

Transportation Instruction

Securing Pressure Cylinders during Transport

According to item 7.5.7.1 in the ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road) all goods must be secured to prevent it from being shifted or knocked over during road transportation.

Cylinders in baskets must therefore be strapped within the baskets and likewise all units must be strapped. A basket is also characterized as a unit.

Units must only be stacked if they are constructed for stacking (e.g. dry ice containers and 10 x 10 bundles with stacking tracks). Bundles with horizontal cylinders are not suitable for stacking.

Bulk and cryo containers must be placed directly at the truck bed.

Gaps on the truck bed must be minimized.

Other goods on the truck bed should also be secured, e.g. sack trolleys, electric stackers, lifting trucks etc.

As a minimum, 1 strap must be used per 2 units placed next to each other across the truck bed.

As a minimum, 2 straps must be used for horizontal cylinder bundles or for a line of horizontal cylinder bundles placed next to each other across the truck bed.

Straps used must be at least 4t and in perfect shape.



Strap in perfect shape 4t (see number of stripes)



Strap with two defects 5t (see number of stripes)

On the following pages you will find examples of correct securing of units according to the Danish and Swedish rules. The last page shows examples of correct securing according to the German (increased) rules.



Securing According to Danish and Swedish Rules

One (1) strap per 2 units next to each other across the truck bed



Securing According to Danish and Swedish Rules

Horizontal cylinder bundles must always be secured with 2 straps per battery or 2 straps per 2 bundles lying next to each other across the truck bed.



Securing According to Danish and Swedish Rules

Only units suitable for stacking and of the same type must be stacked. One (1) strap per line across the truck bed and 2 straps on horizontal cylinder bundles.



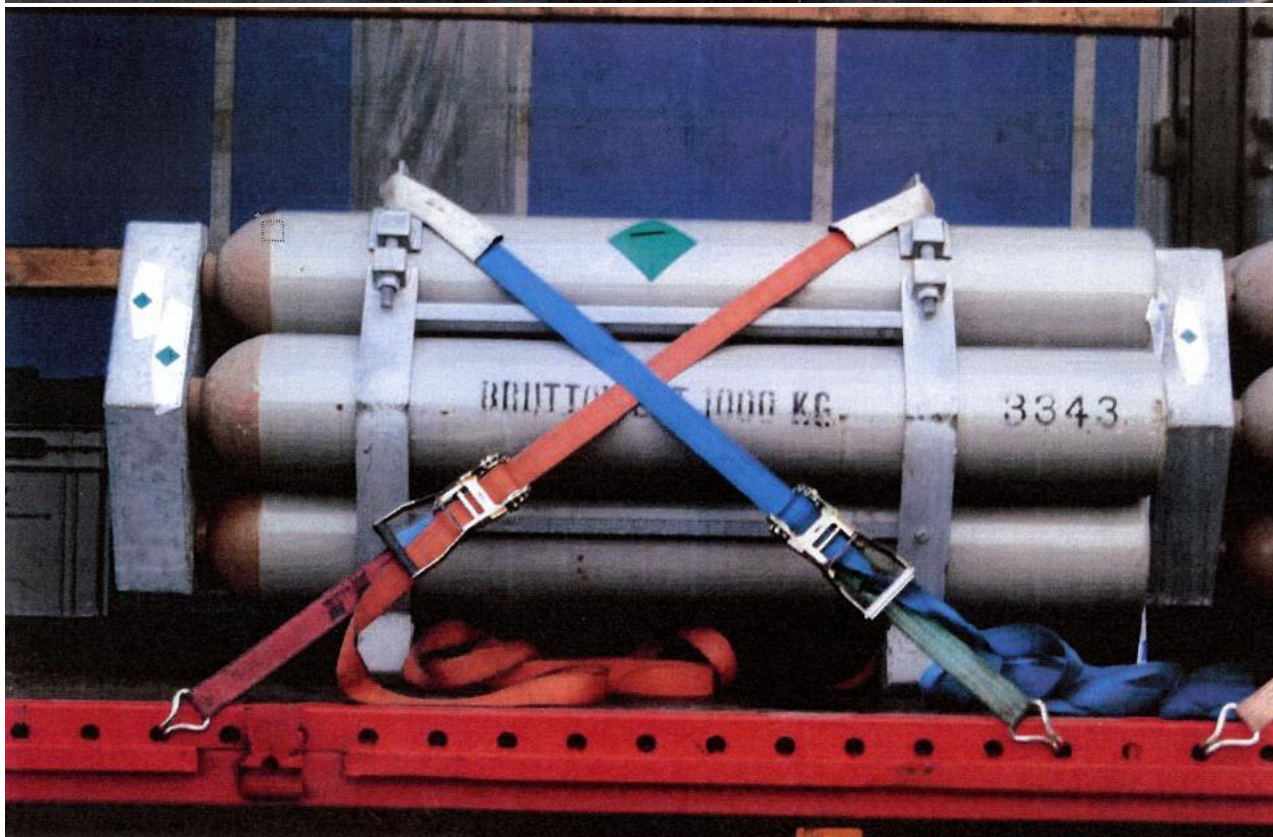
Securing According to Danish and Swedish Rules

It may be helpful to place the straps diagonally if a unit is not supported lengthwise on the truck bed.



Securing According to German Rules

Two (2) diagonal straps must be used for each unit or for lines of units across the truck bed, and the straps must be strengthened at the point(s) with the highest risk of damage/wear.



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