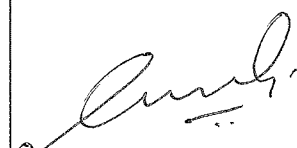
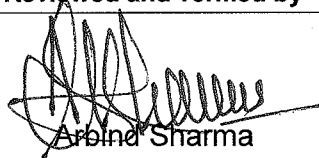
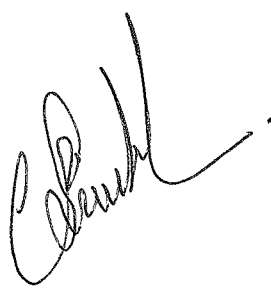
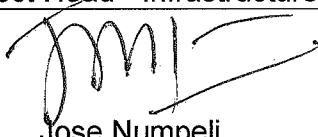



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## TECHNICAL STANDARD (TS)

# MANUAL MATERIAL HANDLING SAFETY

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20-02-23

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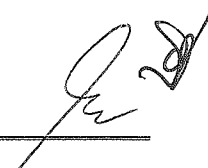
# Document Change Note

Rev. No	Rev. Date	Comments / Changes
00	19-12-2022	New Issue

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## 1 PURPOSE

This procedure outlines the requirements for identifying, evaluating and minimizing health and safety risks associated with manual handling.

## 2 SCOPE

This procedure shall apply to all AMNS project sites and related work areas including contractors to meet –

- Legal and regulatory requirements
- Project specific HSE requirements
- ISO 45001 and ISO 14001 standard requirements
- AMNS HSE Policy

## 3 DEFINITIONS

**MANUAL HANDLING:** An activity that requires the use of force exerted by a person to lift, carry, lower, push, pull, move or hold any item

## 4 RESPONSIBILITIES

The Project Head is responsible for ensuring that the project is in compliance with the general requirements and those given in this procedure. Allocate resources to reduce manual handling risks

The HSE Manager is responsible for ensuring that all workmen are trained in Manual Handling Techniques.

Supervisor is responsible:

To ensure that all workmen are provided with the suitable PPE.

Pre-work risk assessments (Job Safety Analysis) are completed prior to any work commencing.

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## **5 MANUAL MATERIAL HANDLING - SAFETY ASSURANCE**

### **5.1 GENERAL REQUIREMENTS**

Typical manual handling includes:

- Packing equipment into or removing it from packing or containers
- Lifting boxes from a shelf or other position
- Handling materials such as packages of chemicals
- Handling lifting tackle during rigging operations
- Carrying construction materials

Manual handling tasks that could result in an injury or illness to a worker typically include one or more of the following movements and actions and these tasks should be assessed to identify means to reduce the risk:

- Twisting
- Stooping or awkward posture
- Fixed, sustained, rigid or prolonged posture
- Unvaried and repetitive movement
- Sudden, uncontrolled or jerky movement
- Handling or reaching away from the body
- Using high or sustained forces
- Handling heavy or awkward loads
- Whole body or upper limb vibration
- Handling that goes on for long periods without a sufficient rest break to allow for adequate recuperation and recovery of the body

Manual handling requires assessment to determine safety controls.

### **5.2 HAZARDS DURING MANUAL MATERIAL HANDLING**

The potential hazards associated with Manual Handling are:

- Weight, dimensions and characteristics of the load
- Obstacles, obstructions or other trip hazards
- Frequency or duration of the task
- Ground / surface conditions
- Lighting and environmental conditions
- Nearby vehicles, plant or equipment
- Near by personnel (e.g. other workers)

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### 5.3 MANUAL HANDLING RISK ASSESSMENTS

AMNS recognizes the potential for injury and illness if manual handling issues are not addressed. Exposure to manual handling risks must be taken into account in the layout of facilities and procurement of equipment. Where manual handling cannot be avoided, a risk assessment is to be carried out according for Manual Handling.

### 5.4 REDUCING MANUAL HANDLING RISK FACTORS

The key to reducing manual handling risk is to recognize that all workers are individuals and have different needs in terms of their work equipment and environment and different abilities in terms of their allocated tasks.

In order to reduce the identified risk, the AMNS will adopt different control measures to reduce the risk as low as reasonably possible.

These control measures includes:

- Elimination: can the task or activity be eliminated in some way? Can manual handling be eliminated through automating a process, providing equipment, or changing the layout?
- Substitution / Reduction / Replacement: can the weight of the load be reduced (in terms of manual handling)? Can the time or duration of the task be reduced?
- Engineering controls : suitable and sufficient, adjustable equipment
- Procedural controls : documentation of appropriate work instructions
- Administrative controls : provision of information, training, instruction and appropriate intervention by supervision (apply minimum controls - see below)

### 5.5 MINIMUM CONTROLS

Gloves must be worn for all manual tasks to assist with secure hand grip, unless they are deemed to introduce or present a risk.

When moving/carrying between two points:

- Items which are pushed or pulled must be as near to waist level as possible. Pushing is preferred to pulling
- Carrying distances must be assessed and planned and kept to a minimum
- Twisting the body must be minimized

When lifting a load:

- The load must be kept as close to the body as possible, ensuring visibility of travel path is maintained.
- Unstable and awkward loads must be handled with caution, taking weight, size and the centre of gravity of the load into account (Refer rule 62 of the Gujarat Factories Rules prescribes the following maximum loads that could be manually carried or lifted)

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- An individual must not attempt to handle loads that are beyond their capability. The use of certified mechanical aids or an additional person/s to assist where the load is too heavy or large to lift / carry.

Repetitive/ Lifting/ Carrying tasks (including continuous vibration work) must incorporate breaks or task rotation.

## 5.6 MANUAL HANDLING - Do's & Don'ts

### Do's

- Avoid placing objects either very high or very low.
- Make sure your route is free from obstructions. Ensure that area is cleared to receive the load.
- Eliminate bending and/ or stooped postures.
- Use mechanical assistance (where ever possible).
- Stretch and loosen up before work
- Keep the hands away from the ends of long objects.
- Provide handles for movement of the load and to improve grip
- Altering the handles on manually pushed/pulled vehicles to a level that enables employees to keep their backs straight.
- Eliminating or reducing the distance / height a load must be carried / lifted or lowered.

### Don'ts

- Don't twist your body during this step.
- Don't lift material with oily hands.
- Don't carry the load for long time/distance.
- Don't lift material with bend back posture.
- Don't walk on slippery surface while handling.
- Don't handle the job with sharp edges
- Don't keep the fingers near to pinch points

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## 5.7 MINIMUM PPE REQUIREMENT

Head Protection	Helmet with Chin strap	Hand Protection	Hand Gloves
Body protection	Shoulder pad	Foot Protection	Safety shoes with Steel Toe

## 6 AUDITS, CORRECTIVE / PREVENTIVE ACTION

Non-conformance, once identified, shall be corrected immediately by the supervisor / site engineer. The root cause of the nonconformance shall be investigated and appropriate preventive action to be implemented at site by Project Manager. Appropriate verification and evaluation methods shall be performed in order to ensure the effectiveness of corrective actions that have been taken.

## 7 TRAINING

- All employees are trained on this procedure and made aware of their role in environmental protection and prevention of pollution and achieving the environmental objectives and targets.
- Training activities shall be documented and records shall be maintained.
- Tool Box Talk to be conduct prior to the start of the activity.
- Manual Handling Safety (Do's & Don'ts) to be displayed through safety poster.

## 8 RECORDS

S. No.	Title	Location	Retention period
01	Manual Handling Training	HSE Department	Until the completion of Project

## 9 REFERENCES

AMNS/Project/SS/HSEM/08	Hazard identification, risk assessment and control
AMNS/Project/SS/HSEM/14	Occupational Health & Hygiene