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Consequences Of Unsafe Conditions In Tannery Workers

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ABSTRACT:

Tanneries are high-risk work environments where unsafe conditions significantly endanger workers' health and safety. Unsafe acts, such as neglecting to use personal protective equipment (PPE) or improper handling of hazardous chemicals, combined with unsafe conditions like inadequate ventilation, poor machinery maintenance, and cluttered workspaces, contribute to frequent occupational accidents and chronic health issues. These factors result in severe consequences, including chemical burns, respiratory disorders, skin diseases, musculoskeletal injuries, and in extreme cases, fatalities. Furthermore, long-term exposure to toxic substances and repetitive unsafe practices increases the risk of chronic illnesses and reduces overall productivity. This abstract emphasizes the urgent need for strict enforcement of safety regulations, proper worker training, and continuous monitoring to mitigate the negative impacts of unsafe behaviours and hazardous working conditions in the tanning.

Key Words: High-risk, Unsafe, Health and safety, Improper handling of hazardous, Chemicals, Diseases.

INTRODUCTION:

The leather tanning industry involves complex processes that expose workers to various occupational hazards. Despite its economic significance, tannery workplaces often suffer from inadequate safety measures, leading to unsafe acts and unsafe conditions that compromise the health and safety of employees. Unsafe acts typically refer to the risky behaviours or neglectful actions taken by workers, such as failing to wear personal protective equipment (PPE), mishandling hazardous chemicals, or bypassing safety protocols. On the other hand, unsafe conditions include poorly maintained equipment, lack of proper ventilation, overcrowded workspaces, and insufficient emergency preparedness. Both unsafe acts and unsafe conditions can have severe consequences in tanneries. Immediate risks include physical injuries such as cuts, burns, and fractures, often resulting from accidents involving heavy.

THE ROLE WORKERS IN TANNERIES:

Workers in a tannery play a crucial role in the leather production process, which involves transforming raw animal hides or skins into durable and usable leather. Their responsibilities span across various stages of production, and their roles can vary based on the size of the tannery and its specific processes. Below are the primary roles of workers in a tannery.

1. Preparation of Hides/Skins:

Cleaning and Sorting: Workers are responsible for cleaning and sorting the hides and skins to remove dirt, hair, and other impurities before the tanning process begins.

Soaking: They soak the hides in water to soften them, making them easier to handle and treat.

2. Chemical Treatment:

Liming: Workers treat the hides with chemicals like lime to remove hair and flesh. This is an essential step before the tanning process.

De-hiring: Skilled workers use special tools or chemicals to remove hair from the hides.

Pickling and De-greasing: Workers use various chemicals to prepare the hides by removing any remaining fats or oils that could interfere with the tanning process.

3. Tanning Process:

Vegetable Tanning: Some workers may be involved in vegetable tanning, where plant-based tannins are used to treat the hides, which can take weeks.

Chrome Tanning: Workers who specialize in chrome tanning handle the chemical treatment with chromium salts, which is faster than vegetable tanning.

Other Tanning Methods: Some workers may also be trained in other tanning methods, such as aldehyde tanning or synthetic tanning.

4. Drying and Conditioning:

Drying: After tanning, workers carefully dry the leather by stretching, hanging, or using special machines, depending on the type of leather being produced.

Conditioning and Softening: Workers apply oils or conditioners to the leather to restore its natural texture and flexibility.

5. Finishing:

Polishing and Dyeing: Workers dye the leather in various colors or finish it with different textures, depending on the final product's requirements. They might also apply protective coatings to increase durability.

Cutting and Shaping: Skilled workers cut the leather into specific shapes and sizes for various products, such as shoes, bags, or garments.

6. Quality Control:

Inspection: Workers regularly inspect the leather for defects, such as tears, holes, or uneven dyeing. They ensure that only high-quality leather moves to the next stage.

Testing: Leather may be tested for strength, flexibility, and other qualities, requiring skilled workers to carry out these assessments.

7. Maintenance and Safety:

Equipment Maintenance: Workers are also responsible for maintaining machinery used throughout the tanning process, ensuring it runs efficiently and safely.

Safety Practices: Tannery workers must follow strict safety protocols, especially due to the use of hazardous chemicals, to protect themselves and their colleagues.

IMPORTANCE:

Tannery workers are extremely important for several reasons, both within the leather production process and in broader social and economic contexts. Their work ensures that the tannery operates efficiently, produces high-quality leather, and contributes to the livelihoods of many people. Here are some key points that highlight the importance of tannery workers:

1. Essential to Leather Production:

Skill and Expertise: Tannery workers possess specialized skills and knowledge essential to transforming raw hides into finished leather. Without their expertise in handling chemicals, machinery, and techniques like tanning, de-hairing, and dyeing, it would be impossible to produce the high-quality leather used in countless industries.

Quality Control: Workers are responsible for inspecting, testing, and ensuring the quality of the final leather products. Their attention to detail ensures that only the best leather reaches the market, which is crucial for industries like fashion, automotive, and furniture, where quality is key.

2. Economic Contribution:

Job Creation: Tannery workers make a significant contribution to the local economy, particularly in regions where tanning is a major industry. The leather industry provides employment to millions of workers worldwide, including those in tanneries.

Boosting Trade and Exports: High-quality leather products are often in demand internationally. Workers in tanneries play a direct role in enabling this trade, which can significantly contribute to national and local economies, especially in countries where leather is a major export.

3. Supporting Other Industries:

Supply Chain Dependence: Many industries, such as footwear, clothing, upholstery, and automotive, depend on the leather produced by tanneries. Without skilled tannery workers, these industries wouldn't have access to the raw materials needed for their products.

Leather as a by product of the Meat Industry: Tannery workers also help in utilizing a by product of the meat industry, reducing waste. Leather is often produced from animal hides that would otherwise go unused, contributing to sustainability by making use of the whole animal.

4. Health and Safety Responsibilities:

Safety in Hazardous Environments: Tannery workers play a vital role in ensuring the safe use of hazardous chemicals and maintaining safety standards. This includes following proper procedures for handling chemicals like chromium and ensuring the safety of themselves and their co-workers.

Health Monitoring: Workers must adhere to safety protocols to avoid exposure to toxic chemicals and physical harm, contributing to a healthier and safer workplace environment.

5. Cultural and Traditional Significance:

Preservation of Craftsmanship: In many regions, tanning is not only an industrial process but also a traditional craft that has been passed down through generations. Workers help preserve and carry forward these artisanal skills, ensuring that traditional methods of leatherworking continue alongside modern production techniques.

Cultural Heritage: In some cultures, the skills and practices associated with tanning have deep-rooted cultural significance. The work of tannery workers helps maintain these traditions, contributing to cultural identity and heritage.

6. Environmental Impact:

Waste Management and Sustainability: Skilled workers are involved in improving environmental practices within the tanning industry, such as better waste management and reducing harmful chemical usage. Some workers help in implementing sustainable methods like vegetable tanning, which is less harmful than chrome tanning.

Health Hazardous:

Tannery workers are at risk for a variety of health issues due to the nature of their work, which involves exposure to harmful chemicals, dust, and biological agents. Some of the diseases and conditions they might be prone to include:

1. Respiratory Diseases:

Chronic Obstructive Pulmonary Disease (COPD): Caused by exposure to dust and chemicals, including chromium compounds.

Asthma: Occupational asthma can develop due to inhalation of chemical fumes and dust particles.

Pneumoconiosis: A lung disease caused by inhaling dust, especially from leather processing.

2. Skin Disorders:

Dermatitis: Skin irritation caused by exposure to chemicals like chromium salts, which can lead to allergic reactions, rashes, and blisters.

Chemical Burns: Due to direct contact with harsh tanning agents, such as acids or alkalis.

Eczema: Chronic skin condition caused by prolonged exposure to irritants in the tannery environment.

3. Toxicity and Poisoning:

Chromium Poisoning: Exposure to chromium compounds, especially hexavalent chromium, can lead to poisoning, affecting the lungs, skin, kidneys, and liver.

Lead Poisoning: Lead-based compounds used in some tanning processes can lead to toxic accumulation in the body.

Mercury Poisoning: In some tanneries, mercury compounds are used, posing a risk for neurological and kidney damage.

4. Infectious Diseases:

Leptospirosis: This bacterial infection is contracted through contact with contaminated water or animal hides.

Anthrax: A bacterial infection that can be contracted from animal hides, particularly in industries that deal with raw or unprocessed hides.

5. Musculoskeletal Disorders:

Repetitive Strain Injuries (RSIs): Due to the repetitive nature of certain tasks, workers may experience musculoskeletal injuries, particularly in the hands, wrists, and back.

PREVENTING MEASURE:

Tannery workers can reduce their risk of developing health issues and diseases by following certain precautions and safety measures in the workplace. Some essential precautions include:

1. Personal Protective Equipment (PPE):

Gloves: Wear durable gloves to protect the skin from harmful chemicals like acids, alkalis, chromium compounds, and solvents.

Respirators and Masks: Use respirators or face masks to protect against inhaling dust, fumes, and chemicals, especially in areas with poor ventilation.

Eye Protection: Safety goggles or face shields should be worn to protect the eyes from chemical splashes, dust, and irritants.

Protective Clothing: Workers should wear long-sleeved shirts, pants, and waterproof clothing to prevent direct skin contact with chemicals.

Boots: Heavy-duty, waterproof boots can help prevent exposure to chemicals and keep workers' feet protected from hazardous materials.

2. Ventilation:

Proper Airflow: Ensure the workplace is well-ventilated to prevent the build up of toxic fumes, dust, and gases. This can be done through the installation of exhaust systems or localized ventilation.

Use of Fume Extractors: Fume extractors can help remove harmful airborne chemicals such as formaldehyde and solvents.

3. Safe Handling and Storage of Chemicals:

Labelling and Proper Storage: Chemicals should be clearly labelled, stored according to safety standards, and handled with care to prevent spills, accidents, and exposure.

Training in Handling Chemicals: Workers should be trained on how to handle chemicals safely, including how to properly mix, apply, and dispose of substances like chromium and solvents.

4. Hygiene and Sanitation:

Hand Washing: Encourage workers to wash their hands frequently, especially before eating, drinking, or touching their faces.

Clean Work Environment: Maintain a clean and organized work environment to minimize the risk of contamination and the spread of harmful bacteria and fungi.

Showers and Changing Facilities: Provide showers and separate changing areas for workers to wash off chemicals and change out of contaminated clothing at the end of shifts.

5. Regular Health Monitoring:

Medical Check-ups: Regular health check-ups and screenings (including lung function tests, skin checks, and blood tests) should be conducted to detect early signs of exposure-related diseases.

Vaccinations: Provide vaccinations against diseases like tetanus, hepatitis B, and other infections that may arise from exposure to raw hides and animal products.

6. Ergonomics and Physical Health:

Ergonomic Workstations: Set up workstations to reduce repetitive strain and musculoskeletal injuries. Workers should be trained in proper lifting techniques and posture.

Breaks and Rest Periods: Ensure workers take regular breaks to avoid physical strain and fatigue, especially when performing repetitive or physically demanding tasks.

7. Training and Education:

Safety Training: Provide regular safety training to workers, covering safe handling of chemicals, emergency procedures, and the importance of wearing PPE.

Emergency Response Plans: Workers should be trained in emergency response procedures in case of chemical spills, fires, or injuries.

8. Control of Dust and Chemical Exposure:

Dust Suppression Systems: Install dust suppression systems like water sprays or air filters to reduce dust inhalation.

Minimize Direct Chemical Contact: Use mechanical equipment or automated systems to reduce direct contact between workers and chemicals.

9. Handling Biological Hazards:

Disinfection Procedures: Implement regular disinfection procedures for tools, machinery, and work surfaces to reduce the risk of infection from bacteria or fungi.

Safe Handling of Raw Hides: Workers should wear gloves and take care when handling raw hides, as these can carry bacteria like *Leptospira* or *Bacillus anthracis* (causing anthrax).

CONCLUSION:

In conclusion, unsafe working conditions in tanneries pose significant risks to the health, safety, and well-being of workers. These risks include severe health problems such as skin diseases, respiratory issues, and even cancer, as well as physical injuries, mental health challenges, and long-term disabilities. Furthermore, workers face heightened exposure to toxic chemicals and hazardous environments, which can lead to poisoning and other serious illnesses. The negative impacts extend beyond individual workers to the broader community and environment, contributing to pollution and environmental degradation. Additionally, unsafe conditions can result in legal consequences for employers and economic losses due to reduced productivity and increased healthcare costs. To mitigate these consequences, it is crucial for industries to prioritize worker safety by enforcing strict safety standards, providing protective equipment, improving working conditions, and complying with regulations. Only through these efforts can the negative impact on workers' health and the environment be minimized, ensuring a safer, healthier workplace for all.

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These sources provide a solid foundation of evidence and case studies regarding the health risks associated with unsafe working conditions in the tannery industry.