act, 1947.
14. Section 41H of the Factories Act, 1948
15. The survey did not inquire into collective action on workplace safety issues.
16. See Sections 22(1), 133(2)(n) and Second Schedule of the OSHWC Code, 2020.
17. See for instance, Chapter V under the Contract Labour (Regulation and Abolition) Act, 1972 and Chapter V under the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.
18. BHIKUSA YAMASA KSHATRIYA (P) LTD. Vs. UNION OF INDIA, AIR 1963 SC 1591, para 9
19. Mangesh G Salodkar v. Monsanto Chemicals of India Ltd & Ors., 2007 (2) BomCR 883, para 19.

References

Aajeevika Bureau (2017), "Settlements of the Un-Sedentary", A Study on the living conditions of seasonal labour migrants in Ahmedabad City. Available at <https://counterview1.files.wordpress.com/2017/11/research-paper-settlements-of-the-un-sedentary.pdf> (last accessed on 30 April 2021)

Aajeevika Bureau (2014), "Their own country: A profile of labour migration from Rajasthan." Chapter 6: 59-73. Available at <http://www.aajeevika.org/assets/pdfs/Their%20Own%20Country.pdf> (last accessed on 30 April 2021)

Ashraf, Hasan (2017), "Beyond building safety: an ethnographic account of health and well-being on the Bangladesh garment shop floor." In: Prentice, R., De Neve, G. (Eds.), Unmaking the Global Sweatshop: Health and Safety of the World's Garment Workers. University of Pennsylvania Press.

Hindustan Times (2020), "Gujarat factory fire death toll rises to 7", 10 February 2020. Available at <https://www.hindustantimes.com/india-news/gujarat-factory-fire-death-toll-rises-to-7/story-hNufgGitqBD5CAYLonjCcJ.html> (last accessed on 30 April 2021)

Indian Express (2020), "Seven workers die in fire at denim factory unit in Ahmedabad", 10 February, 2020. Available at <https://indianexpress.com/article/cities/ahmedabad/seven-workers-die-in-fire-at-denim-factory-unit-in-ahmedabad-6259690/> (last accessed on 30 April 2021)

Jain, Priyanka, and Amrita Sharma (2018), "Seasonal migration of adivasis from southern Rajasthan: A political economy view of labour mobility". Journal of Interdisciplinary Economics 31(1): 63–99.

Jayaram, Nivedita, and Divya Varma (2020), "Examining the 'Labour' in labour migration: Migrant workers' informal work arrangements and access to labour rights in urban sectors". The Indian Journal of Labour Economics. 63, 999–1019 (2020). https://doi.org/10.1007/s41027-020-00288-5

Mahadevia, Darshini, Renu Desai and Suchita Vyas (2014), "City Profile: Ahmedabad", Working Paper 26, Centre for Urban Equity, CEPT University, Ahmedabad, September

Mezzadri, Alessandra and Ravi Srivastava (2015), "Labour regimes in the Indian garment sector: capital-labour relations, social reproduction and labour standards in the National Capital Region", *Report of the ESRC-DFID Research Project 'Labour Standards and the Working Poor in China and India'*, Centre for Development Policy and Research, October 2015: 102

The New Indian Express (2021), "Gujarat: 421 workers killed in industrial accidents in two years", 16 March 2021. Available at <https://www.newindianexpress.com/nation/2021/mar/16/gujarat421-workers-killed-in-industrial-accidents-in-twoyears-2277468.html> (last accessed on 30 April 2021)

Patel, Jagdish (1999), "Health and safety at workplaces: Loopholes in the law". Economic and Political Weekly (January 1999) 34(3): 86-89.

Times of India (2020), "Blaze again at Nandan Denim, AFES takes 3 hours to douse", 9 August 2020. <https://timesofindia.indiatimes.com/city/ahmedabad/blaze-again-at-nandan-denim-afes-takes-3-hours-to-douse/articleshow/77439801.cms>

Wadud, Fuad Yasin Huda and Nizam Uddin Ahmed (2014), "Assessment of fire risk in the readymade garment industry in Dhaka, Bangladesh", doi: 10.1007/s10694-013-0349-2.

Annexure-1: Relevant Legal Provisions

Comparison of relevant provisions under existing labour legislations and OSHWC Code, 2020.

Working conditions:

Heading	Factories Act, 1948	OSHWC Code, 2020
Applicability	Every factory employing ten or more workmen	Every establishment employing ten or more workers; Part VII specifically relates to factories
Occupier	Section 2(n)	Section 2(zs)
Factory	Section 2(m)	Section 2(w)
Worker	Section 2(l)	Section 2(zzl)
Ventilation and temperature	Section 13	Section 23
Dust and fume	Section 14	Section 23
Floors, stairs and means of access	Section 32	Second Schedule
Precautions in case of fire	Section 38	Second Schedule
Safety officers	Section 40B	Section 22(2)
Safety committees	Section 41G	Section 22(1)
Right of workers	Section 41H	Section 89
Permissible limits of exposure of chemical and toxic substances	Section 41F	Section 88
Weekly hours	Section 51	Section 26
Daily hours	Section 54	Section 25(1)(a)
Spread over	Section 56	-
Overtime	Section 59	Section 27
Right of workers	Section 111A	Section 14
Restriction on disclosure	Section 118A	-

Contract labour:

Heading	Contract Labour (Regulation and Abolition) Act, 1970	OSHWC Code, 2020
Applicability	Every establishment or contractor employing 20 or more workmen	Every establishment or contractor employing 50 or more contract labourers
Canteens	Section 16	Section 24
Rest-rooms	Section 17	Section 24
Other facilities	Section 18	Section 24
First-aid facilities	Section 19	Section 24
Liability of principal employer	Section 20	Section 53
Payment of Wages	Section 21	Section 55

Annexure-2: Sample Questions to Guide Interactions with Workers

1. क्या आपने हाल ही में कारखानों में आग लगने की घटनाओं के बारे में सुना है?
2. फायर सेफ्टी से आप क्या समझते हैं?
3. काम पर अपने दिन का वर्णन करें।
4. अपने कार्यस्थल और कारखाने का वर्णन करें।
5. Fire Compliance

Sr. No.	**Hard Compliance**	**Soft Compliance** (any other pointed out by participant)	**Y / N**	**No.**	**Other**
		Presence of Source of Fire			
1		Exposed electric line			
2		Broken sockets			
		Presence of Combustible Material -			
3		Chemicals			
4		Fabric dust			
5		Material (grey material thaans/ finished material/fabric pieces)			
6	Fire Extinguisher	Availability			
		Training to operate			
		Workability tested / Service done?			
7	Fire-Exit Sign				
8	Fire-Exit and Corridor	Type of door and unlocked condition			
		Number of workers per floor			
		Obstructions by material or machine?			
9	First-Aid	Availability			
		Training			

10	Automatic Sprinkler				
11	Fire Hydrant	Availability			
		Accessibility			
		Workable - supply of water? Tested?			
		Training			
12	On-Site Emergency Plan	Announcement or alarm?			
		Practice of fire drill?			
		Time take to exit your floor and factory?			
		Location of main switch board			
13	Stairway	Available?			
		Accessible?			
14	Safety Committee				
15	Safety Officer				

6. फ़ैक्टरी पर फायर सेफ्टी सुनिश्चित करने का दायित्व किसके पास है?
7. क्या आप अपने कार्यस्थल पर फायर सेफ्टी की चिंता करते हैं?
8. महामारी ने आपके कार्यभार को कैसे प्रभावित किया है?

Annexure-3: Questionnaire for Survey of Workers

सर्वेक्षण प्रपत्र

दिनांक और समय:

नाम:

मोबाइल नम्बर:

उम्र:

प्रश्न	**Yes**	**No**
परिचयात्मक		
आप क्या काम करते हो ?		
आप इस फैक्ट्री में कितने समय से काम कर रहे हैं ?		
आप कितने घंटे काम करते हैं?		
क्या आप फैक्ट्री के पेरोल पर हो?		
यदि हां, तो क्या आपको PF/ESIC की सुविधा मिलती हैं ?		
इस लाइन में आप कितने समय से काम कर रहे हैं?		
क्या आपके हर दिन के काम का टार्गेट अनिश्चित होता है?		
क्या लॉकडाउन के बाद से आपका काम बढ़ गया है?		
यदि हां, तो क्या आपकी पगार बढ़ी है?		
यदि हां, तो क्या आपकी पगार घटी है?		
क्या आपको अपने काम में मौजूद रसायन / जोखिम के बारे में कोई पूर्व सूचना मिली थी?		
क्या आपको अपने काम में मौजूद रसायन / जोखिम के बारे में कोई प्रशिक्षण मिला था?		
क्या आपके कारखाने में सुरक्षा समिति है?		
कारखाने में रहने वालों के बारे में		
क्या आपके कारखाने में ऐसे श्रमिक है जो कारखाने के अंदर रहते हैं?		
क्या आप कारखाने में रहते हैं?		
यदि हाँ, तो आपके साथ और कितने श्रमिक रहते हैं?		

प्रोसेसिंग विभाग के श्रमिक		
क्या आपके काम में रसायन (जैसे की एसिड, डाई) का उपयोग होता है?		
क्या आप काम करते वक्त दस्ताने और जूते का उपयोग करते है?		
क्या आपके विभाग में रसायन रखने के लिए कोई निश्चित जगह दी गयी हैं?		
क्या रसायन गैलनो और कंटेनरों को कभी कभार मशीन / पैसेज / दरवाज़े के आस-पास रखा पाया जाता है?		
क्या रसायन को गैलन में ले जाया जाता है?		
क्या यह गैलन खराब स्थिति में होते है? जैसे की पुराने, टूटे हुए.		
क्या आप कभी फर्श पर डाई, एसिड जैसे रसायन गिरा / फैल पाते हैं?		
क्या आप मानते है की रसायनो को और सुरक्षित ढंगे से इस्तेमाल किया जा सकता है?		
क्या आपके विभाग में मटेरियल रखने के लिए कोई निश्चित जगह दी गयी हैं?		
क्या मटेरियल जैसे की ग्रे माल मशीनों के आस-पास, पैसेज में पाया जाता है?		
क्या मटेरियल दरवाजों के आस-पास भी रखा पाया जाता है?		
क्या आपके कारखाने में कपड़े की धूल जमा होती है? जैसे की बिजली के तारों, पैनल, स्विच बोर्ड और मशीनें पर।		
क्या आपने कारखाने में कभी कोई खुली तारें, टूटे स्विच बोर्ड देखें हैं?		
पैकिंग विभाग के श्रमिक		
क्या आपके विभाग में मटेरियल रखने के लिए कोई निश्चित जगह दी गयी हैं?		
क्या मटेरियल मशीन, पैसेज, दरवाज़े / सीढ़ी के आस-पास रखा पाया जाता है?		
क्या मटेरियल उच्चे ढेरों में रखा जाता है?		
क्या मटेरियल को बेतरतीब ढंग से रखा जाता है?		
क्या आप मानते है कि मटेरियल को बेहतर और नियमित ढंग से रखा जा सकता है?		
क्या आपने कारखाने में कोई खुली तारें, टूटे स्विच बोर्ड देखें है?		
मेंटेनेंस / हाउसकीपिंग विभाग के श्रमिक		

क्या आपके कारखाने में कपड़े की धूल जमा होती है? जैसे की बिजली के तारों, पैनल, स्विच बोर्ड और मशीनें पर।		
यदि हां, तो यह कितनी बार साफ किया जाता है?		
क्या यह झाड़ू और कपडे से साफ किया जाता है?		
क्या फर्श को झाड़ू और पोछे से साफ किया जाता है?		
आप फर्श पर क्या कचरा पाते हैं?		
क्या आप फर्श पर डाई, एसिड जैसे रसायन गिरा / फैल पाते हैं?		
क्या आपको अपने काम के लिए कोई सुरक्षा उपकरण दिए गए हैं?		
क्या आपने कारखाने में कोई खुली तारें देखें है?		
क्या आपने कारखाने में कोई खुले या टूटे सॉकेट, प्लग पॉइंट देखें है?		
क्या आप चलती मशीनों के करीबी में काम करते हैं?		
क्या आपको चलती मशीन पर काम करना पड़ता हैं?		
काम करने की स्थिति और अग्नि सुरक्षा की व्यवस्था		
क्या आप उच्च गर्मी की स्थिति में काम करते हैं?		
क्या कारखाने के अंदर का नक्शा जटिल है? [यदि आप नक्शा नहीं जानते हैं तो क्या आप कारखाने में खो सकते हैं?]		
आप किस मंजिल पर काम करते हैं?		
यदि उपयुक्त, तो आपके आसपास कितनी सीढ़ियां हैं?		
आपके आसपास कितने दरवाज़े हैं?		
क्या इन दरवाज़ों पर फायर एग्जिट का बोर्ड लगा हैं?		
क्या यह दरवाज़े खुले रहते हैं?		
क्या यह शटर वाले दरवाज़े हैं?		
क्या दरवाज़ों के रस्ते में या उनके आगे सामान पड़ा रहता हैं?		
यदि हा, तो क्या आप मानते है की यह सामान भागने में अड़चन बन सकता हैं?		

क्या आप जानते हैं कि आग लगने की स्थिति में क्या करना चाहिए?		
क्या आपके कारखाने में मॉक ड्रिल किया जाता है?		
क्या आपके कारखाने में फायर अलार्म हैं?		
क्या आप अपने आस-पास में आग लगने के साधन पहचान पाते हैं ?		
क्या आप मानते है की कपडे की धूल, खुली तारें, टूटे सॉकेट, एसिड जैसे रसायन आग लगने का साधन है?		
क्या आप मानते है की आपके कारखाने में आग लगने के जोखिम मौजूद है?		
क्या आपके कारखाने में कोई आग से सम्बंधित घटना हुई है?		
आपके विभाग/मंजिल में कितने श्रमिक हैं?		
फैक्ट्री से निकलने में आप सबको कितना समय लगेगा?		
क्या आपके कारखाने में फायर एक्सटीन्गुइशेर (अग्निशामक यंत्र) हैं?		
क्या आपने इनका परीक्षण या बदलाव होते देखा है?		
क्या आपके कारखाने में फायर हाइड्रेंट हैं?		
क्या आपने इनका परीक्षण या बदलाव होते देखा है?		
क्या आपको इन यंत्रों को चलाना आता है?		
क्या आपके कारखाने में कोई पानी छिड़काव के लिए स्वचालित व्यवस्था है? (जैसे की स्वचालित स्प्रिंकलर)		
क्या आपके कारखाने में फर्स्ट ऐड की व्यवस्था हैं?		
क्या आप अपनी सुरक्षा के लिए चिंतित होते हैं?		
क्या आपके कारखाने में ऐसी कोई जगह है जहाँ आप असुरक्षित महसूस करते है?		
क्या आप अपनी सुरक्षा चिंताओं के बारे में मालिक/सेठ को बताते हैं?		
क्या आप मानते है की अग्नि सुरक्षा की व्यवस्था मालिक/सेठ की जिम्मेदारी हैं?		
क्या आप मानते है कि श्रमिक की सुरक्षा के लिए और व्यवस्था होनी चाहिए?		
क्या आपकी सुरक्षा के लिए मालिक/सेठ/ठेकेदार जिम्मेदार हैं?		

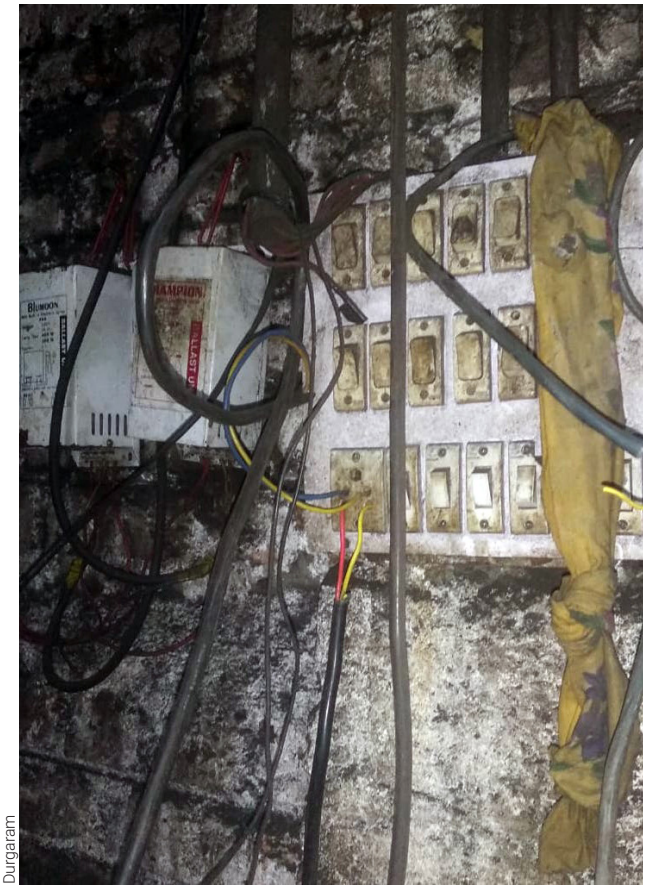
TOP: Presence of fabric dust and fumes were confirmed by 96% of the workers

BOTTOM LEFT: Workers engaged to operate boilers are not provided adequate safety gear

IMAGES: Anoop Sathyan

BELOW: Exposed wires on electrical panels were commonly reported occurrences in factories

BOTTOM: Haphazard stocking of raw materials and chemical drums on the factory floor blocking corridors and exits is routine



Durgaram

IMAGES: Anoop Sathyan

Shubham Kaushal

Aajeevika Bureau, established in 2005, is a non-profit organisation, which provides specialised services to migrant and informal workers including legal awareness and aid, healthcare, financial services and skills training. It conducts research, teaching and training and policy advocacy at local, regional and national levels through the Centre for Migration and Labour Solutions (CMLS). For sustainable change in employment and public provisioning systems, Aajeevika Bureau also undertakes grassroots mobilisation of worker communities in both rural source and urban destination areas. Through its operations across western India, in Rajasthan, Gujarat and Maharashtra, it focuses on ensuring that migrant and informal workers can - *live and work with dignity, everywhere!*