Health and Safety Services

UNIVERSITY OF GREENWICH

Guidance on Cylinders and Long Narrow Loads

Contents

1. Overview

This guidance outlines the control measures required to safely manage the manual handling of gas cylinders and long, narrow loads across University of Greenwich premises. The transportation and movement of gas cylinders is considered one of the most hazardous manual handling tasks in laboratory and technical environments, due to the weight, instability, and pressure hazard associated with these vessels. Long, narrow loads, including piping or similar equipment, can present additional risks such as musculoskeletal strain, impact injuries, or poor visibility when carried incorrectly.

The guidance aims to ensure staff, students, and visitors are protected from injury and that manual handling is conducted only where necessary and in accordance with a risk-assessed procedure.

2. Definitions

"Cylinder" - A pressure vessel designed to store gas under high pressure, typically made of steel or aluminium, and often extremely heavy and unstable when unsupported.

"Manual Handling" - Any activity involving the lifting, lowering, pushing, pulling, or carrying of a load using bodily force.

"Long Narrow Loads"- Items such as piping, poles, or elongated equipment that may require specific handling techniques due to their shape and length.

3. Roles and Responsibilities

Information on the responsibilities associated with manual handling are described in HS094 Manual Handling Code of Practice.

4. Guidance

This section outlines the practical measures and safety standards that must be followed when handling gas cylinders or long, narrow loads to prevent injury and ensure compliance with legal duties.

4.1. Handling Gas Cylinders

Before any cylinder is handled manually, a risk assessment must be completed to consider whether the handling task can be avoided altogether. If avoidance is not possible, individuals must consider the nature of the load, the task involved, the environment, and their own capability.

Gas cylinders must never be transported by students or trainees unless under direct supervision by a competent person. Only individuals who have received specific training in the safe handling of gas cylinders should carry out this task. Cylinder regulators and manifolds must only be connected or changed by individuals who have completed competency-based training.

It is essential that cylinders are always transported in an upright position using a specially designed trolley. Under no circumstances should a cylinder be rolled freely, lifted by its valve, or moved with attachments in place.

The following step-by-step process should be followed to ensure safety during transport:

- The cylinder trolley must be positioned close to the cylinder rack, and the securing bars on the trolley should be opened.
- The chain securing the cylinder to the rack must be unhooked, and the hand should be placed over the neck of the cylinder to stabilise it.

- The cylinder should be tilted forward slightly and rotated on its base edge (a method often referred to as “milk churning”) until it is in line with the trolley.
- The securing mechanism on the trolley (chains or bars) must then be fastened to prevent movement.
- With one foot placed securely on the axle, the trolley should be tilted back until the weight of the cylinder is balanced over the wheels.
- The cylinder can then be moved to its intended location, where it should again be secured using wall brackets or clamps.

Steel toe-capped safety footwear and industrial-grade gloves must be worn during the transport or delivery of cylinders, especially when moving stock from a bulk store or accepting deliveries.

Cylinders must **never** be:

- Left unsupported in an upright position.
- Moved with regulators or attachments still connected.
- Lifted by the valve or valve cap.

4.2. Handling Other, Long and Narrow, Loads

Long, narrow items may appear lighter or easier to move, but they still present risks such as awkward posture, twisting, or slips and trips. A handling aid should always be used where practicable.

Where manual handling is the only viable method, a safe lifting technique must be followed:

- If available, place a low platform or strong box under one end of the item to act as a resting surface.
- Adopt a stable posture by crouching with one foot slightly in front of the other.
- Using both hands, lift the load from the lower end and raise it to a vertical position.
- Adjust your grip so that one hand is placed approximately three-quarters up the item to support its height.
- With the other hand underneath the base, lift the item onto the platform.

- Reassess your stance and adjust posture before proceeding.
- With a straight back and knees flexed, lift with the strength of your legs, not your back, keeping the load close to your body throughout movement.
- When setting down the load, reverse the above steps in order.

Any activity involving the lifting of awkward, heavy, or oversized items must be properly assessed in line with HS094 Manual Handling Code of Practice. Staff must not lift items alone where the task clearly requires two people.

5. Further information

5.1. Related HSE Guidance:

Further general guidance on the handling of cylinders and long narrow loads can be found on Health and Safety Executive (HSE) web pages; Manual handling at work: Good handling technique - HSE.

5.2. Related University documents:

- HS094 Manual Handling Code of Practice
- Risk Management & Assessments

5.3. Other related guidance:

- Making the best use of lifting and handling aids-HSE
- Managing Upper Limb Disorders in the Workplace-HSE
- Manual Handling Assessment Charts (the MAC tool)-HSE

6. Document History

Details of previous three reviews are as follows:

Review Date	Reviewer	Summary of Review
02-08-2022	Jo Harrington (H&S Adviser)	Annual review – no changes
Aug-2023	Jo Harrington (H&S Adviser)	Annual review – no changes
28-July-25	Michelle Owusua Appiah-Agyekum (H&S Adviser)	Annual review – Transferred onto new document template and updated related links

This document will be reviewed at least annually, hereafter.