

## Handling of Cylinders Using a Crane

### Introduction

There have been requests for guidance on how to answer questions from gas cylinder customers on how to move cylinder packages using a crane. In particular, single cylinders with guards can be mishandled leading to accidents.

This Safety Information is intended to advise how to safely move single cylinders taking into account the requirements of EN and ISO standards, see EN ISO 11117, *Gas cylinders - Valve protection caps and valve guards - Design, construction and tests* and ISO 11625, *Gas cylinders -- Safe handling*.

### Guidance

EIGA strongly recommends not transporting single cylinder packages by crane without using an appropriate lifting device. Lifting shall not be attempted by wrapping a sling or chain directly around the cylinder body or by using the valve guard as a lifting device unless it has been designed and qualified for this purpose and its condition and secure attachment to the cylinder has been verified. This approach is supported by international standards, see ISO 11625 item 5.2.16.

#### 5.2.16 Handling of cylinders

*Users shall not roll or drag cylinders in the horizontal position in order to move them. A suitable hand truck, forklift truck or similar material-handling device may be used with the cylinder securely held by the device, especially for large or heavy cylinders. However, for short distances, larger cylinders may be manoeuvred manually by wheeling the cylinder on the base ring with the cylinder slightly tilted. Caution shall be used to guard against dropping or permitting cylinders to violently strike against each other or other surfaces. Do not lift cylinders by using the valve protection device unless they have been designed for that purpose. Do not use ropes, chains or slings to suspend cylinders unless the supplier has installed appropriate lifting attachments such as lugs. Suitable cradles, platforms or pallets to hold the cylinders may be used for lifting.*

*NOTE 1 - Certain smaller cylinders are designed to have a carrying handle that also serves as the valve protection device. It is safe to carry these cylinders using such handles/shrouds.*

*NOTE 2 - Personnel handling cylinders should wear appropriate protective equipment (e.g. safety shoes).*

EIGA recommends following the above principles with these additions:

- A typical device for horizontal movement is a cylinder trolley. Some trolleys are designed to be lifted by a crane and defined as lifting equipment. These trolleys need to be approved and periodically inspected.
- Lifting by a crane may also be carried out using purpose designed cages;
- Addition to Note 1: Do not carry more than one cylinder in one hand;
- Addition to Note 2: Recommendation to use gloves;
- ISO 11117 does not specify all the requirements that could be necessary to enable the valve protection device to be used for lifting the cylinder; and
- If in doubt contact your gas supplier.

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