1. This guideline applies to:

- Wire Rod in coil transported by road only.

Note: The friction factor between coils and trailer decks determined as per EN 12195-1:2010 Annex B.1.2 is μ=0.49

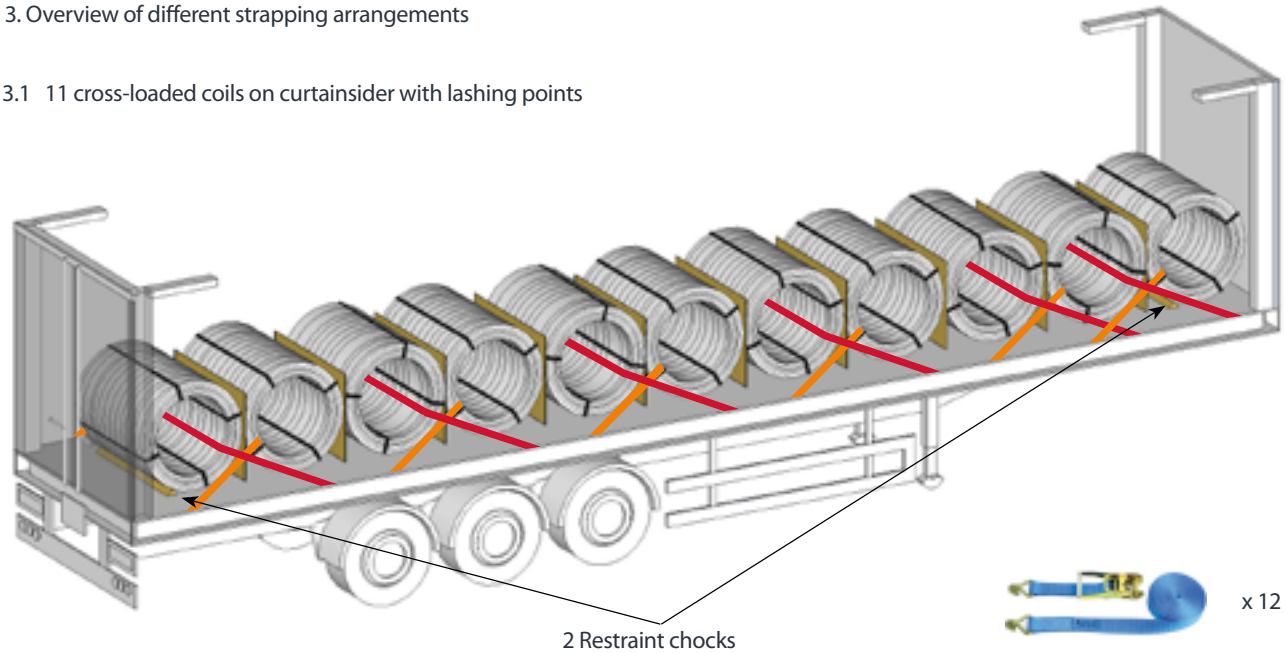
2. Essential requirements

- All restraints must be webbing straps with minimum lashing capacity of 2000 daN compliant with EN 12195-2.
- All loads must be loaded or blocked against the trailer headboard.
- 2 small coils loaded side-by-side across the trailer to be treated as one.
- Each coils securely banded with minimum of 4 evenly distributed steel bands.
- Triangular chocks must be used as shown on drawings to prevent coils rolling.

Warning: Unchocked coils may roll whilst loading and unloading. Use temporary chocks as necessary.

3. Overview of different strapping arrangements

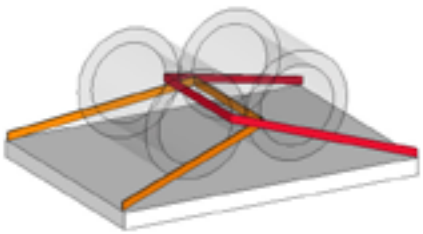
3.1 11 cross-loaded coils on curtainsider with lashing points






x 12

✓ 2 direct lashings pulling in opposite directions through each pair of cross-loaded coils.
✓ Curtainsider with sufficient number of lashing points.



Application of direct lashings.

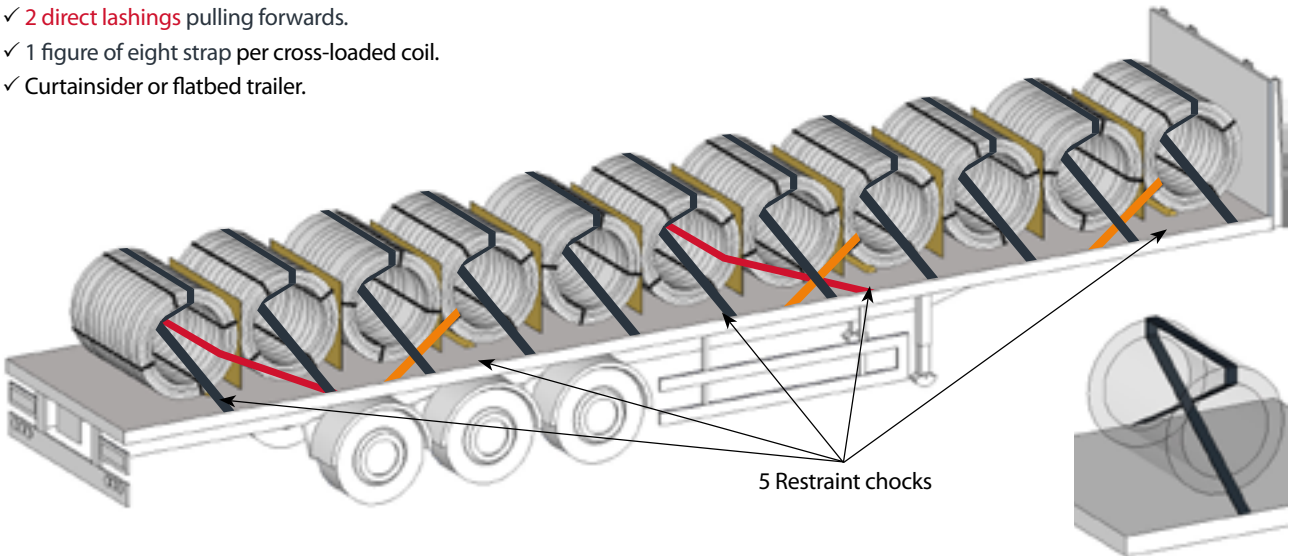
Note: Following a heavy braking event coils may compact together, causing restraints to lose tension. Check and re-tighten restraints as necessary en route.

This Load Restraint Guideline is designed and tested to meet the forces for road and sea transport as stated in EN 12195-1:2010 and VDI2700.

### 3.2 11 cross-loaded coils on flatbed trailer

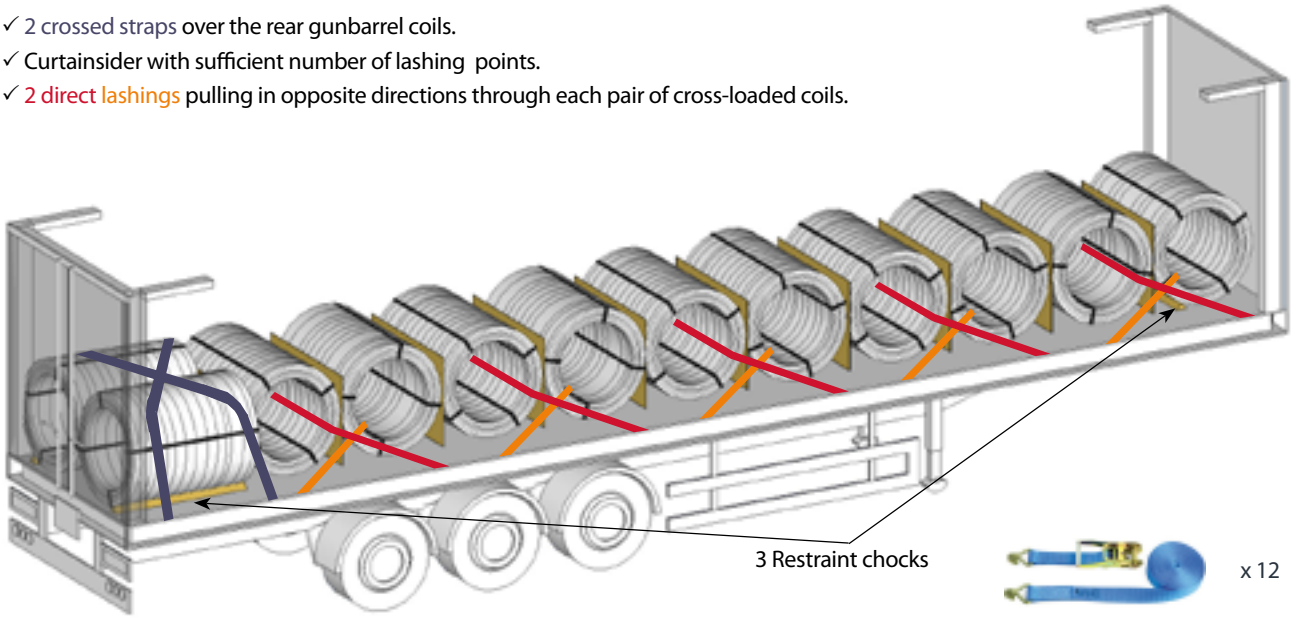
x 16

✓ 3 direct lashings pulling rearwards.
✓ 2 direct lashings pulling forwards.
✓ 1 figure of eight strap per cross-loaded coil.
✓ Curtainsider or flatbed trailer.




### 3.3 10 cross-loaded and 2 gunbarrel coils on curtainsider with lashing points

✓ 2 crossed straps over the rear gunbarrel coils.
✓ Curtainsider with sufficient number of lashing points.
✓ 2 direct lashings pulling in opposite directions through each pair of cross-loaded coils.

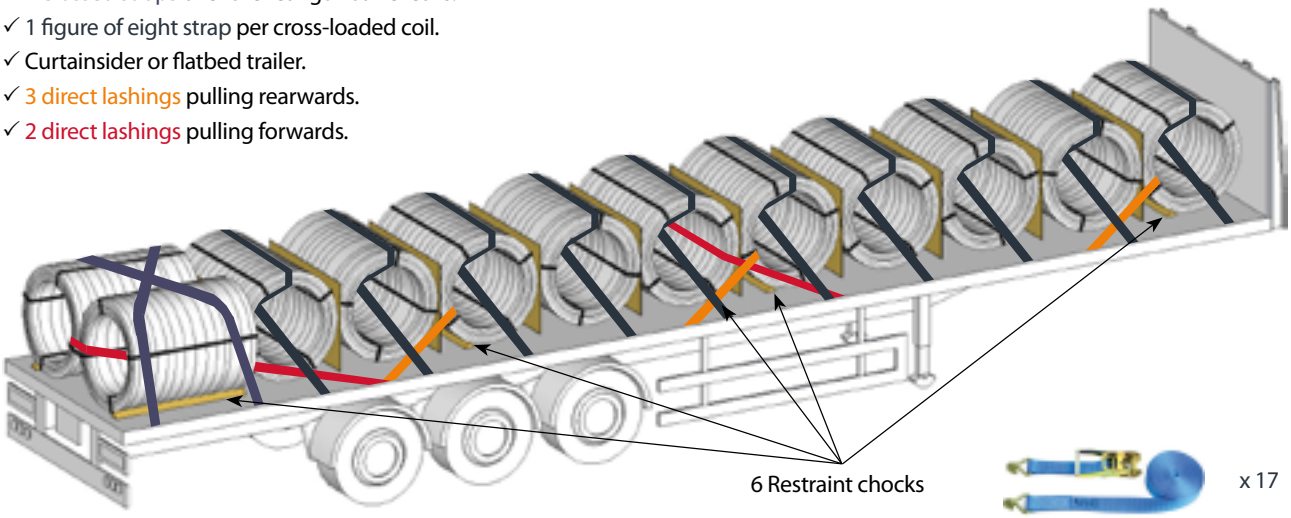





x 12

### 3.4 10 cross-loaded and 2 gunbarrel coils flatbed

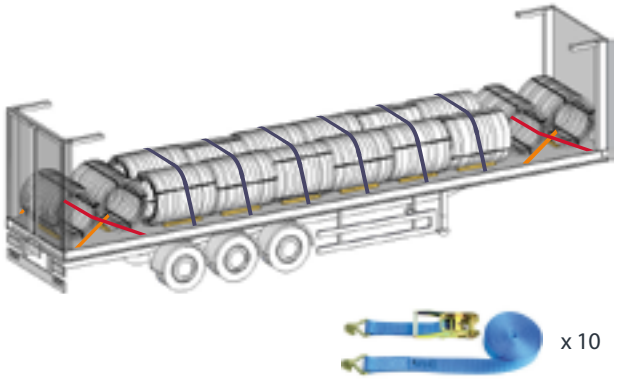
✓ 2 crossed straps over the rear gunbarrel coils.
✓ 1 figure of eight strap per cross-loaded coil.
✓ Curtainsider or flatbed trailer.
✓ 3 direct lashings pulling rearwards.
✓ 2 direct lashings pulling forwards.






x 17

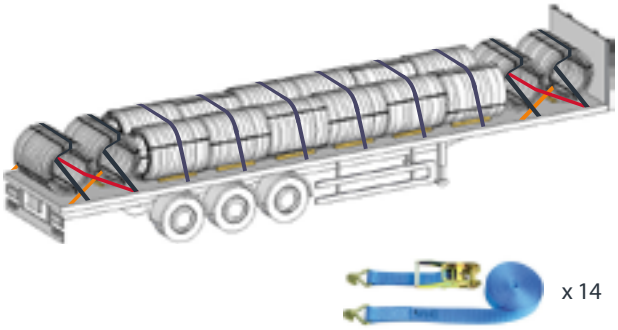
3.5 Mixed gunbarrel and cross-loaded coils - curtainsider



x 10

✓ 1 over-the-top lashing over each pair of gunbarrel coils.
✓ Chocks wedged tightly on outside of gunbarrel coils.
✓ Chock wedged tightly behind the rear coil.
✓ All coils securely chocked.

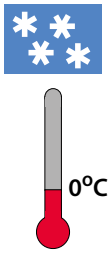
3.6 Mixed gunbarrel and cross-loaded coils - flatbed trailer



x 14

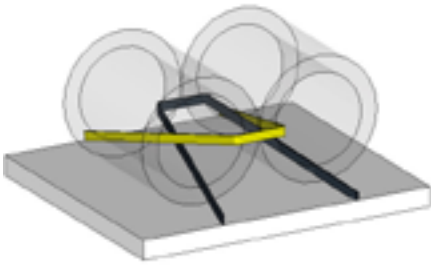
✓ 2 direct lashings pulling in opposite directions through each pair of cross-loaded coils.
✓ Coils loaded against the headboard.
✓ 1 figure of eight lashing per cross-loaded coil.
✓ All coils securely chocked.

4. Winter weather restraint



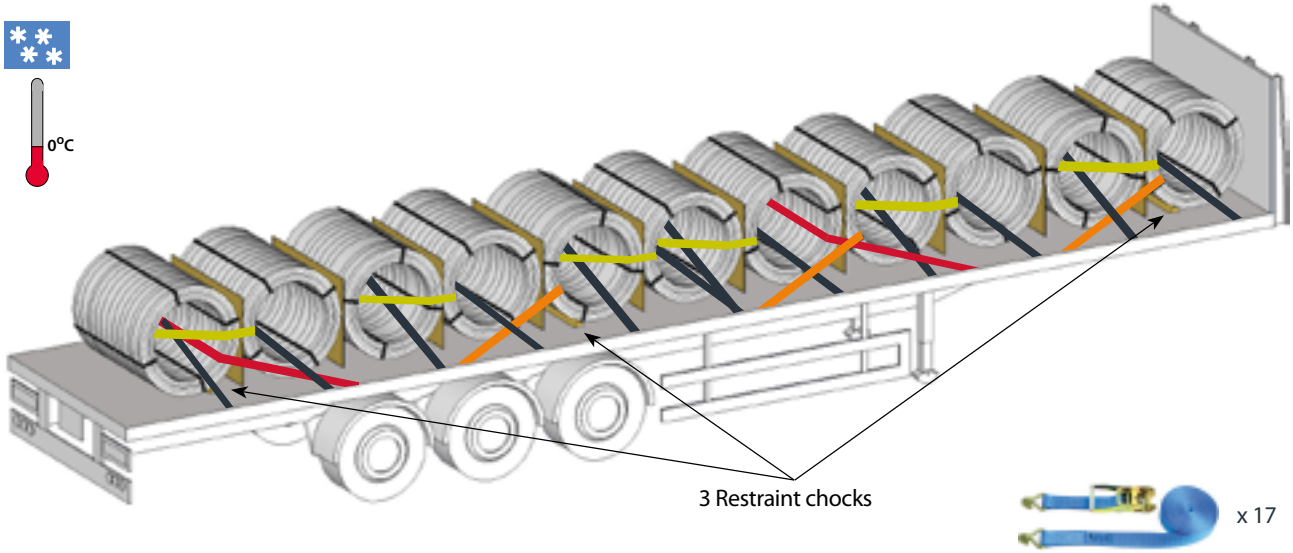

During winter weather advisory periods, when there is a risk of ice or frost present in the load, the following restraint methods must be used on flatbed trailers and curtainsiders.

The winter restraint methods take account of the possibility of reduced friction between the coils and the trailers due to frost or ice. U-straps through the bores of the coils ensure that they will not slide sideways and additional forward and rearward straps ensure the safety of the load.



U-straps must be used to prevent sideways movement on icy trailers.

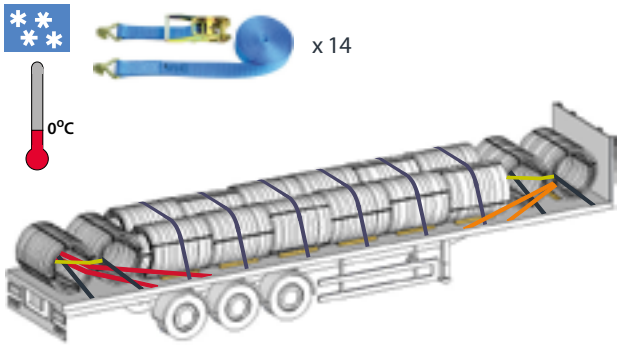
4.1 11 cross-loaded coils - winter weather




x 17

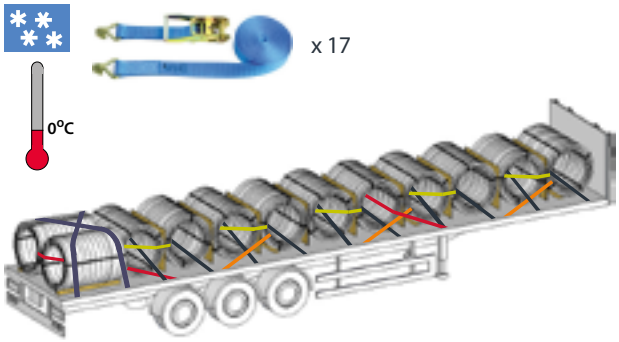
✓ 2 direct lashings through the rear coils pulling forwards.
✓ 2 U-straps for each pair of cross-loaded coils.
✓ 3 direct lashing through the front coils pulling back.
✓ Triangular chocks positioned as per drawing.

### 4.2 Mixed gunbarrel and cross-loaded coils




- ✓ 2 direct lashings through the bores of the front and rear coils pulling to the centre of the trailer.
- ✓ 2 U-straps for each pair of cross-loaded coils.
- ✓ 1 over-the-top strap over each pair of gunbarrel coils.
- ✓ Chocks wedged tightly on outside of gunbarrel coils.
- ✓ Chock wedged tightly behind the rear coil.

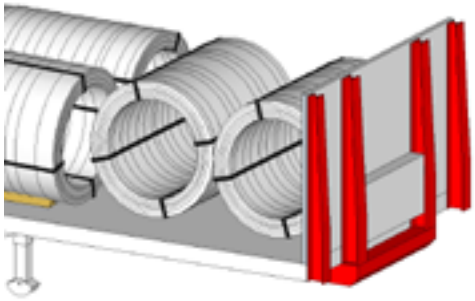
### 4.3 10 cross-loaded and 2 gunbarrel coils




- ✓ 3 direct lashings through the coils pulling back.
- ✓ 2 U-straps for each pair of cross-loaded coils.
- ✓ Triangular chocks positioned as per drawing.
- ✓ 2 crossed straps over the rear gunbarrel coils.
- ✓ 1 direct lashing through the rear coils pulling forwards.
- ✓ 1 direct lashing through the middle coil pulling forwards.

## 5. Equipment requirements

### 5.1 Trailer headboards



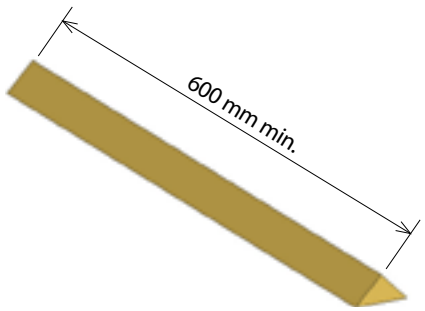
Restraint straps omitted for clarity.


Typical plaque on a trailer manufactured to EN 12642 code XL.

Trailer headboards are part of the load restraint system for Wire Rod in Coil and must be capable of providing up to 7.5 tonnes of blocking force. Typically, this will be provided if there are four vertical members welded adequately to the chassis of the trailer. For more information refer to Technical Information Sheet TIS-0010 Trailer Headboards.

Trailers with headboards rated to EN 12642 code XL will provide up to 13.5 tonnes of blocking force and will therefore, be suitable for all Wire Rod in Coil loads.

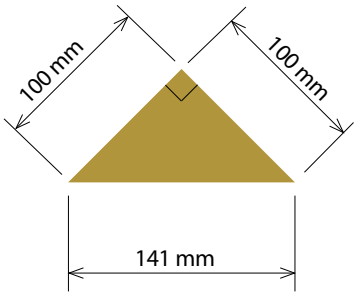
### 5.2 Timber chocks




Timber chocks must be a minimum size of 100 x 100 mm right angled triangles positioned on the 141 mm face as shown.

Minimum length 600 mm.

Chocks must be wedged tightly under the coils and re-checked after restraint straps are applied.

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