

Road Standards Restraint Guidelines

Guidelines for the securing of steel products for external road transport.



Introduction

This document details the securing methods for those steel products transported in Europe under the responsibility of or ordered by Tata Steel Strip Products and Tata Steel Packaging.

These methods are to be applied to those products where Tata Steel Europe Load Restraint Guidelines (LRG's) have not yet published or implemented.

These regulations also apply for road transports outside continental Europe when agreed so with the service provider.

The load restraint methods and guidelines described in this document are designed to be compliant with the forces as specified in EN12195-1: 2010 and VDI 2700.

In addition, this document also lists the Tata Steel Europe (TSE) Load restraint Guidelines and Technical information sheets that are currently in force. These documents are available independently and therefore are not included in this document.

This document shall be supplied to the haulier before they enter the site.

Change List (from Road Standards 3.0)

Changed

Road Standards Guideline ETTS coils replaced by: -
Coil Bore Vertical Using Spring Lashings - LRG-0005a-BV Issue3
and
Coil Bore Vertical - LRG-0005-BV Issue2

1. Restraint Guidelines and Technical Information Sheets

Table of Road Standard Guidelines

As described in this document

Horizontal coils on cradles	RSG-RB-1.0
Horizontal coils on stillages	RSG-RR-1.0
Coil ends on a flat floor	RSG-RRV-1.0
Damaged coil in the well	RSG-RRG-1.0
Vertical slit coils	RSG-VR-1.0
Tinplate sheet pack	RSG-BP-1.0

Table of TSE Load Restraint Guidelines

Accompanying documents

Wide coil in the well	LRG-0008-BH Issue2
Coil Bore Vertical Using Spring Lashings	LRG-0005a-BV Issue3
Coil Bore Vertical	LRG-0005-BV Issue2

Table of Technical Information Sheets

Accompanying documents

Webbing straps and ratchets	TIS-0003 Issue 1
Transport chains and tensioners	TIS-0004 Issue 1
Webbing strap edge protection	TIS-0005 Issue 1
Well boards for well trailers	TIS-0006 Issue 1
Anti slip matting	TIS-0008 Issue 1

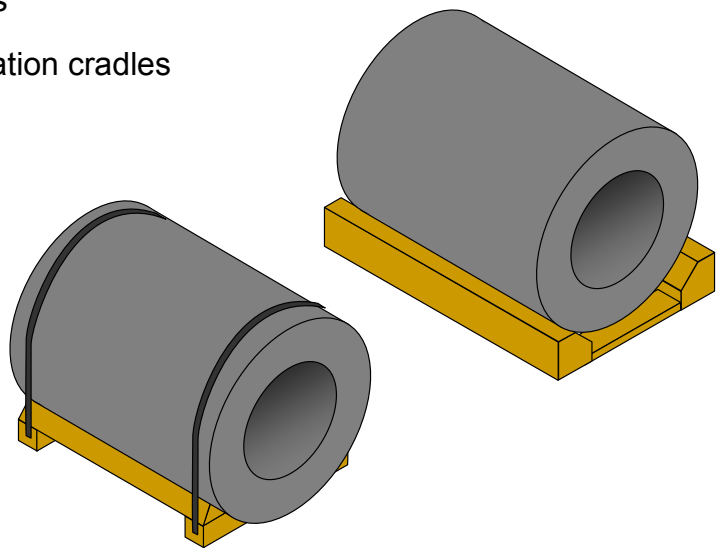
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ROAD REGULATION GUIDELINE

Horizontal coils on cradles

This guideline applies to

- Horizontal coils - weight: 0 - 10 tons
- Coils placed on Tata Steel specification cradles

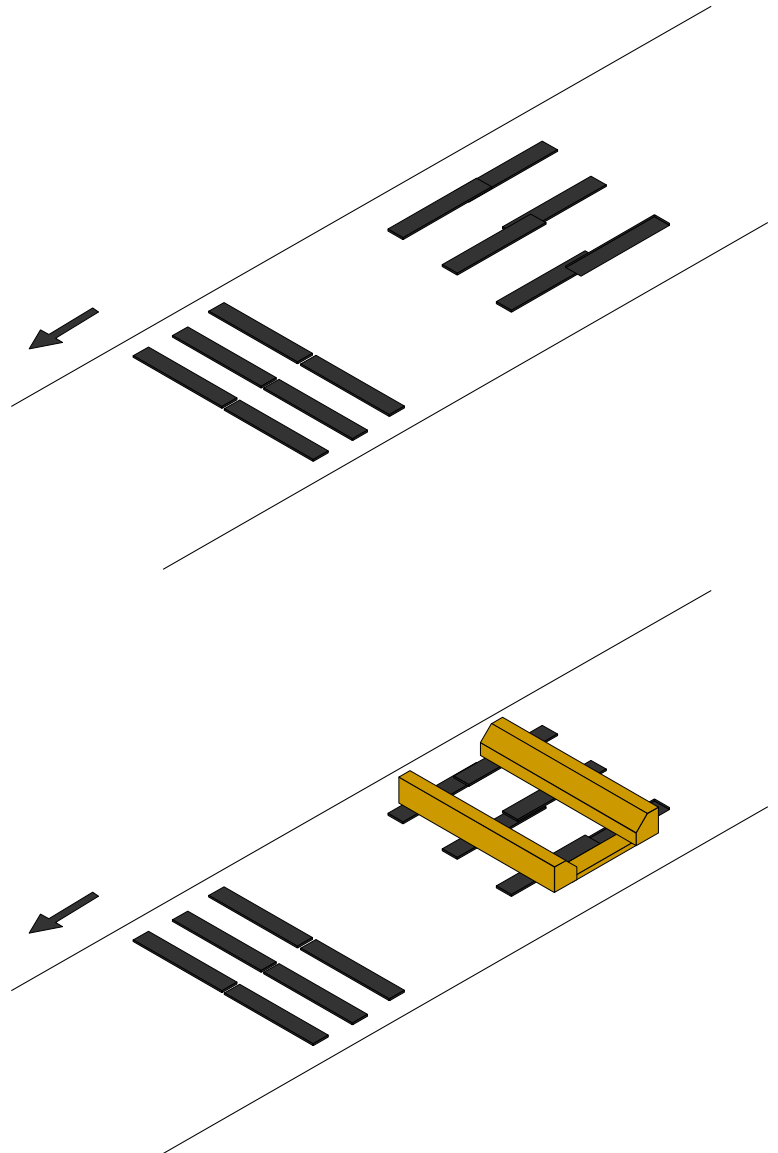


Requirements per coil

- Flat loading platform
- Tata cradle if necessary
- 4 Securing points
- 2 Straps:
 - lashing capacity (LC) ≥ 2000 daN
- 3 Ratchets:
 - lashing capacity (LC) ≥ 2000 daN
 - standard tension force (STF) ≥ 300 daN
- 6 Edge protectors
- Sufficient anti-slip mats (minimum of 6 mats)

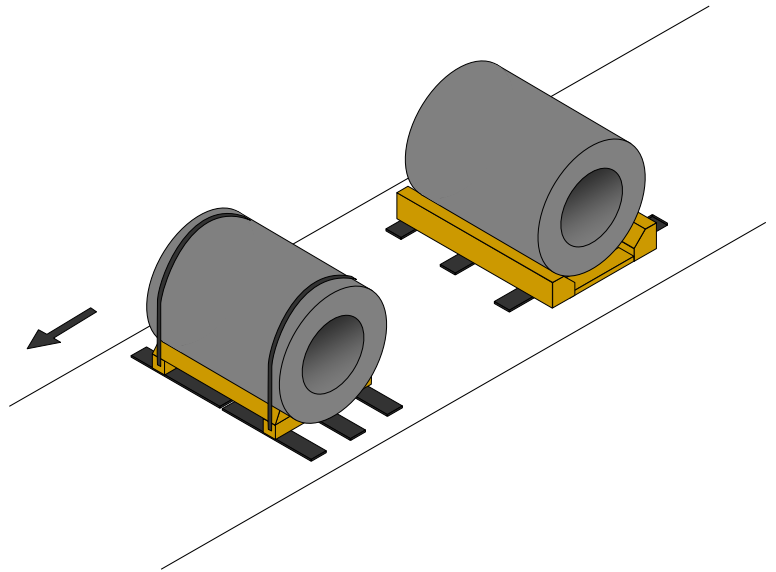
Preparation

- Place the anti-slip mats on the loading platform at the point the coil should be loaded, next to a securing point.
 - The amount of anti-slip mats must be adapted to make sure there is no direct contact between the coil and the loading platform, even after a small movement of the cradle.
 - The use of anti-slip mats between cradle and loading platform is not mandatory when the cradle has a solid connection to the loading platform.
- Place the loose cradle on the anti-slip mats so the coil can be loaded with the eye of the coil at right angles to the driving direction.
- No cradles have to be made ready for Tata Steel coils that are already packed with a cradle.



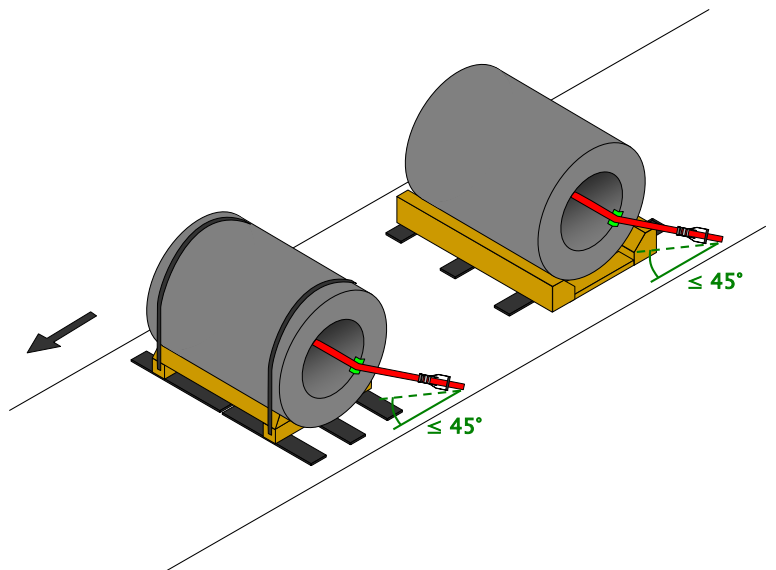
Loading

- The coil will be loaded on the loose cradle with the eye of the coil at right angles to the driving direction.
- A coil with a Tata Steel cradle will be loaded on the anti-slip mats with the eye of the coil at right angles to the driving direction.
- To protect the coil anti-slip mats must be used between the cradle and the coil when the cradle is made of steel.

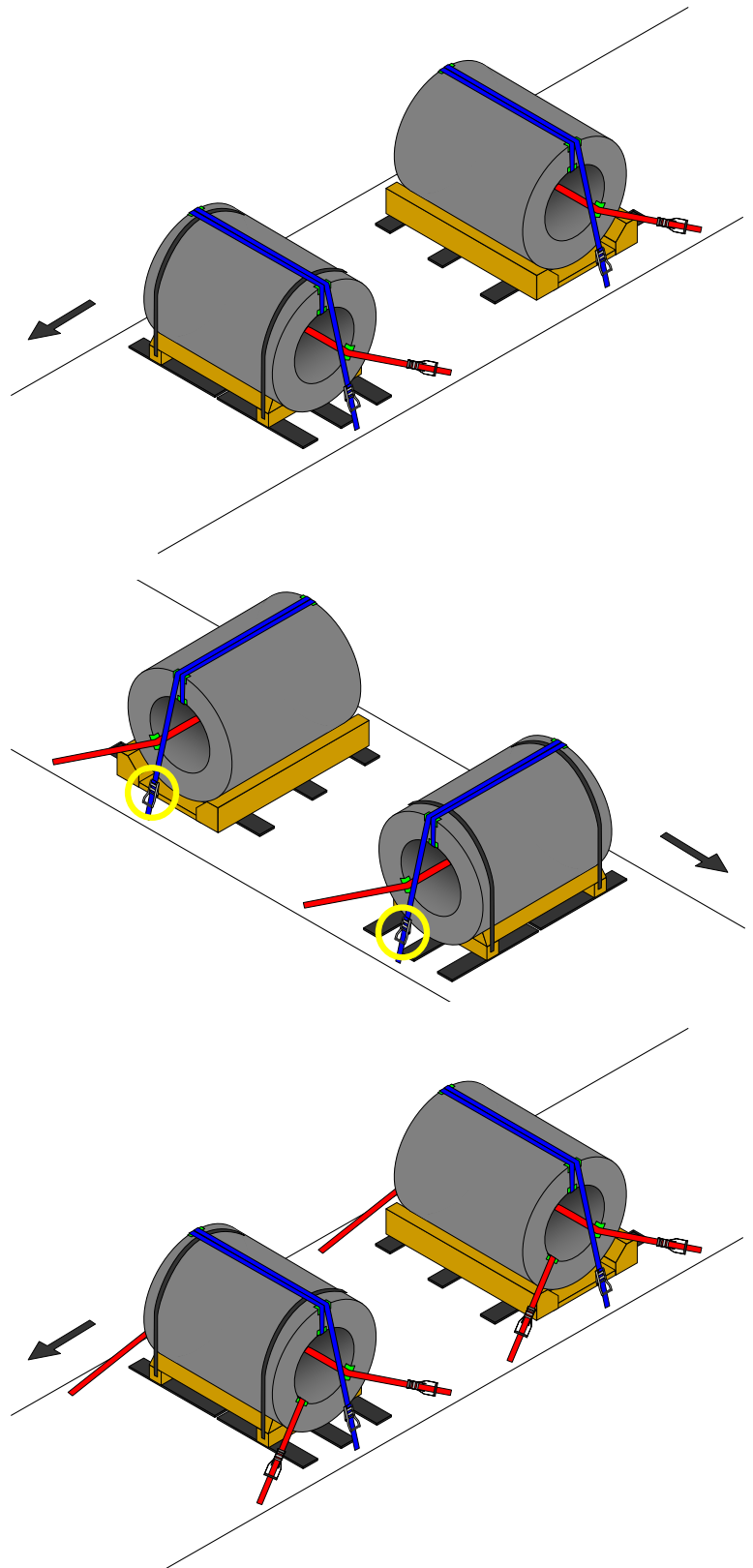


Securing

- The first strap runs from a securing point at the back of the coil through the eye of the coil in a U-formation to a securing point at the back of the coil on the opposite side of the trailer.
 - The ends of the strap must have an angle of 45° or less, slantwise to the back, compared to the driving direction.
 - Edge protectors must be used between the edges of the coil and the strap where necessary.



- The second strap must be put through the ratchet and pulled almost to the end.
- The second strap runs from a securing point next to the coil, over the coil, back through the eye of the coil and again over the coil to a securing point next to the coil on the opposite side of the trailer.
- The second strap should now have a ratchet on each end of the strap and must be tightened with these two ratchets.
 - Edge protectors must be used between the edges of the coil and the strap.



- As an option a third strap may be added in a U form and secured in front of the coil.

The load restraint method described in this document is designed to be compliant with the forces as specified in EN12195-1: 2010 and VDI 2700.

ROAD REGULATION GUIDELINE

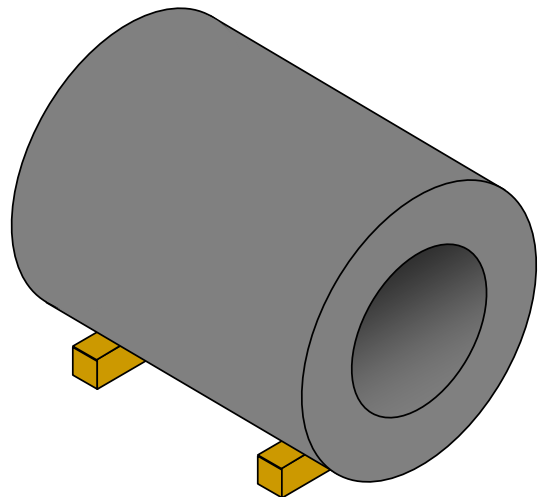
Horizontal coils on stillages

This guideline applies to

- Horizontal coils - weight: 0 - 5 tons
- The method with stillages is to be used only in combination with blocking in the forward direction.

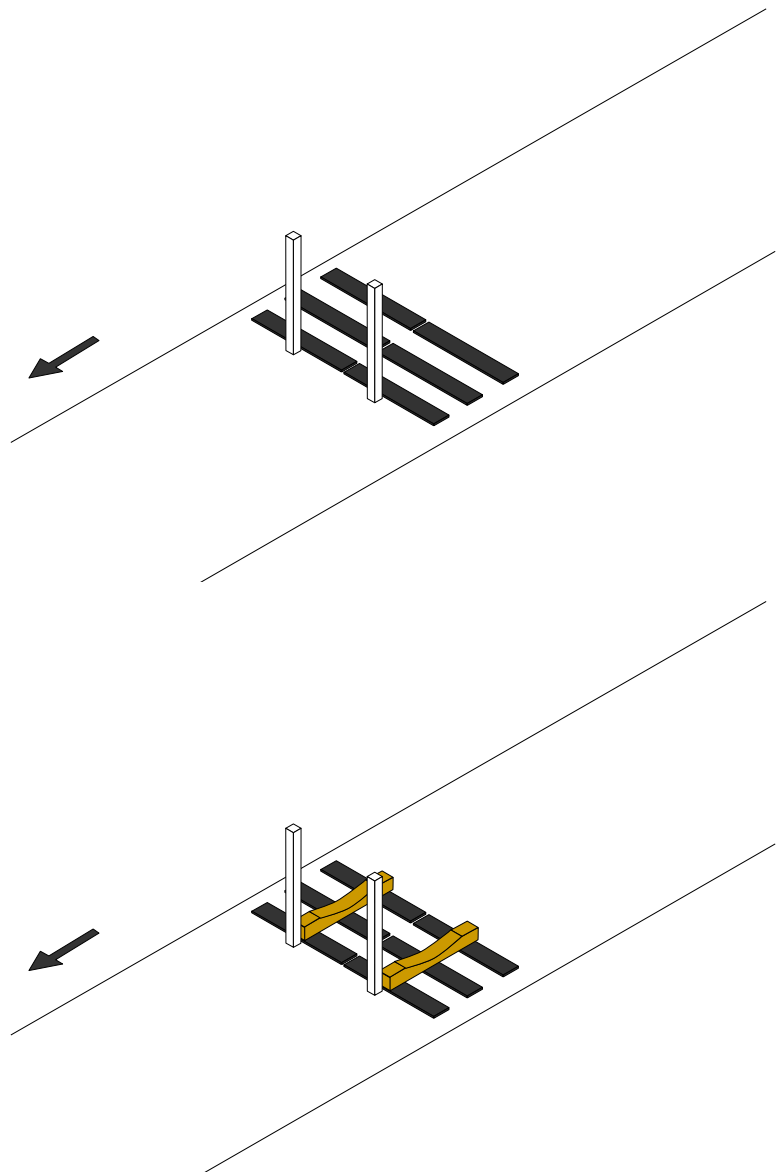
Requirements per coil

- Flat loading platform
- Minimum of 2 stillages
- 4 Securing points
- 2 Straps:
 - lashing capacity (LC) ≥ 2000 daN
- 3 Ratchets:
 - lashing capacity (LC) ≥ 2000 daN
 - standard tension force (STF) ≥ 300 daN
- 6 Edge protectors
- Sufficient anti-slip mats (minimum of 6 mats)



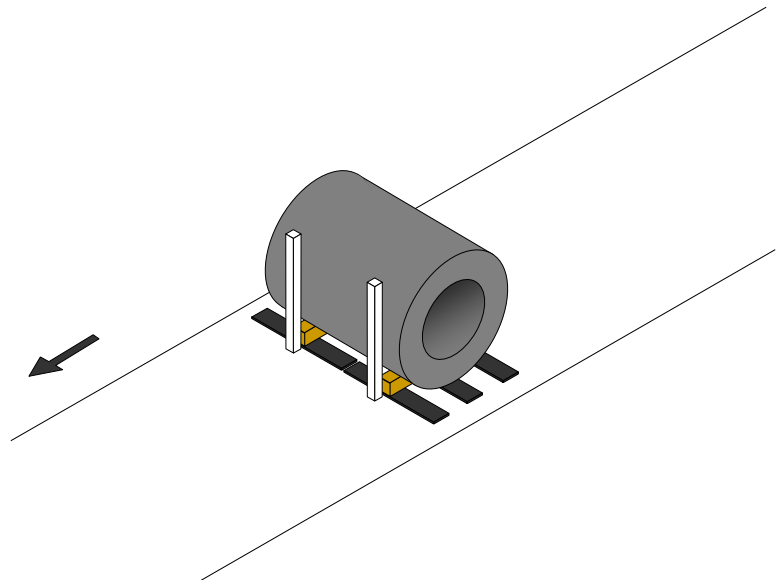
Preparation

- Place the anti-slip mats on the loading platform at the point the coil should be loaded, next to a securing point.
 - The amount of anti-slip mats must be adapted to make sure there is no direct contact between the coil and the loading platform, even after a small movement of the stillages.
 - The use of anti-slip mats between stillages and loading platform is not mandatory when the stillages have a solid connection to the loading platform.
- Place the stillages on the anti-slip mats so the coil can be loaded with the eye of the coil at right angles to the driving direction.
- No stillages have to be put ready for Tata Steel coils that are already packed with a cradle.



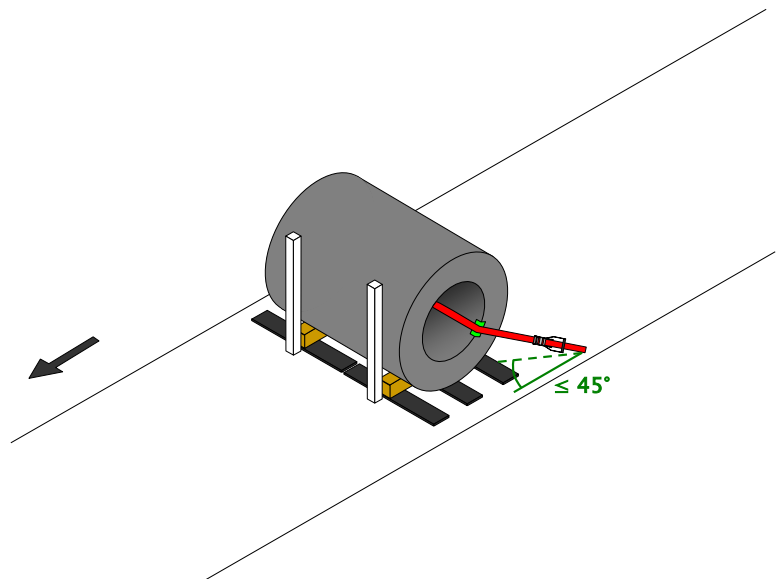
Loading

- The coil will be loaded on the stillages with the eye of the coil at right angles to the driving direction.

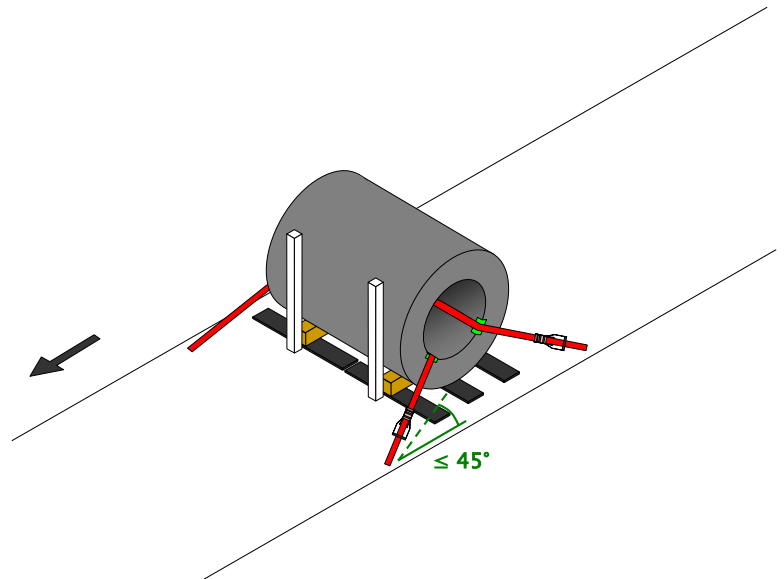


Securing

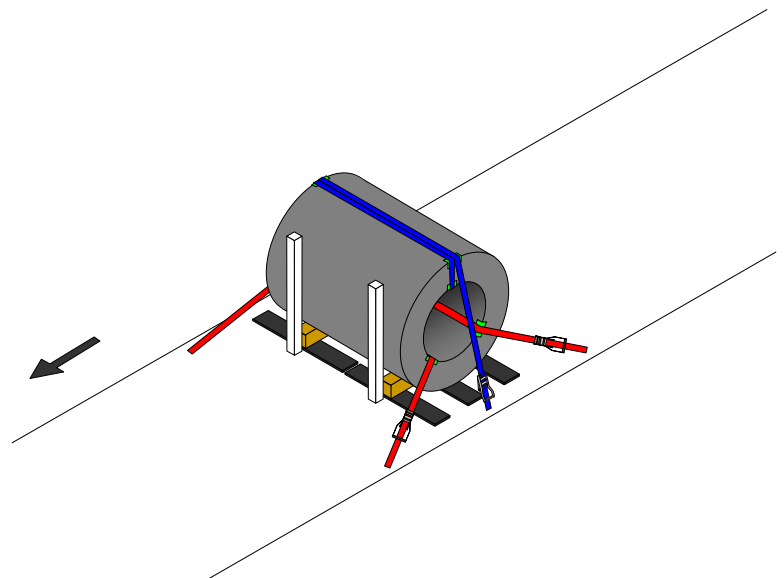
- The first strap runs from a securing point at the back of the coil through the eye of the coil in a U-formation to a securing point at the back of the coil on the opposite side of the trailer.
- The ends of the strap must have an angle of 45° or less, slantwise to the back, compared to the driving direction.
- Edge protectors must be used between the edges of the coil and the strap where necessary.



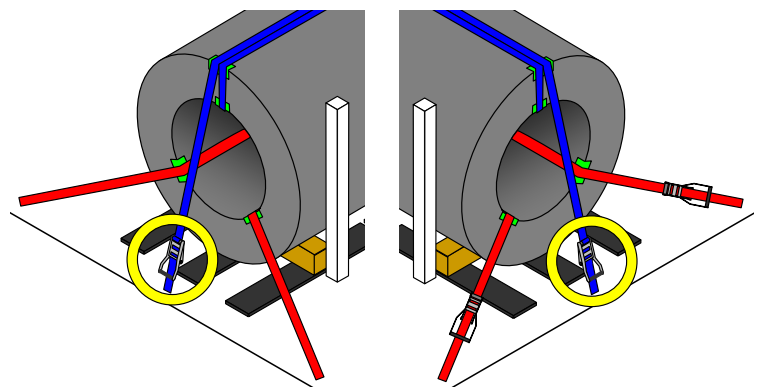
- The second strap is added in a U form and secured in front of the coil.
- The strap ends must be pulled forwards at an angle of 45 deg or less compared to the driving direction.
- Edge protectors must be used between the edges of the coil and the strap



- The third strap must be put through the ratchet and pulled almost to the end.
- This strap runs from a securing point next to the coil, over the coil, back through the eye of the coil and again over the coil to a securing point next to the coil on the opposite side of the trailer.



- The third strap should now have a ratchet on each end of the strap and must be tightened with these two ratchets.
- Edge protectors must be used between the edges of the coil and the strap.



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ROAD REGULATION GUIDELINE

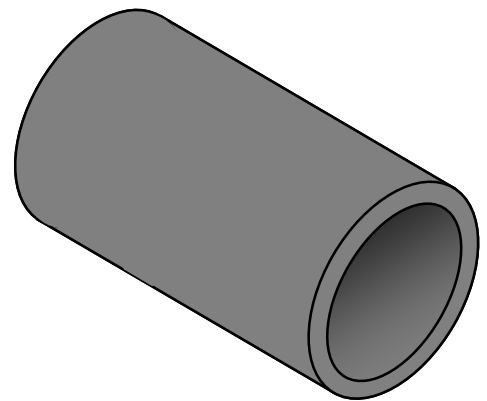
Rest coil on flat loading platform

This guideline applies to

- Coils – weight: 0 - 4 tonnes
- Coils where chains may be used (2nd choice for example)

Requirements per 3 - 5 coils

- 4 Securing points
- 2 chains conform EN 12195-3: 2001:
 - lashing capacity (LC) ≥ 3000 daN
- 2 Tensioners conform EN 12195-2: 2001:
 - lashing capacity (LC) ≥ 3000 daN
- 1 Wedge

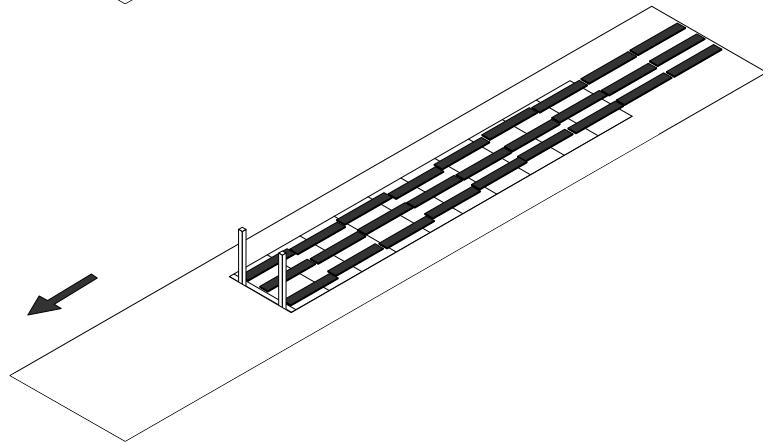
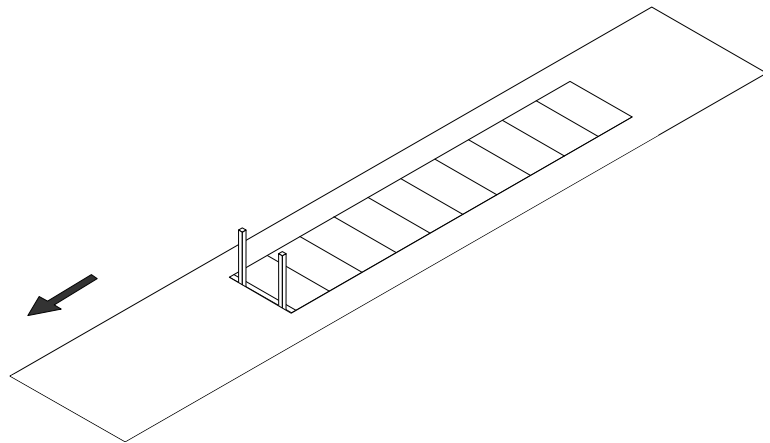


Requirements per load rest coils

- Set of stanchions
- Trailer with 30 cm high sideboards is preferred.
- Wooden loading platform.
- Sufficient anti-slip mats must be used when the loading platform is made of another material.

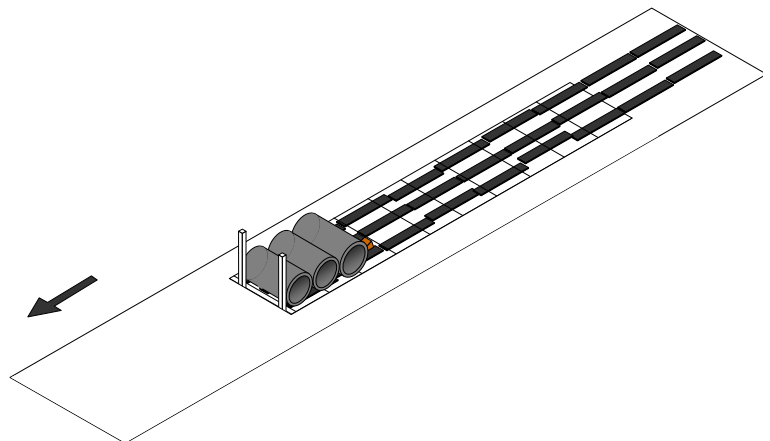
Preparation

- The stanchions must be placed in the well and the well must be fully covered.
- Anti-slip mats must be placed on the loading platform from the stanchions to the back when the loading platform is not made of wood.
 - The number of anti-slip mats must be adapted to make sure there is no direct contact between the coils and the loading platform.

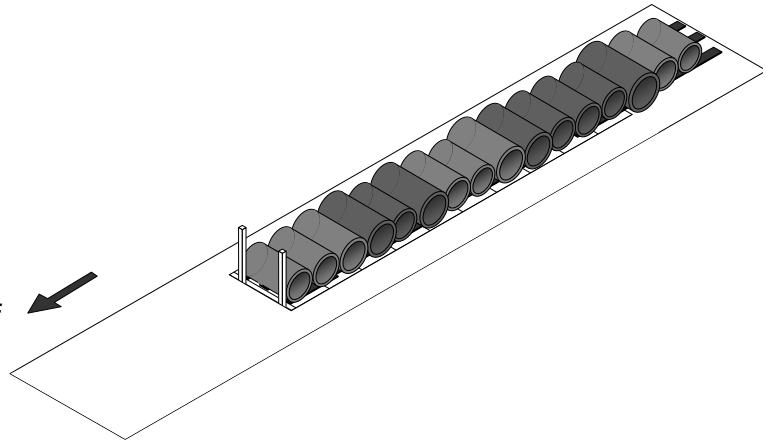


Loading

- The coils will be loaded in groups of 3 to 5 coils depending on axle weights. During loading this must be taken into account.
 - The first coil must be placed directly against the stanchions. No space must be left between, so the coils are locked in forward direction.

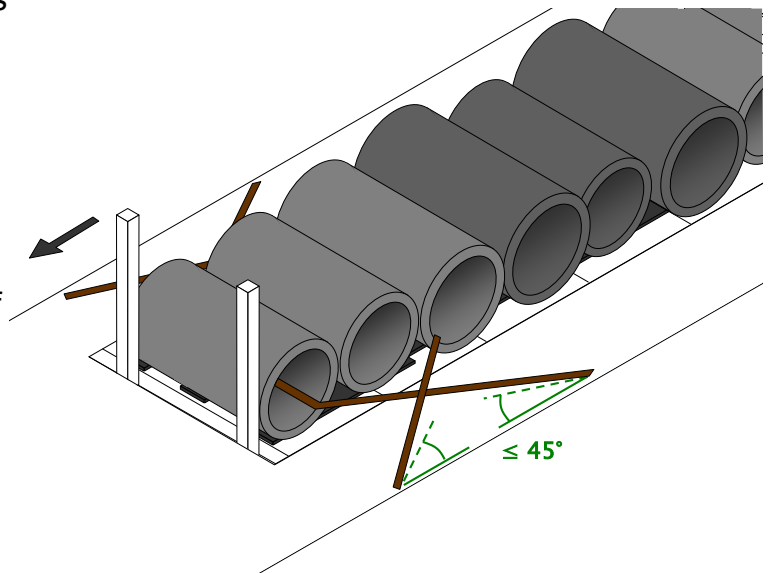


- The diameter of the first and last coil of a group must be the same or larger than the diameter of the intermediate coils to prevent the intermediate coils being pressed upwards when securing the coils.
- Groups should be as small as possible.
- A wedge is placed at the back of the last coil of the group and positioned with care to prevent shifting of the group.
- Repeat this step for each group until all the coils are loaded.

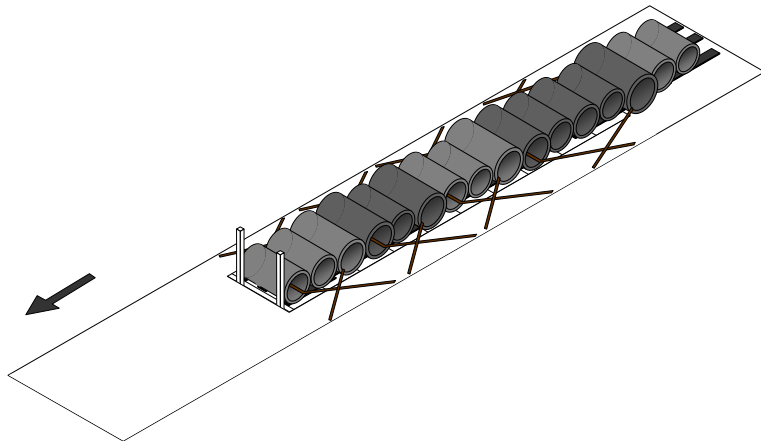


Securing

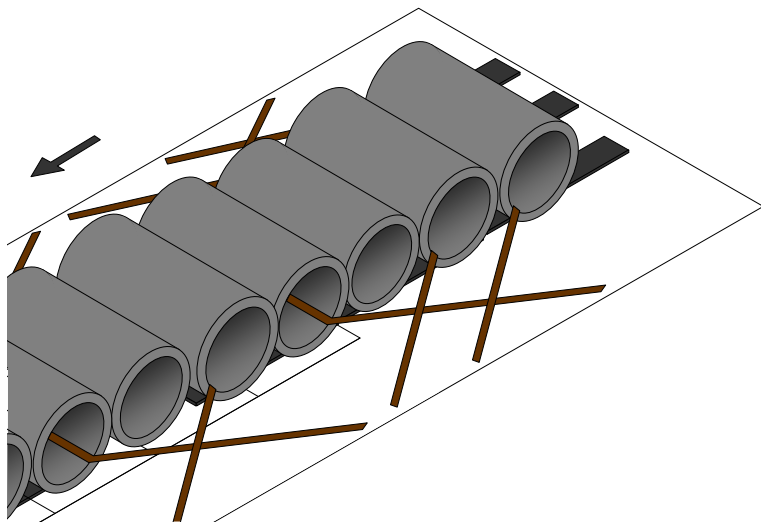
- The coils will be secured in groups of 3 to 5 coils depending on the positioning and number of securing points.
- The first chain runs from a backward lying securing point in a U-formation through the eye of the coil, to a securing point on the opposite site of the trailer.
- The second chain runs from a forward lying securing point in a U-formation through the eye of the coil, to a securing point on the opposite site of the trailer.



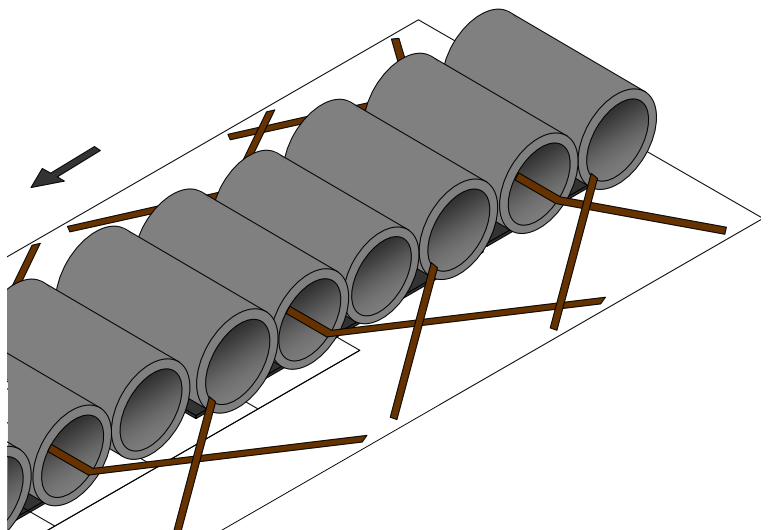
- The ends of the chain must have an angle of 45° or less compared to the driving direction.
- The chains must always pass along the front of the intervening coils
- Repeat this step for each group until no group of minimal 3 coils remains.



- Any remaining coils should be secured as follows:
 - One remaining coil is tightened against the other coils.



- Two remaining coils are secured similar to a group but without intervening coils.



The load restraint method described in this document is designed to be compliant with the forces as specified in EN12195-1: 2010 and VDI 2700.

ROAD REGULATION GUIDELINE

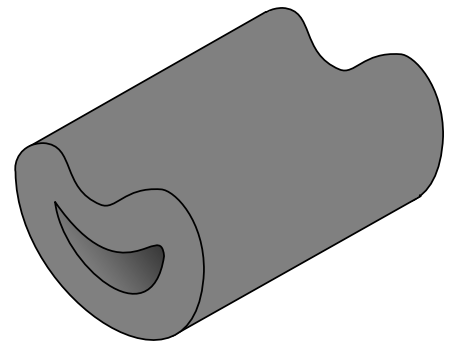
Rest coil in well

This guideline applies to

- Damaged collapsed bore horizontal coils a weight of 0 – 25 tonnes
- Where it is not possible or safe to place web lashings through the bore of the coil:

Requirements per coil

- Coil well trailer
- Set of stanchions
- 4 Securing points rated to a minimum of 3000 daN
- 2 Chains conform EN 12195-3: 2001:
 - lashing capacity (LC) ≥ 3000 daN
- 2 Tensioners conform EN 12195-2: 2001:
 - lashing capacity (LC) ≥ 3000 daN
- Anti-slip mat every 30 cm

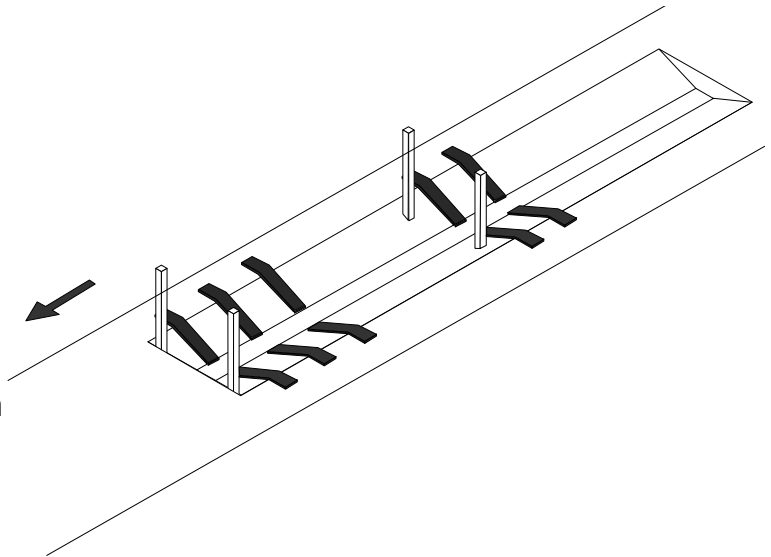


Requirements per narrow coil

- Coil well trailer
- Set of stanchions
- 2 Securing points rated to a minimum of 3000 daN
- 1 Chain conform EN 12195-3: 2001:
 - lashing capacity (LC) ≥ 3000 daN
- 1 Tensioners conform EN 12195-2: 2001:
 - lashing capacity (LC) ≥ 3000 daN
- Anti-slip mat every 30 cm

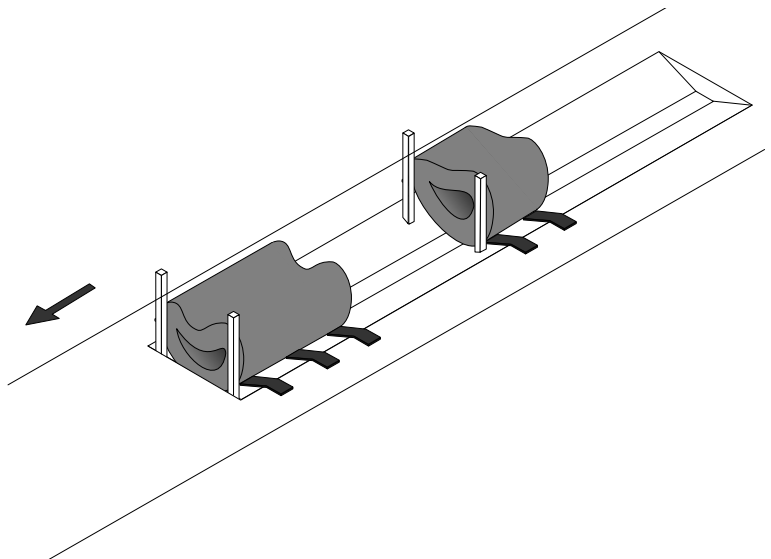
Preparation

- Open the well about a meter more than the width of the coil.
- Place the stanchions in the well.
- Place the anti-slip mats in the well at the point the coil will be loaded.
 - The number of anti-slip mats must be adapted to make sure that there is no direct contact between the coil and the well, an anti-slip mat must be placed at least every 30 cm.
 - Place the anti-slip mats so that they are still visible when the coil is loaded.



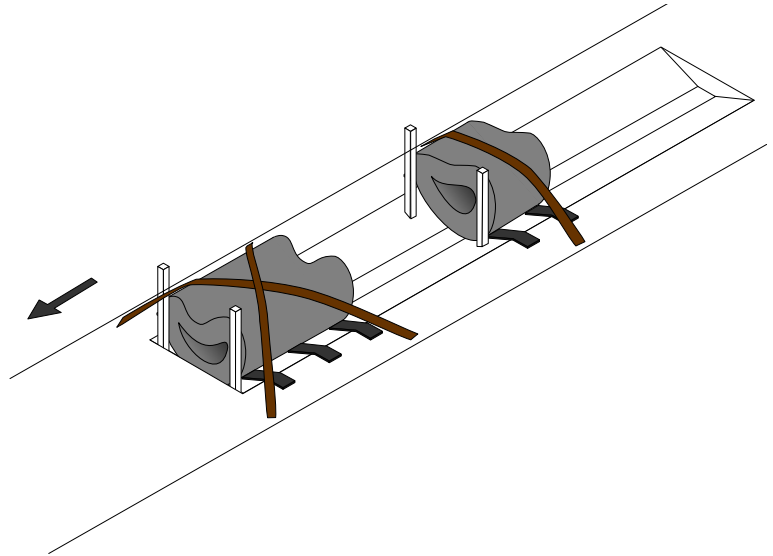
Loading

- The coil will be loaded on the anti-slip mats in the well.
- The coil must be placed directly against the stanchions. No space must be left between, so the coils are locked in forward direction.



Securing

- The coil must be secured with at least two chains over the top of the coil. A cross is formed by letting these two chains run diagonal from one side of the trailer to the opposite site.
- It is not always possible to form a cross over narrow coils. A narrow coil must be secured with one chain over the top of the coil.



The load restraint method described in this document is designed to be compliant with the forces as specified in EN12195-1: 2010 and VDI 2700.

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ROAD REGULATION GUIDELINE

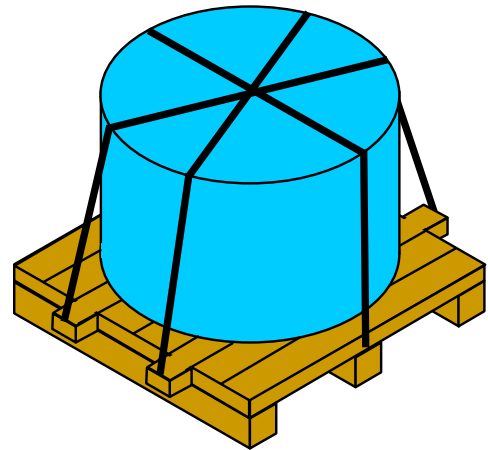
Vertical slit coils

This guideline applies to

- Slit coils with a weight of 0 - 3 tonnes
- Blocks of coils must not be in excess of 24 tonnes

Requirements per row of slit coils

- 2 Securing points
- 1 Strap:
 - lashing capacity (LC) ≥ 2000 daN
- 1 Ratchet:
 - lashing capacity (LC) ≥ 2000 daN
 - standard tension force (STF) ≥ 300 daN
- 2 Edge protectors
- Sufficient anti-slip mats

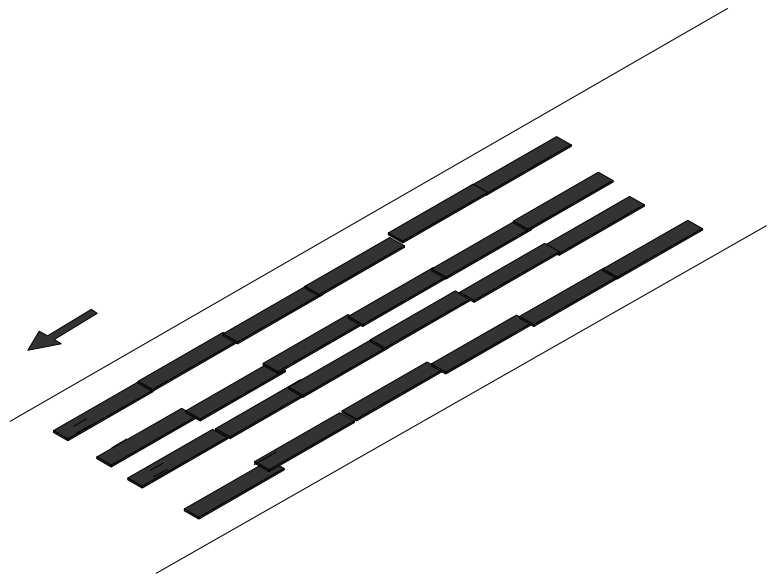


Requirements per block of slit coils

- 2 Securing points
- 1 Strap:
 - lashing capacity (LC) ≥ 2000 daN
- 1 Ratchet:
 - lashing capacity (LC) ≥ 2000 daN
 - standard tension force (STF) ≥ 300 daN

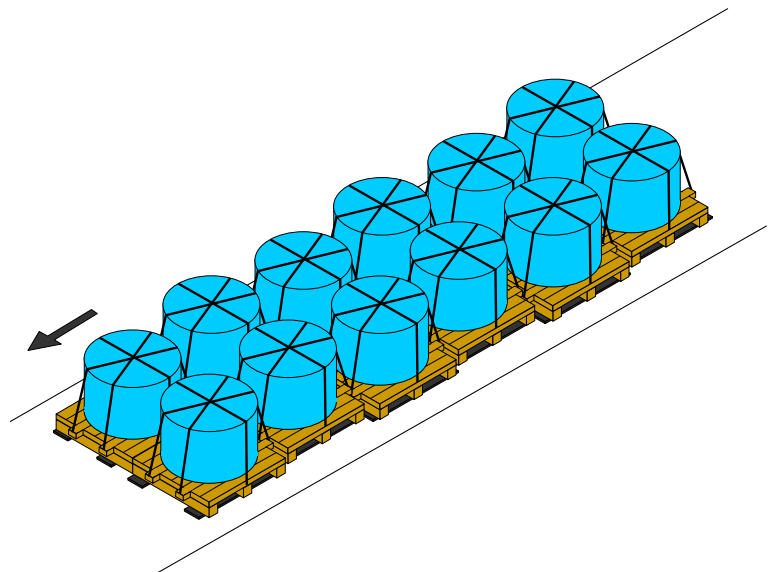
Preparation

- Place the anti-slip mats on the loading platform at the point the coil should be loaded.
- Place the anti-slip mats in longitudinal direction on the loading platform.
- The amount of anti-slip mats must be adapted to make sure there is no direct contact between the coils and the loading platform, even after a small movement of the coils.

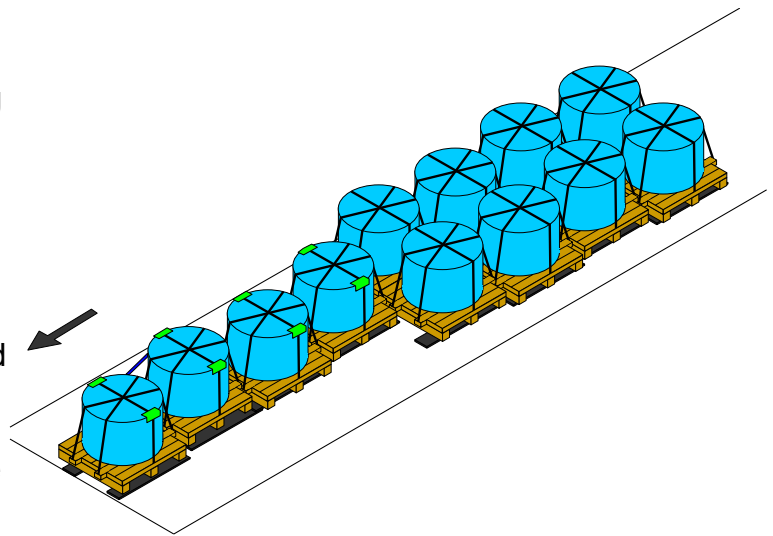


Loading

- The coils will be loaded in pairs in the middle of the loading platform on the anti-slip mats. No space must be left between the products, so they are locked in forward direction.
- The coils will be loaded in blocks as large as possible, with a maximum of 24 tons per block.
- When the load consists of an odd number of coils the last row is formed by a single and centrally placed coil.
- Axle weights must be taken into account when placing the coils.

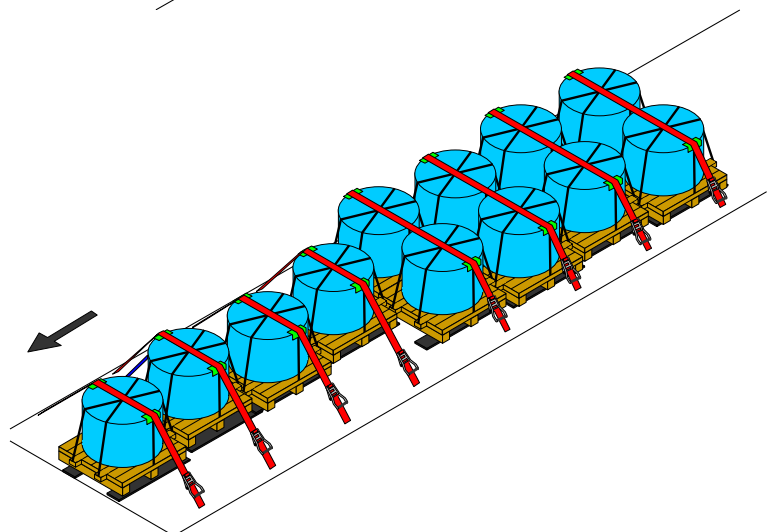
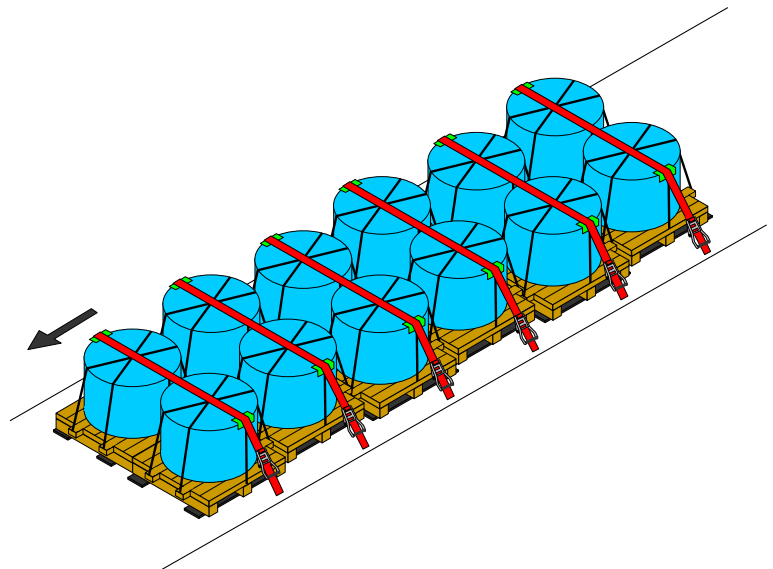


- Axle weights permitting, it is possible to start with a single line of coils from the headboard, going over to a double line.
- The first product must be placed directly against the headboard. No space must be left between, so the coils are locked in forward direction.
- It is not permitted to use a single row when the slit coils are placed on round pallets.

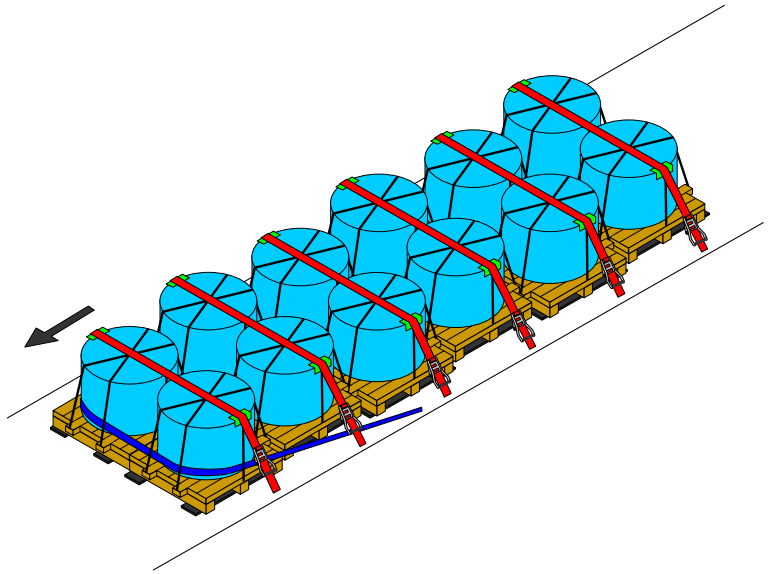


Securing

- Every pair of coils must be secured with at least one strap.
- The straps must be placed over the coils so the straps remain on the coils even after a small movement of the coils.
- Edge protectors must be used between the edges of the coil and the strap.
- A row of single coils is lashed in a similar way as a double row.



- Every block not placed against the headboard must also be secured with an extra strap.
 - The extra strap runs from a securing point next to the block in a U-formation in front of the block to a securing point on the opposite side of the trailer.
 - The strap must run over the coil just above the pallet.
 - The ends of the strap must be attached as far as possible from the front of the block.



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ROAD REGULATION GUIDELINE

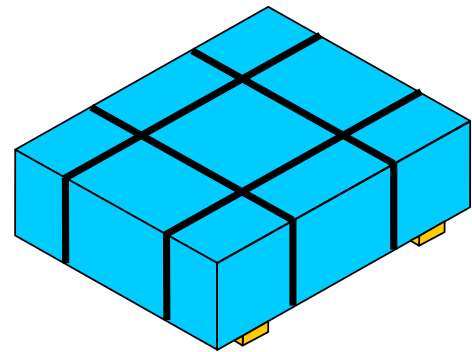
Tinplate sheet packs

This guideline applies to

- Bundles with a weight of 0 - 3 tonnes
- Blocks of bundles must not be in excess of 25 tonnes:

Requirements per row

- 2 Securing points
- 1 Strap:
 - lashing capacity (LC) ≥ 2000 daN
- 1 Ratchet:
 - lashing capacity (LC) ≥ 2000 daN
 - standard tension force (STF) ≥ 300 daN
- 2 Edge protectors
- Sufficient anti-slip mats

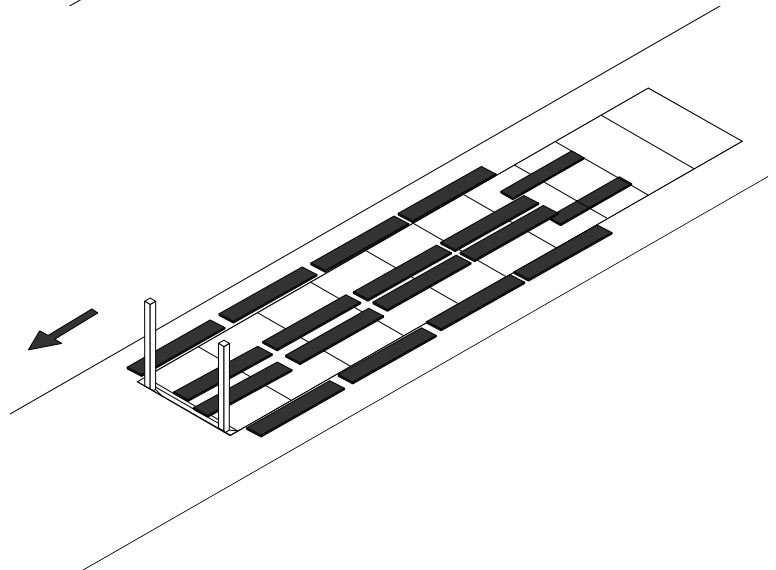
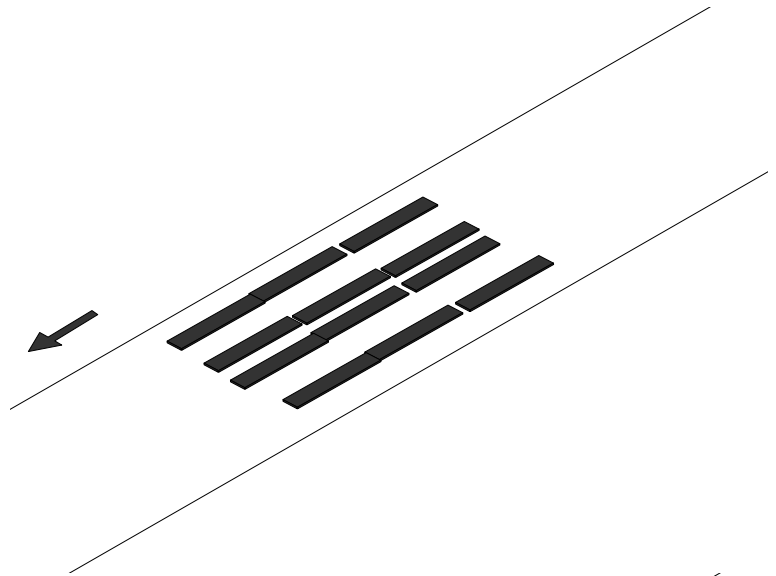


Requirements per block of bundles

- Stanchions or headboard or:-
- 4 Securing points
- 2 Straps:
 - lashing capacity (LC) ≥ 2000 daN
- 2 Ratchets:
 - lashing capacity (LC) ≥ 2000 daN
 - standard tension force (STF) ≥ 300 daN
- 6 Edge protectors

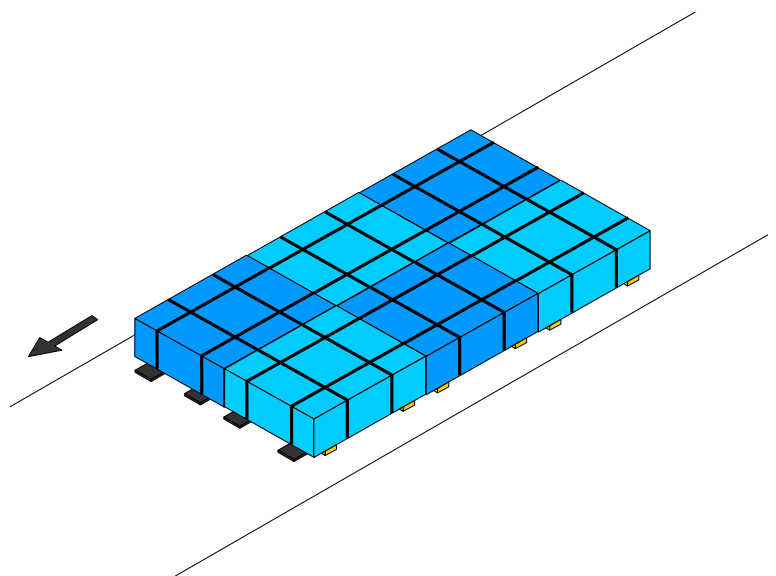
Preparation

- The stanchions must be placed in the well if necessary and the well must be fully covered.
- Line up the well boards directly against the stanchions, no space must be left between.
- Place the anti-slip mats on the loading platform at the point the bundles should be loaded.
- Place the anti-slip mats in longitudinal direction on the loading platform.
- The amount of anti-slip mats must be adapted to make sure that there is no direct contact between the bundles and the loading platform even after a small movement of the bundles.

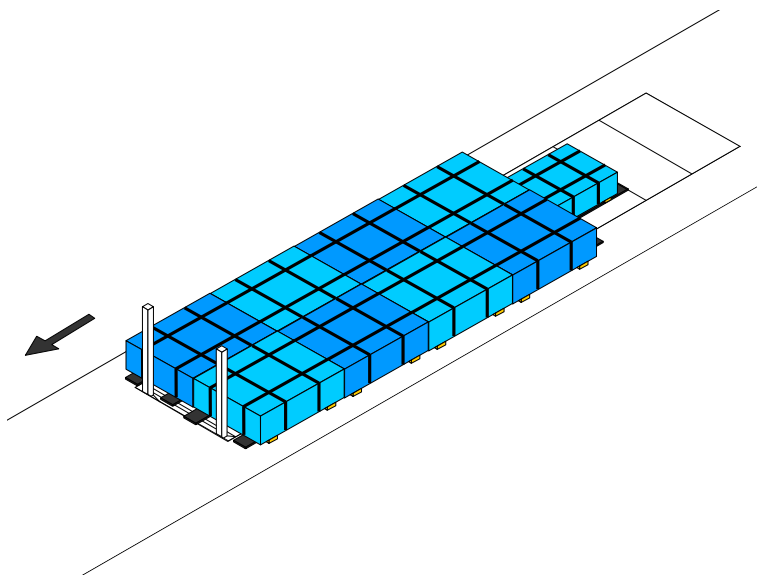


Loading

- The bundles will be loaded in singles or pairs in the middle of the loading platform on the anti-slip mats. No space must be left between the bundles, so the bundles are locked in forward direction.
- The first row of each block must be placed centred next to a securing point.

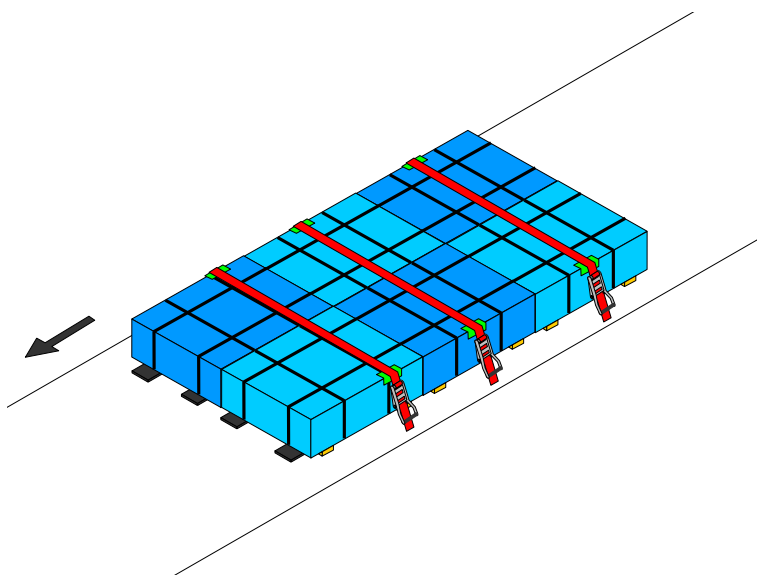


- The bundles will be loaded in blocks as large as possible, with a maximum of 25 tons per block.
- When the load consists of an odd number of bundles the last row is formed by a single and centrally placed bundle.
- Axle weights must be taken into account when placing the bundles.
- When stanchions are used, or a block is placed against the headboard, no space must be left between the bundles and the stanchions or headboard to make sure the bundles are locked in forward direction.

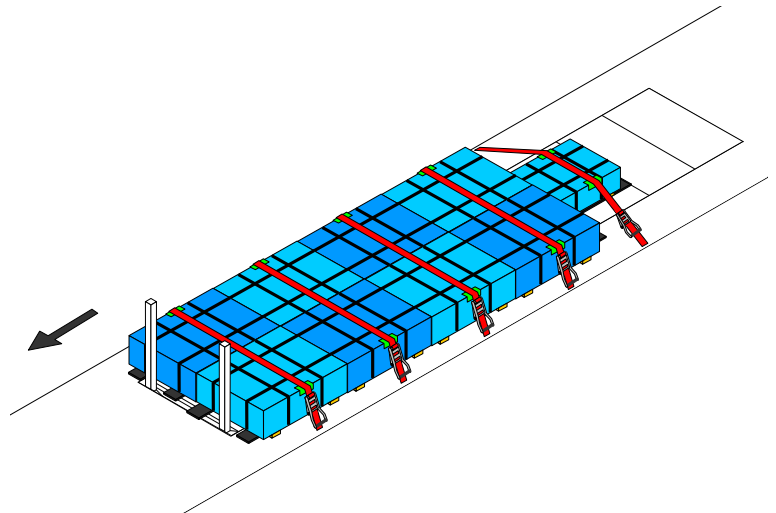


Securing

- Every pair of bundles must be secured with at least one strap.
- The straps must be placed over the bundles so the straps remain on the bundles even after a small movement of the bundles.
- Edge protectors must be used between the edges of the bundle and the strap.
- These lashings can be attached to the side rave should there not be enough anchor points for the load.

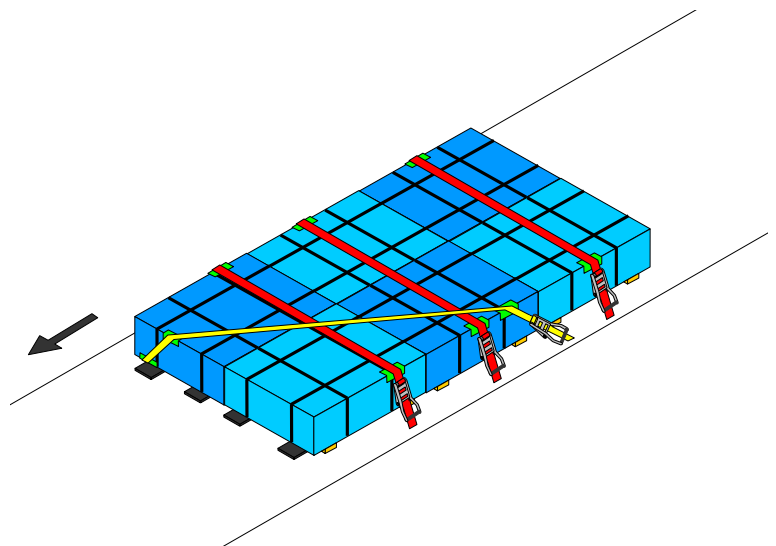


- A single bundle is lashed in a similar way as a double row.

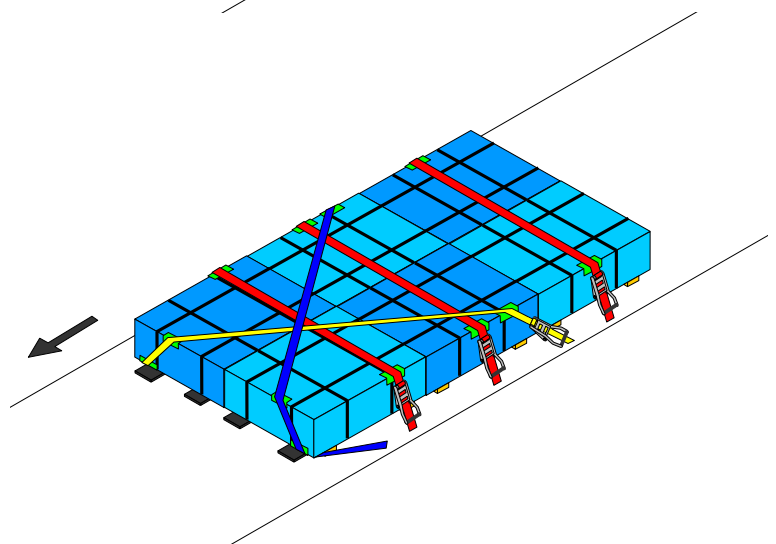


- Every block not placed against the headboard or stanchions must also be secured with a corner lashing.

- The first strap of the corner lashing runs from the securing point next to the first bundle, under the corner of the bundle and then turns back over the bundles to a backward lying securing point on the opposite side of the trailer.



- Edge protectors must be used between the edges of the bundle and the strap.
- The second strap of the corner lashing is applied like the first strap, but on the opposite side of the trailer.



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2. Document Control

2.1.1 Responsibility

- Carriers are responsible for providing safe and damage-free transport. This document describes the minimum requirements. It does not relieve carriers from responsibility for taking additional measures as he may deem necessary. Carriers retain full liability.

2.1.2 Application

- These regulations apply for all road transports departing in Europe under responsibility of or ordered by Tata Steel Europe Strip Products
- These regulations also apply for all road transports outside continental Europe when agreed so with the service provider.
- In the USA all loads must be secured according to the standards as described in the current version of the 'Federal Motor Carrier, Safety Regulations'.

2.1.3 Standards

- The load restraint methods and guidelines described in this document are designed to be compliant with the forces as specified in EN12195-1: 2010 and VDI 2700.

2.1.4 Publication method

- The Quality and Transport Safety Department (QTS) of Tata Steel Supply Chain Europe, Outbound is charged with the publication of the Outbound Road Standards.
- QTS will maintain a record of the publication of the controlled copies so that amendments can be made in all relevant departments.
- The current version of the Outbound Road Standards will be available on a Tata Steel internet site anytime on the URL: <http://www.tatasteel.nl/veiligheid/en>.
- Under Regulations > Transport en logistics > Road Regulations.

2.1.5 Validity

- This document remains valid up to and including the 31st October 2021, but can be amended when necessary.

2.1.6 Archive

- Records of the Road Standards will be archived for at least 3 years.
- Authorisations will be archived until they are replaced by a new authorisation about the same piece of the Road Standards.

2.1.7 Authorisation

- QTS will consult and inform all relevant departments and the forwarder when intending an alteration.
- QTS will present every amendment to the QTS Manager for authorisation.