

## IMPLEMENTATION ON BEHAVIOR BASED SAFETY IN WAREHOUSE

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**Abstract** - Requirement of law and execution of various strategies and practices by association to diminish mishaps at working environment is a continuum which has brought about new ways. The outcome showed that a sufficient improvement in wellbeing execution is conceivable with this methodology like Dock security, stack security, Manual material taking care of, rack security, PIT and Streetcar Taking care of, Gear stockpiling enclosure and Corona virus rules. Conduct Based Security (BBS) study is a cycle that makes a wellbeing organization among the executives and workers that persistently zeros in individuals' considerations and activities on theirs, and others, day by day security practices.

**Key words** (BBS, Dock safety, stack safety, Manual material handling, rack safety, PIT and Trolley Handling, Rigging storage cage and Covid 19)

### 1.INTRODUCTION

#### Behavior Based Safety

- Behaviour based safety (BBS) is a process that helps you and your co-workers identify and choose a safe behaviour over an unsafe one
- BBS looks at how three things interact to improve safety
  - Person
  - Work Environment
  - Behaviour

A behaviour-based safety approach promotes interventions that are people-focused and often incorporate one-to-one or group observations of employees performing routine work tasks, setting goals carefully and giving timely feedback on safety-related behaviour, coaching and mentoring. The initiatives have a proactive focus, encouraging individuals and their work groups to consider the potential for incident involvement, (accidents) and to assess their own behaviour as safe or unsafe always, no matter what.

### 2.Literature Review

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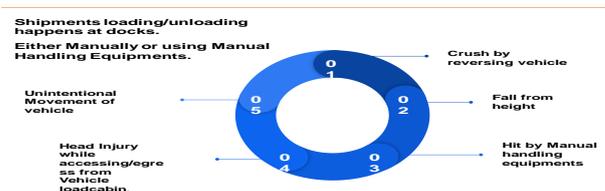
Authorization of law and execution of various techniques and practices by association to diminish mishaps at work environment is a continuum which has brought about new ways. Conduct Based Wellbeing (BBS) study is a cycle that makes a security association among the board and representatives that ceaselessly zeros in individuals' considerations and activities on theirs, and others, every day security practices. The target of this exploration is to give a choice emotionally supportive network, which will help shipyards in executing BBS. This examination is done by a pilot concentrate in a shipyard situated in South India. A gathering of 15 laborers were chosen for the examination. Wellbeing execution was additionally assessed at customary stretches to compute the improvement in the gathering.

#### 3. Problem Identification

##### 3.1 Dock safety

- Truck/Vehicle keys not shall be seized from the driver by the security personnel as the truck halts for operation at the dock.
- The key not shall be placed at key management board under control of security at all times. Security shall avoid storage of key in other locations.
- The security personal not handover the wheel chokes to driver to be kept at a proper place to avoid any 'struck by' hazard
- During vehicle loading and unloading, there are chances of unexpected movement of vehicle. Unexpected movement of trucks while parked can be result in injuries.

#### HAZARDS AT DOCK



**Fig -1:** Hazard at Dock

### 3.2 Manual Material Handling

- Manual handling means transporting a load by one or more members which includes lifting, lowering, pushing, pulling, carrying and moving
- All electrical cords, ropes, hoses, etc., shall be does not placed safely and securely to avoid hazards such as tripping or damage from oil, grease, water, or moving equipment.
- The load is carrying more than 20kg for employees result is Back injuries are the most common & severe, contusion, back pain etc.,

Hazards associated with Manual Material Handling

- Finger Crush or other limbs
- Cuts and bruises
- Sprained backs
- Contusion
- Fracture muscle strains
- Back injuries are the most common & severe , etc

### 3.3. Powered Industrial Trucks (PIT) And Trolley handling

#### Powered Industrial Trucks

- No employee shall be allowed to stand or move under raised forks
- No employee shall stand or lifted on raised forks.
- Operator shall not drive with raised forks.
- Never exceed the load limit.
- Never put your head between mast.
- Never keep your hands and legs outside the cockpit.

#### Trolley handling

- Moving two trolleys at the same time results is injury.

- Over height bags and shipment box uneven placed in trolley which may be collapse occur
- Sometimes moving a trolley rash driving which may be effect in another person
- Some of the employees moving trolley support handle
- The trolley will be sometimes may be collapse due to uneven ground surface

### 3.4. Rigging storage cage

- Don't use damaged slings
- Inside the cage not properly arranged the shipments it may collapse the cage result is any hazard
- Don't drag the cage one member its heavy weight result is ergonomics
- Some of them misusing the cage like rash moving

### 3.5. Stack safety

- Don't stack materials or load and unload materials near running machinery or near live electrical cable
- Don't block escape route, emergency equipment and pathways by stacking material
- Cant use faulty mechanical tools or machines for stacking the material.
- If stacked incorrectly, products, raw materials and other supplies can fall and cause injuries like cuts and bruises or even more serious injuries related to crushing and pinning.

### 3.6. Rack safety

- In our site having many station. In each station 20 racks were scanning purpose employees were stating five to six members during covid 19 times.
- The employees were hitting the rack by trolley due to improper and rash driving.

Hazards associated with racking.

- Fall of material from height
- Materials collapse while stacking material at racks

- Collapse of structure (racks)
- Hit by vehicle like trolley, cage and cart (near rack)
- Deformation of racks due to overloading, leading to collapse.

### 3.7. Covid 19 guidelines

- Do not let the mask hanging from the neck.
- Not maintain social distance around the site
- Avoid touching the mask while using it; if you do, clean your hands with alcohol-based hand rub or soap and water.
- If any employee found without installing Aarogya Setu App in their phone, Security personnel/ Hub-In charge needs to ensure the employee install the Aarogya Setu App before entering premises.
- During night time not done vehicle disinfecting (fumigation process). Due to vehicles coming from long distance.

## 4.IMPLEMENTATION AND TRAINING

### 4.1 Dock Safety

- Vehicle Clearance - IRN creation shall be done and concerned department shall communicate for entry of vehicle inside the premises.
- Vehicle Parking - All vehicles shall be parked at docks in such a way that no space is left between vehicle and dock leveler.
- Key Handover-Driver shall handover the key to the security personnel at dock.
- Wheel Chock - Security guard shall handover the wheel chock to driver and assist him in positioning it properly.
- Key Management - Key shall be deposited at key management board till the operations are completed at dock.
- Placing of Wheel chocks -Driver shall place the wheel chocks one at rear wheel and one at front wheel.

### Dock Safety Tips



Fig -2: Dock Safety Tips

### 4.2.Manual Material Handling



1. Task & Load – Check the load to be lifted and ensure it is less than 20kg. Lift load by understanding the CG of the load. Plan for travel distance before lifting and carrying load.
2. Blind Corners & Edges – Carry load carefully at corners and edges. Ensure no trip hazard exists.
3. Aisles and Surface – Look for slippery surfaces, electrical cords or cables on floor and any obstructions on aisles before carrying the load
4. Illumination – Adequate illumination / lighting shall be checked while doing manual handling
5. Sharp Edges / Cut Prevention – Check the materials to be lifted for nails, splinters, rough strapping, or other things that might cause injury to hands
6. Lifting Technique – For safe lifting of loads
7. Team Lifting - When the load is more than 20 kg, team lifting shall be done

Fig -3: MMH : Safe Working Practice Team Lifting

- When the load is more than 20 kg, additional manpower is required.
- Two or more members transporting a large load should adjust the load so that each member carries equal weight.
- Long objects (e.g., pipe or lumber) shall be carried on the same shoulder and the members should walk in step.
- Ensure one member has to give command and next member to follow his command.

### 4.3. Powered Industrial Trucks (PIT) And Trolley handling

#### Powered Industrial Trucks (PIT)

- Use Safe Speeds.
- Avoid abrupt stops.
- Emergency button shall be in operating condition
- Don't entertain, encourage for pick up other
- Be aware of fork position

- Keep the load level stationary when in motion. Do not overload
- Keep alert for floor conditions.
- Watch out for blind spots.
- Slow down and sound horn at corners.
- Wear hard hats, reflective jackets and safety

#### **Trolley handling**

- Never intentionally create large loads when a variety of small loads are a safer alternative
- Ensure the employee is capable of moving the trolley.
- Check the condition of the trolley before using it.
- Is the platform trolley designed for the task in hand & can the load be moved safely without risk of private injury or damage to the load or property.
- Always wear suitable loose-fitting clothing, safety footwear, and gear. Make use of private protective equipment where appropriate.
- Make sure the operator can safely load and unload the trolley (anything over 25 kg they'll need assistance – counting on the operator)

#### **4.4. Rigging storage cage**

- Make sure the staff involved are well trained and experienced.
- Use only certified tools, hoists, equipment and inspect them before each use.
- Determine the weight of the load to be lifted.
- Determine the center of gravity of the load to be lifted and attach the sling.
- Make sure the center of gravity is directly below the lifting hook.
- Determine the appropriate lifting hooks, plates, shackles or hitch for the type of load.
- Check the swing area, barricade it, and warn people nearby.
- Determine the correct sling based on the load.

- Ensure good communication between the rigger and the operator.
- Perform maintenance work only at specified locations.
- Always use appropriate PPE.

#### **4.5. Stack Safety**

- Boxes kept at the bottom of the pallet shall be free from damages and stable to avoid collapse.
- Employees involved in the storage, stacking, loading and unloading of materials must be trained to carry out their tasks safely and efficiently
- The height pallet building shall be of 6ft,
- Special care must be taken in handling and transporting flammable liquids. These should not be stored at an unsafe height.
- Stack loads evenly and straight.
- Place heavier loads on lower-to-middle shelving.
- Do not stack items high enough to block sprinklers or come in contact with overhead lights or pipes.

#### **4.6. Rack safety**

- Periodically inspect all components of the racks system of damage and any delay.
- All bracings shall be tightened properly and inspected periodically for its condition.
- Damaged racks shall be clearly identified and communicated to avoid stacking material on those racks.
- Heavy loads shall be planned to stack at the lower levels at racks and light loads to be stacked at the top of the racks.
- At any point of time, racks shall not be overloaded above its specified limit as mentioned by the manufacturer.
- In case of, alteration to any part of the rack, load assessment to be carried out before stacking at the other section of the racks.

- Employees shall be trained, communication on handling material at racks and specified safe working load of the racks.
- Don't climb on the racks. Awareness to be provided for employees on rack safety and material handling associated with racks.

#### 4.7. Covid 19 guidelines

##### Aarogya Setu app verification

- Usage of Aarogya Setu Application is mandatory for all Employees, Vendors, Contractors and stakeholders having compatible phones.
- Installation and usage of application will be physically verified at the entrance of the facility by site security personal/Hub-In charge before performing the thermal screening.
- Everyone must complete the self-assessment given in the application.
- If the Risk level shows GREEN, the person shall be allowed to enter the facility. o If the Risk level shows & AMBER, the person shall be allowed to enter the facility provided COVID Negative Test Report is produced and 3 days of isolation is completed. o If the Risk level shows RED, the person will not be allowed to enter the facility.

#### 5. Warehouse Safety -10 Tips

- All floors and aisles should be clear of anything that employees could trip on or over.
- Give plenty of rest breaks and assign employees attainable and realistic goals.
- New employees should receive material handling & ergonomic training.
- Block any open docks where an employee could fall 4 or more feet.
- Warehouses should be well ventilated.
- Employees should be trained in working in extreme hot or cold conditions.
- All facilities should have lockout/tagout procedures.
- Keep emergency buttons or pull cords for conveyors at each employee workstation.

- Instruct and train on how to handle fire, natural disaster and other hazard emergencies.
- Train all employees on safety rules and guidelines.

#### 6. Conclusion

- The concept and process of BBS can bring for safety professionals and everyone who are concerned about correcting unsafe behaviors for reduction of accidents and promoting safe behaviours for developing injury free culture in their organizations
- BBS is a process that provides organizations the opportunity to move to a higher level of safety excellence by promoting proactive responding to leading indicators that are statistically valid, building ownership, trust, and unity a cross the team, and developing empowerment opportunities which relate to employee safety.

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