

# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Plate - Export loads

### 1. This Technical Advice Document applies when:

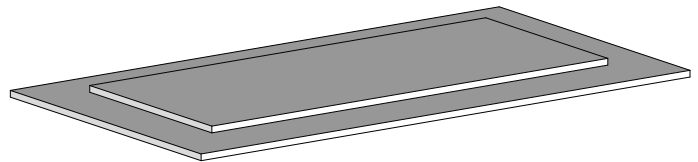
- Air temperature is below 3°C and there is a risk of frost, ice or snow.



*Note: Testing has shown that friction coefficients of steel products can be reduced by as much as 50% in freezing conditions. This means that extra restraints are needed to make loads safe when there is a risk of ice.*

This Technical Advice Document covers the following product:

- Reversing mill plate



### 2. Essential requirements

- Trailers must be clear of debris, snow and ice.
- Do not load above the height of the trailer headboard.
- All restraint equipment must be inspected before use and be in good condition - see relevant Technical Information Sheets for *Belly-wrapping*, *Timber dunnage*, *Webbing straps and ratchets*, *Webbing strap edge protection*, and *Anti-slip matting*.
- All webbing straps must be compliant with EN 12195-2 and have a minimum rating of LC 2000 daN.
- Edge protection must be applied to webbing straps at all sharp or abrasive edges, including trailer chassis frame and side rails.

### 3. Winter weather alert

Throughout the winter period a system will be in place to notify hauliers and Tata Steel despatch points of the risk of freezing conditions.

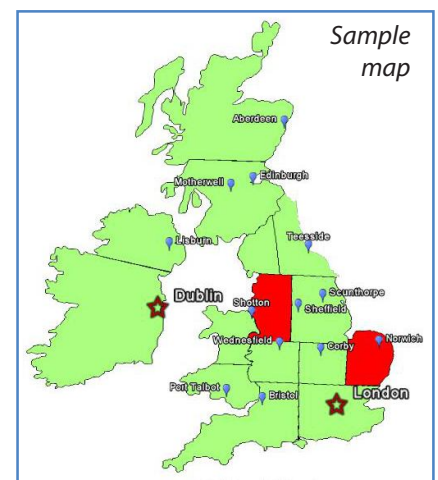
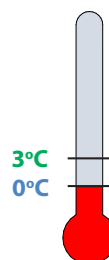
Regions of the UK will be deemed **Red Flag** restraint areas for a period of 24 hours if there is a risk of ice forming on the load. These regions will be coloured **red** on a map sent out daily to all despatch points and hauliers.

Loads despatched from or transiting the **Red Flag** regions will require the restraints identified in this document.

*Note: It is the driver's responsibility to apply the winter weather restraints when the load transits a region identified as **Red Flag**, or conditions deteriorate at the loading point or en-route and there is a risk of ice forming on the load.*



Risk of ice



# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Plate - Export loads

### 4. Loading and restraint requirements

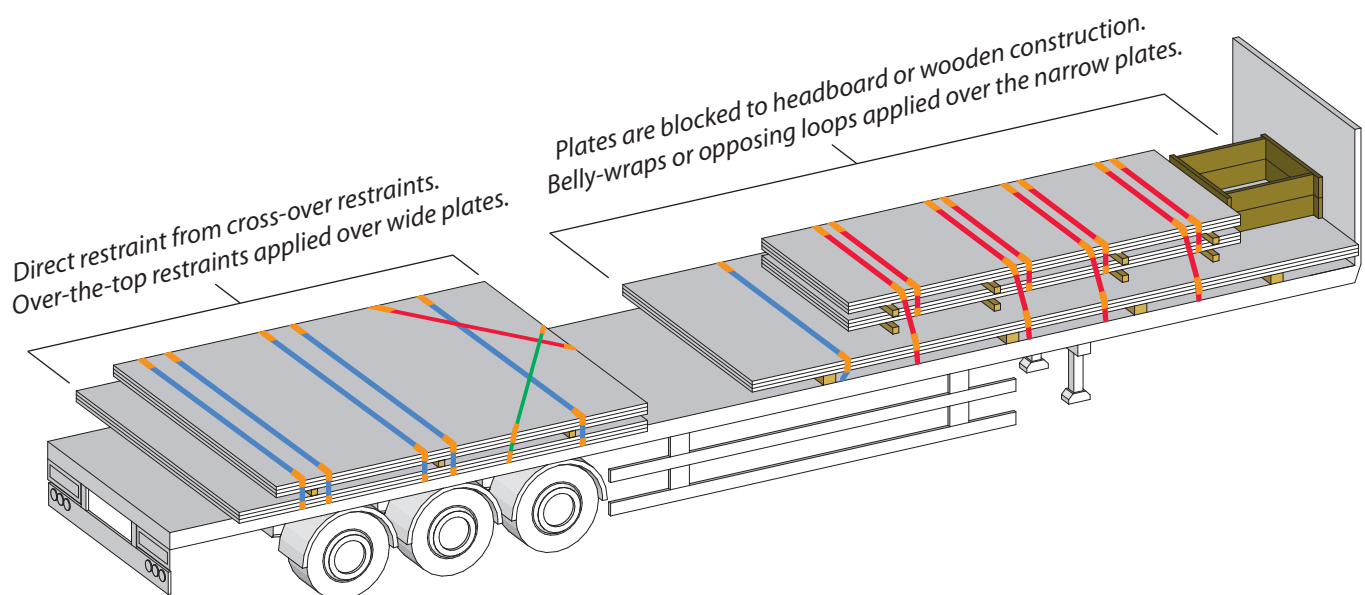
#### 4.1 Fully blocked load

- ✓ Use dry timbers where possible.
- ✓ Minimum number of restraints according to Table 1.
- ✓ Restraints over product less than trailer width are to be belly-wrapped or altered to a pair of opposing loops.
- ✓ **All product to be:**
  - **Loaded to trailer headboard or stanchions**  
or
  - **Blocked using wooden constructions**  
or
  - **Have direct restraint in the form of cross-over restraints.**

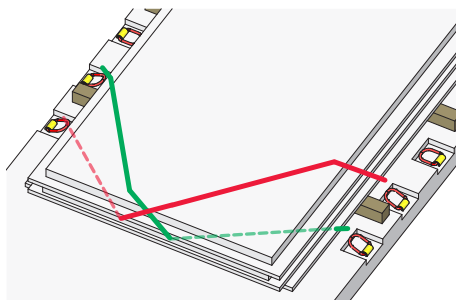
Table 1: Quantity of restraints

Load	Tie-down restraints
0 - 10 t	4
10 - 15 t	5
15 - 20 t	6
20 - 25 t	8
25 - 28 t	9

Illustration below shows how all three methods can be utilised.



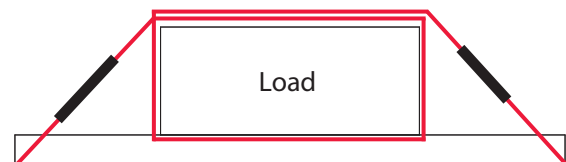
#### Cross-over restraints



Cross-over restraints must be anchored such that the hooks of the lashings are prevented from sliding forward, ideally anchored to lashing points.

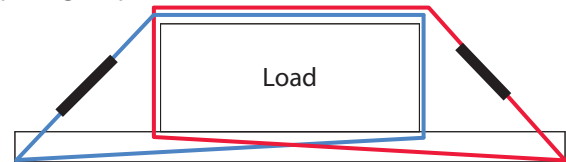
Edge protection omitted for clarity.

#### Belly-wrapping



Edge protection omitted for clarity.

#### Opposing loops



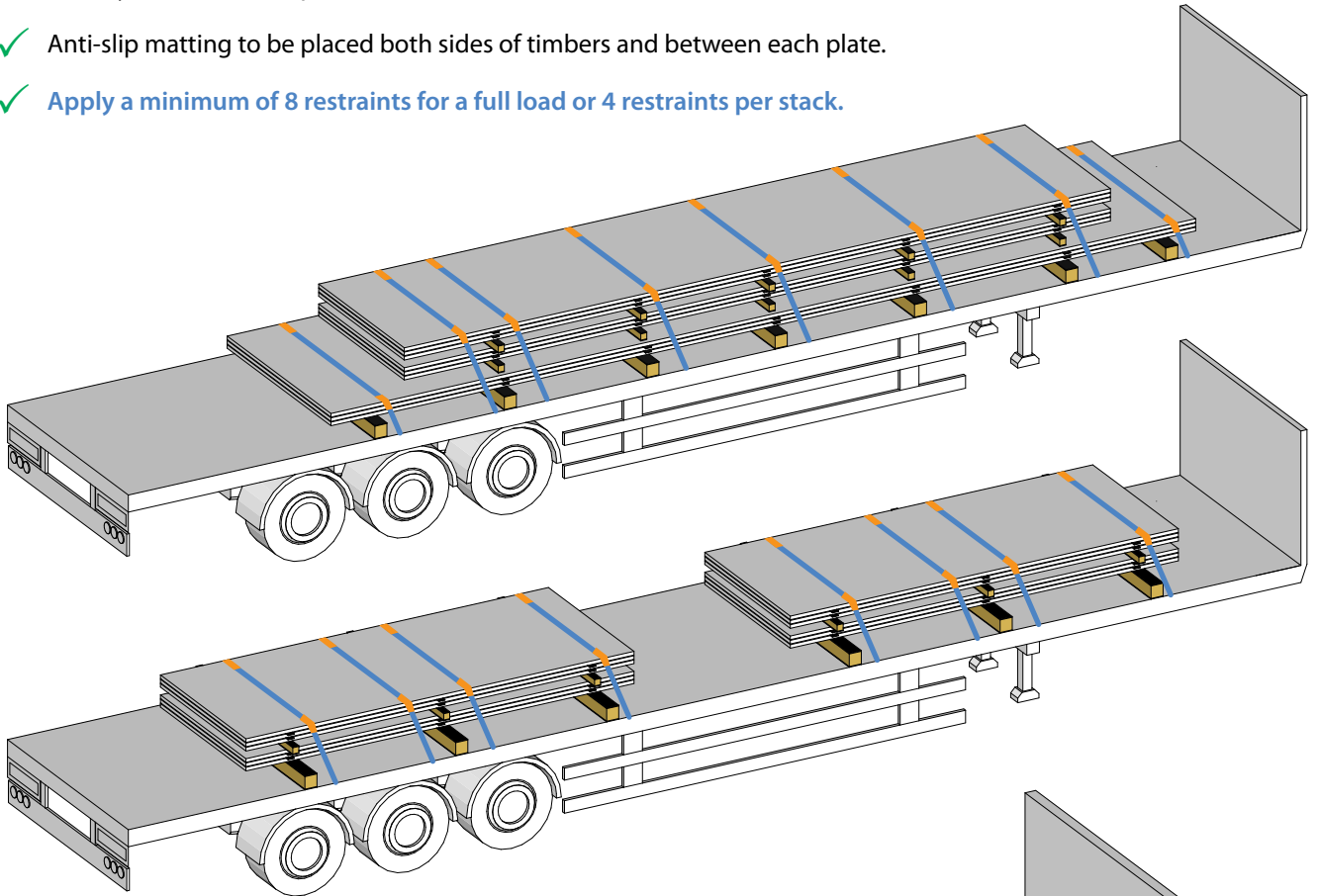
Edge protection omitted for clarity.

# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Plate - Export loads

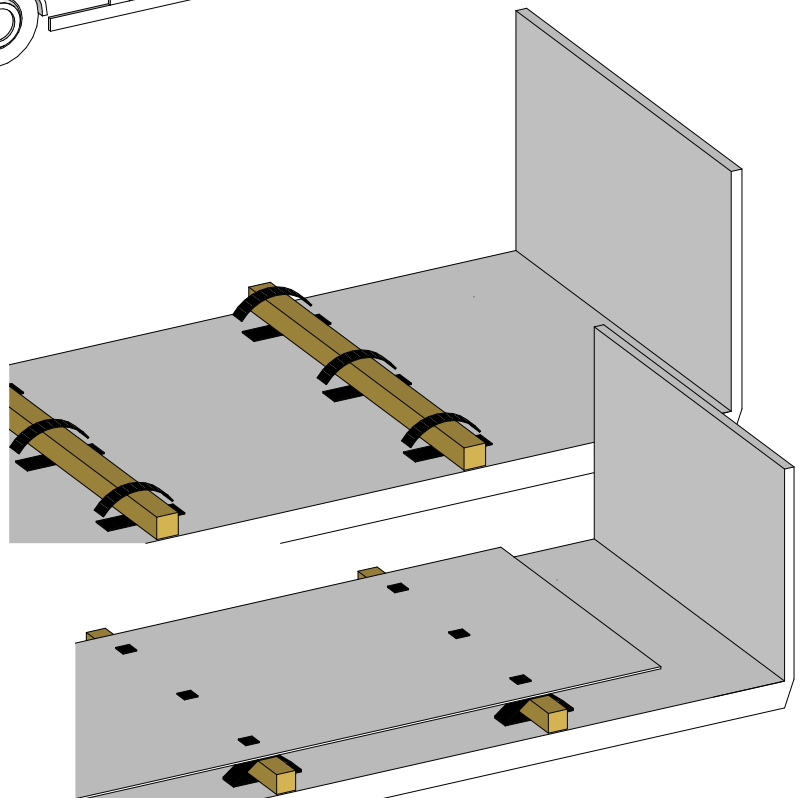
### 4.2 Making use of anti-slip matting

- ✓ Use dry timbers where possible.
- ✓ Anti-slip matting to be placed both sides of timbers and between each plate.
- ✓ Apply a minimum of 8 restraints for a full load or 4 restraints per stack.



### Loading with anti-slip matting

1. Place 500 mm long strips of anti-slip matting lengthways on the trailer, where the base timbers will be positioned.
2. Position base timbers across the anti-slip matting.
3. Place 500 mm long strips of anti-slip matting lengthways over the base timbers.
4. Load first plate.
5. Place anti-slip matting at regular intervals along the length of the plates, typically aligned with the timbers.
6. Load next plate and repeat.



100 x 100 mm pieces of anti-slip matting suffice between the plates.

Care has been taken to ensure that the contents of this publication are accurate, but Tata Steel Europe Limited and its subsidiaries do not accept responsibility or liability for errors or information that is found to be misleading.

# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Rod and bar in coil

### 1. This Technical Advice Document applies when:

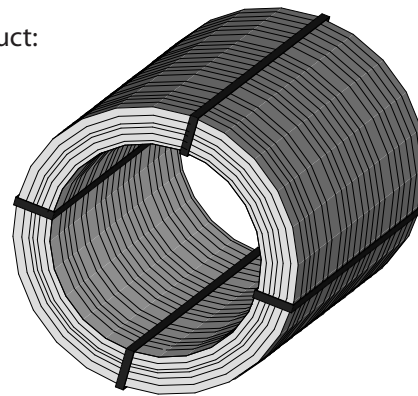
- Air temperature is below 3°C and there is a risk of frost, ice or snow.



*Note: Testing has shown that friction coefficients of steel products can be reduced by as much as 50% in freezing conditions. This means that extra restraints are needed to make loads safe when there is a risk of ice.*

This Technical Advice Document covers the following product:

- Rod in coil
- Bar in coil



### 2. Essential requirements

- Trailers must be clear of debris, snow and ice.
- All restraint equipment must be inspected before use and be in good condition - see relevant Technical Information Sheet for *Timber dunnage, Webbing straps and ratchets, Webbing strap edge protection, and Anti-slip matting.*
- All webbing straps must be compliant with EN 12195-2 and have a minimum rating of LC 2000 daN.
- Edge protection must be applied to webbing straps at all sharp or abrasive edges, including trailer chassis frame and side rails.

### 3. Winter weather alert

Throughout the winter period a system will be in place to notify hauliers and Tata Steel despatch points of the risk of freezing conditions.

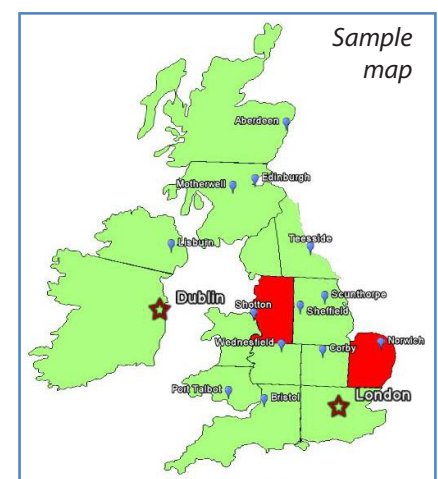
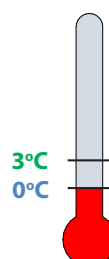
Regions of the UK will be deemed **Red Flag** restraint areas for a period of 24 hours if there is a risk of ice forming on the load. These regions will be coloured **red** on a map sent out daily to all despatch points and hauliers.

Loads despatched from or transiting the **Red Flag** regions will require the restraints identified in this document.

*Note: It is the driver's responsibility to apply the winter weather restraints when the load transits a region identified as **Red Flag**, or conditions deteriorate at the loading point or en-route and there is a risk of ice forming on the load.*



**Risk of ice**



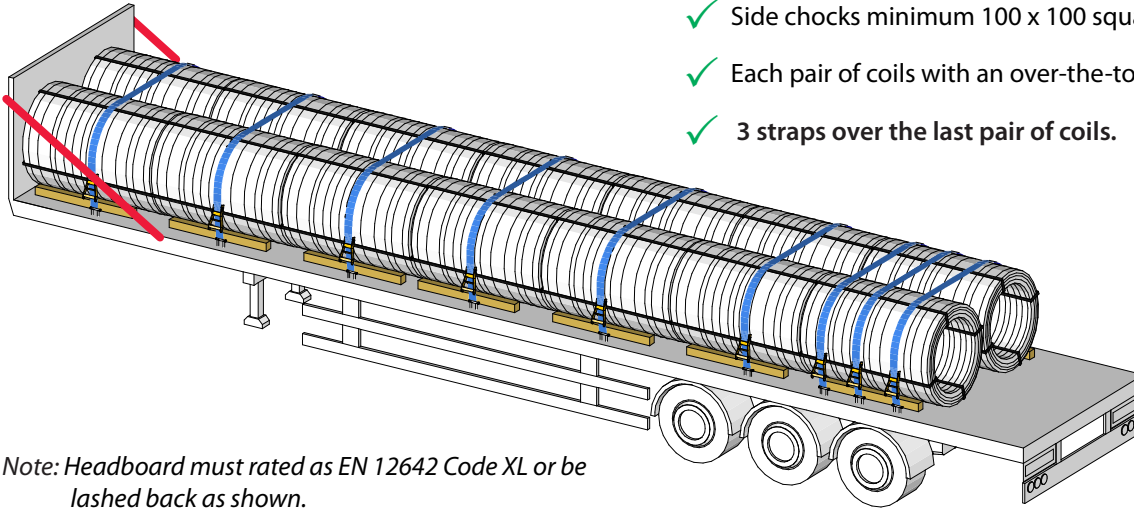
# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Rod and bar in coil

### 4. Loading and restraint requirements

#### 4.1 Scunthorpe coils loaded gunbarrel

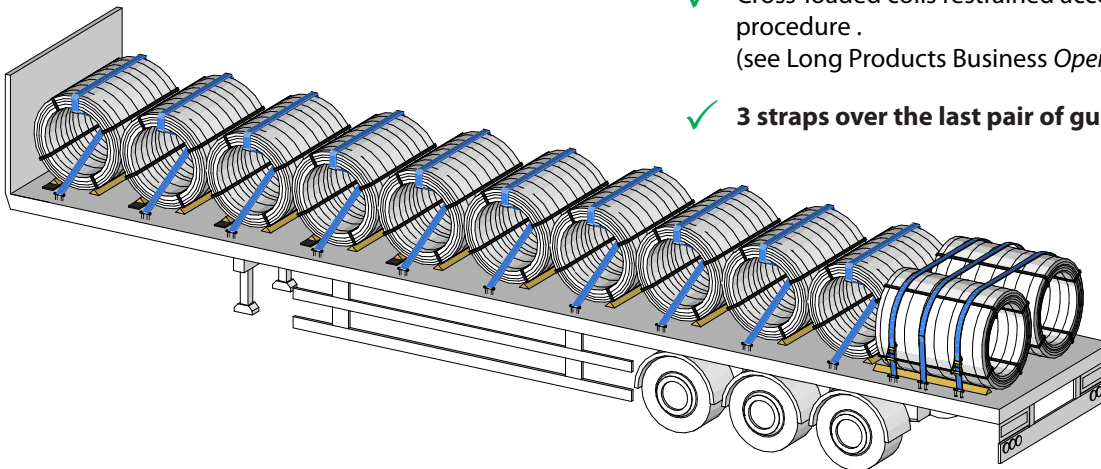
- ✓ Loaded against headboard.
- ✓ Side chocks minimum 100 x 100 square section.
- ✓ Each pair of coils with an over-the-top strap.
- ✓ 3 straps over the last pair of coils.



Note: Headboard must rated as EN 12642 Code XL or be lashed back as shown.

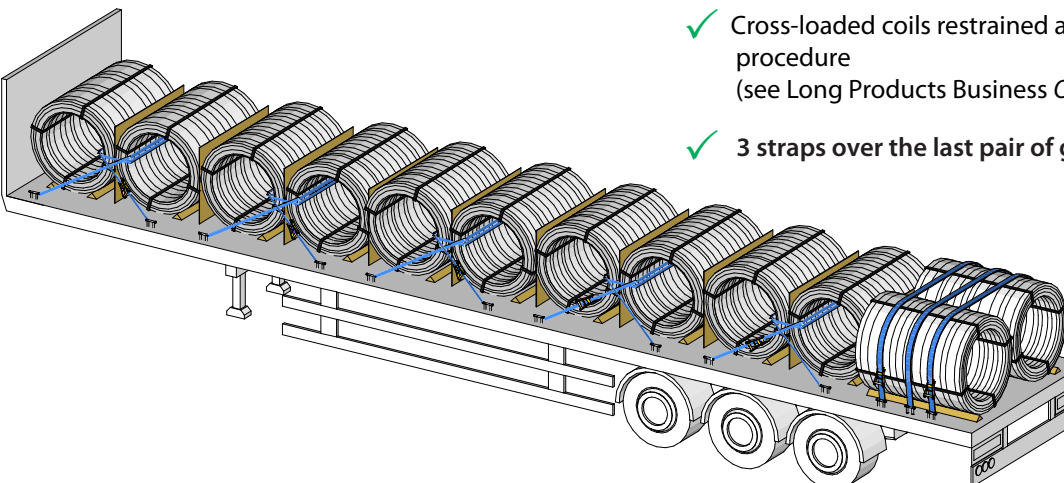
#### 4.2 Scunthorpe coils loaded across trailer - UK

- ✓ First 5 coils to have front chocks on anti-slip matting.
- ✓ Cross-loaded coils restrained according to current procedure .  
(see Long Products Business Operation Manual).
- ✓ 3 straps over the last pair of gunbarrel coils.



#### 4.3 Scunthorpe coils loaded across trailer - Export

- ✓ Cross-loaded coils restrained according to current procedure  
(see Long Products Business Operation Manual).
- ✓ 3 straps over the last pair of gunbarrel coils.

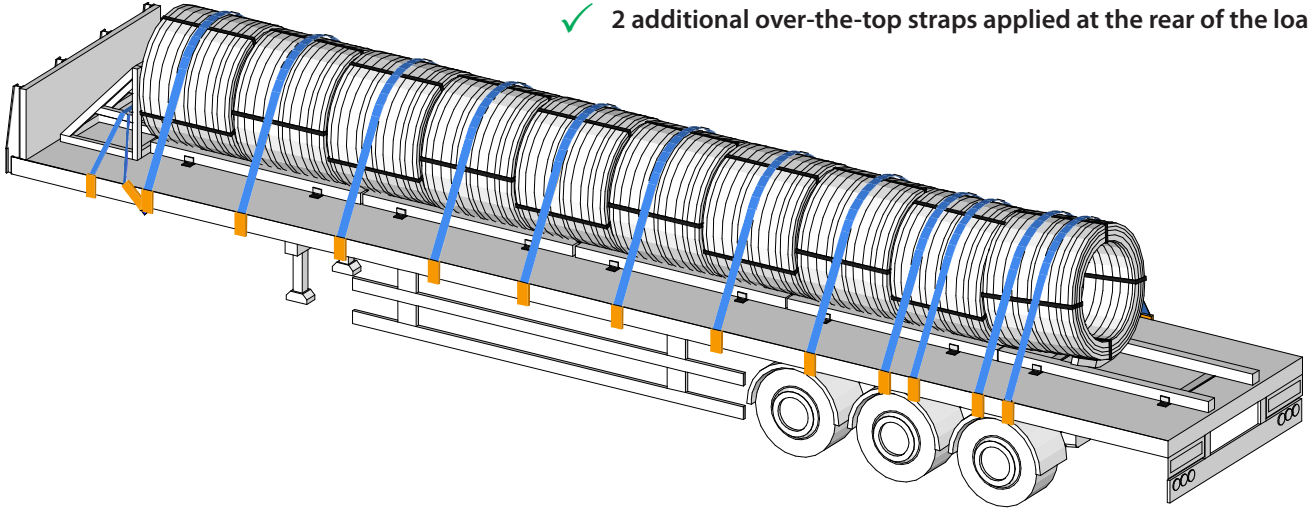


# TECHNICAL ADVICE DOCUMENT

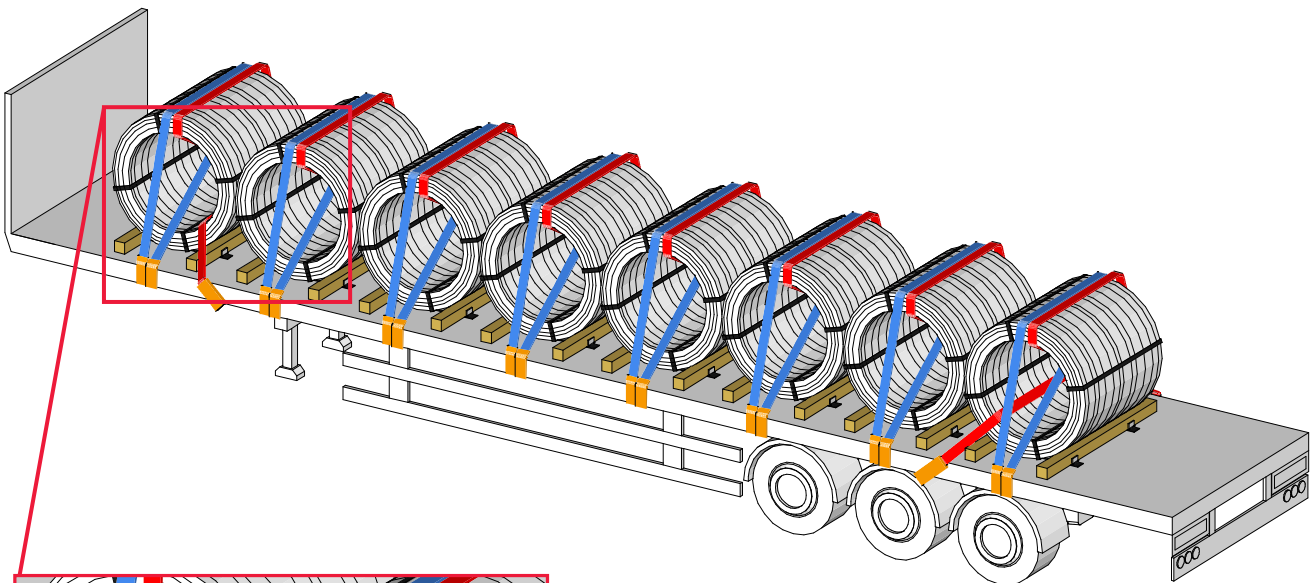
## Winter conditions - Rod and bar in coil

### 4.4 Thybergh coils loaded gunbarrel

- ✓ Loaded against headboard or A-frame.
- ✓ Coils placed on timber chocks minimum 100 x 100 square section
- ✓ Each coil restrained with an over-the-top strap.
- ✓ 2 additional over-the-top straps applied at the rear of the load.



### 4.5 Thybergh coils loaded across the trailer



- ✓ Loaded on timber chocks minimum 100 x 100 square section.
- ✓ Timber chocks held in place by coil cleats.
- ✓ Coil cleats sit on anti-slip matting.
- ✓ Opposing loop straps applied to each coil as per normal practice.
- ✓ Front and rear coils restrained with straps through the bore as shown, providing direct restraint.

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# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Black bar

### 1. This Technical Advice Document applies when:

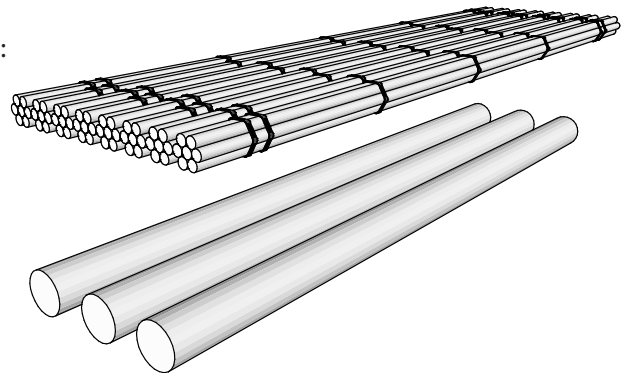
- Air temperature is below 3°C and there is a risk of frost, ice or snow.



*Note: Testing has shown that friction coefficients of steel products can be reduced by as much as 50% in freezing conditions. This means that extra restraints are needed to make loads safe when there is a risk of ice.*

This Technical Advice Document covers the following product:

- Bundled Black Bar
- Large diameter Black Bar.



### 2. Essential requirements

- Trailers must be clear of debris, snow and ice.
- All restraint equipment must be inspected before use and be in good condition - see relevant Technical Information Sheets for *Belly-wrapping, Timber dunnage, Webbing straps and ratchets, Transport chains and tensioners, Webbing strap edge protection, and Anti-slip matting.*
- All webbing straps must be compliant with EN 12195-2 and have a minimum rating of LC 2000 daN.
- Edge protection must be applied to webbing straps at all sharp or abrasive edges, including trailer chassis and side rails.
- All chains must be 8mm minimum and be compliant with EN 12195-3 (Grade 8 chain).

### 3. Winter weather alert

Throughout the winter period a system will be in place to notify hauliers and Tata Steel despatch points of the risk of freezing conditions.

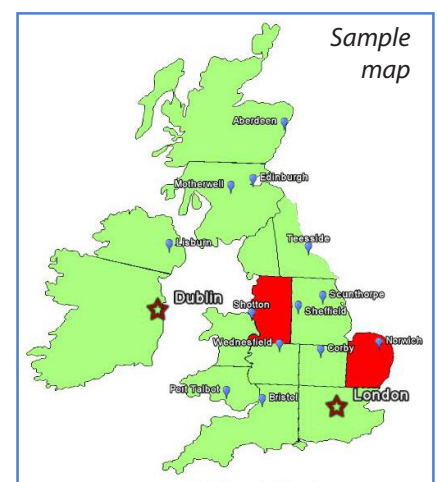
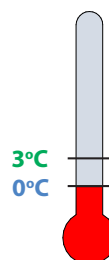
Regions of the UK will be deemed **Red Flag** restraint areas for a period of 24 hours if there is a risk of ice forming on the load. These regions will be coloured **red** on a map sent out daily to all despatch points and hauliers.

Loads despatched from or transiting the **Red Flag** regions will require the restraints identified in this document.

*Note: It is the driver's responsibility to apply the winter weather restraints when the load transits a region identified as **Red Flag**, or conditions deteriorate at the loading point or en-route and there is a risk of ice forming on the load.*



Risk of ice

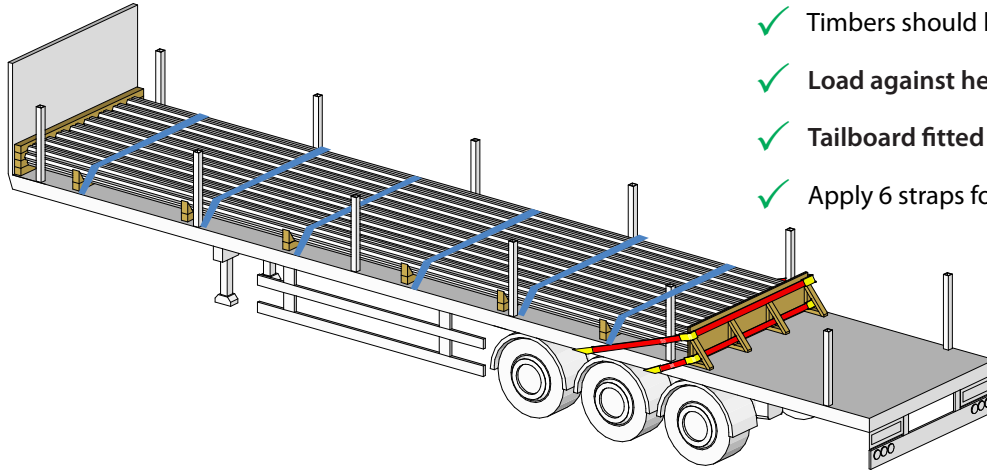


# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Black bar

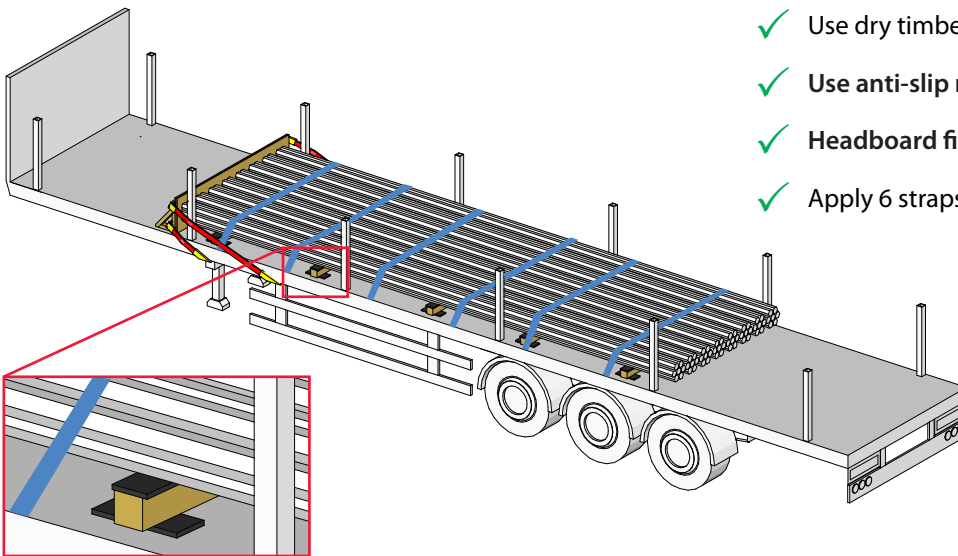
### 4. Loading and restraint requirements

#### 4.1 Blocked load option



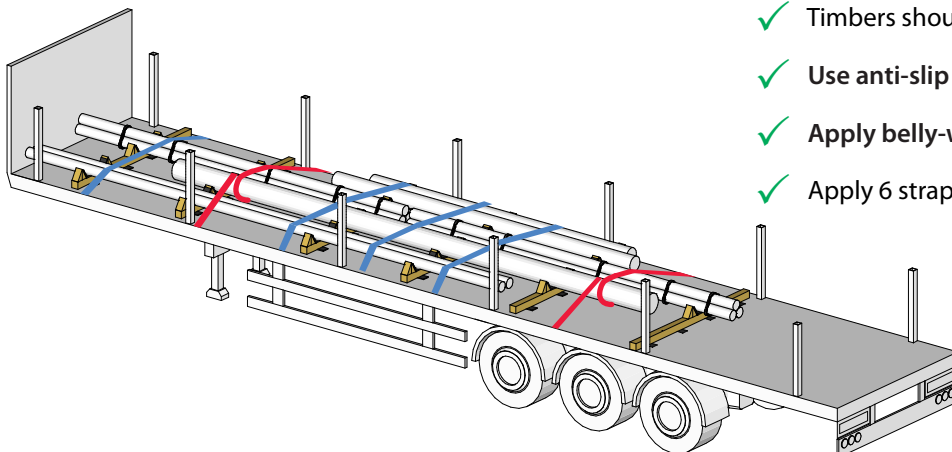
- ✓ Use dry timbers where possible.
- ✓ Timbers should have side chocks fitted.
- ✓ Load against headboard or block forward.
- ✓ Tailboard fitted at rear of load with 2 straps.
- ✓ Apply 6 straps for a full load.

#### 4.2 Anti-slip matting option for bar bundles



- ✓ Use dry timbers where possible.
- ✓ Use anti-slip matting on both sides of timbers.
- ✓ Headboard fitted at front of load with 2 straps.
- ✓ Apply 6 straps for a full load.

#### 4.3 Mixed black bar loads



- ✓ Load to the headboard where axle loads allow.
- ✓ Timbers should have chocks or pins fitted.
- ✓ Use anti-slip matting on both sides of timbers.
- ✓ Apply belly-wraps to unblocked bars.
- ✓ Apply 6 straps for a full load.

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# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Loose pipe

### 1. This Technical Advice Document applies when:

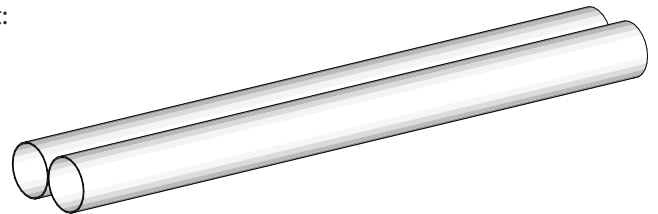
- Air temperature is below 3°C and there is a risk of frost, ice or snow.



*Note: Testing has shown that friction coefficients of steel products can be reduced by as much as 50% in freezing conditions. This means that extra restraints are needed to make loads safe when there is a risk of ice.*

This Technical Advice Document covers the following product:

- Loose pipe



### 2. Essential requirements

- Trailers must be clear of debris, snow and ice.
- Do not load above the height of the trailer headboard.
- All restraint equipment must be inspected before use and be in good condition - see relevant Technical Information Sheets for *Timber Dunnage, Webbing straps and ratchets, Transport Chains and tensioners, Webbing strap edge protection, and Anti-slip matting.*
- All webbing straps must be compliant with EN 12195-2 and have a minimum rating of LC 2000 daN.
- Edge protection must be applied to webbing straps at all sharp or abrasive edges, including trailer chassis frame and side rails.
- All chains must be 8 mm minimum and be compliant with EN 12195-3 (Grade 8 chain).
- **Chains are only permitted on certain product types.** If in doubt, ask the despatch team.

### 3. Winter weather alert

Throughout the winter period a system will be in place to notify hauliers and Tata Steel despatch points of the risk of freezing conditions.

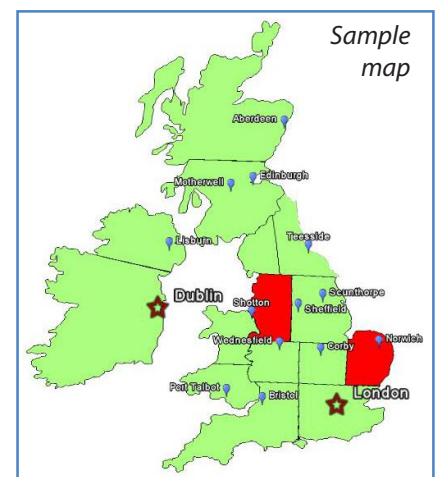
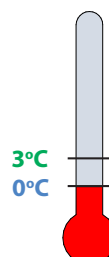
Regions of the UK will be deemed **Red Flag** restraint areas for a period of 24 hours if there is a risk of ice forming on the load. These regions will be coloured **red** on a map sent out daily to all despatch points and hauliers.

Loads despatched from or transiting the **Red Flag** regions will require the restraints identified in this document.

*Note: It is the driver's responsibility to apply the winter weather restraints when the load transits a region identified as **Red Flag**, or conditions deteriorate at the loading point or en-route and there is a risk of ice forming on the load.*



Risk of ice



# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Loose pipe

### 4. Loading and restraint requirements

- ✓ Load to the headboard wherever possible.
- ✓ Maximum of 2 pipes in upper most layer, otherwise product must be loaded to headboard.
- ✓ **Apply anti-slip matting throughout the load.** If timber bearers are used, apply the anti-slip matting to both sides of all bearers before loading product.
- ✓ Use goal posts as per normal practice. Goal post ties omitted for clarity in illustrations.
- ✓ Edge protection applied to webbing strap at all points of contact with trailer chassis beam and side rails.
- ✗ Do not mix and match webbing straps and chains.

*All illustrations in this document are for webbing straps.*

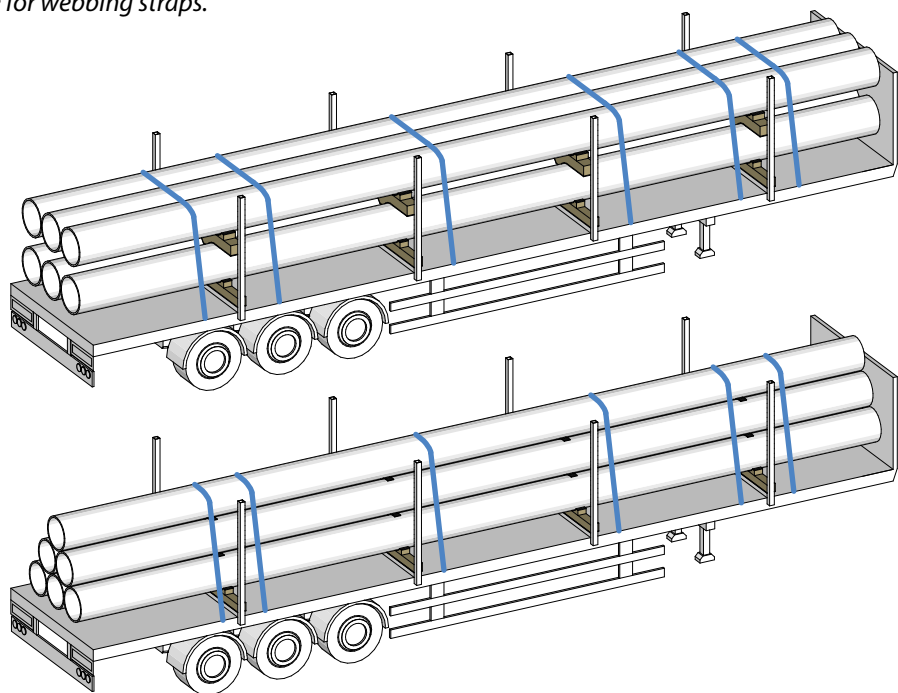
#### 4.1 Loaded to headboard

Lashing type	Quantity
Webbing straps	6
Transport chains*	4

\* if appropriate

Layers of pipe loaded to headboard, anti-slip matting throughout and 6 webbing straps.

Nested pipes loaded to headboard, anti-slip matting throughout and 6 webbing straps.



#### 4.2 Loaded away from headboard

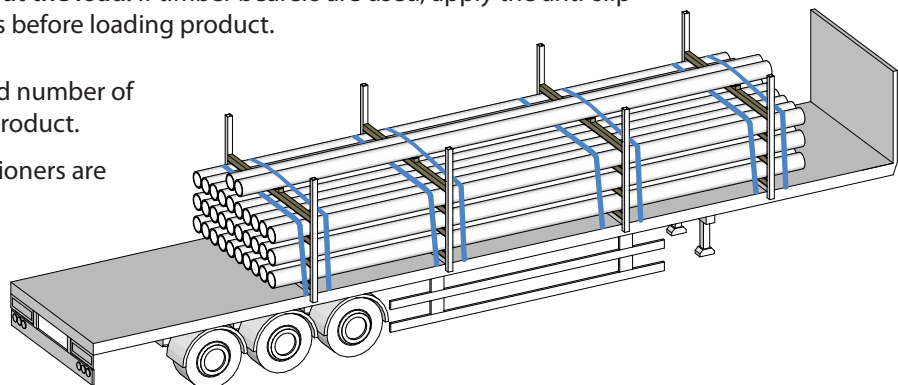
- ✓ Maximum of 2 pipes in upper most layer. These two pipes are to be chocked or belly-wrapped.
- ✓ **Apply anti-slip matting throughout the load.** If timber bearers are used, apply the anti-slip matting to both sides of all bearers before loading product.

Good practice to apply half the required number of restraints before loading final layer of product.

Alternate sides on which webbing tensioners are applied.

Lashing type	Quantity
Webbing straps	8
Transport chains*	5

\* if appropriate



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# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Semi-finished products

### 1. This Technical Advice Document applies when:

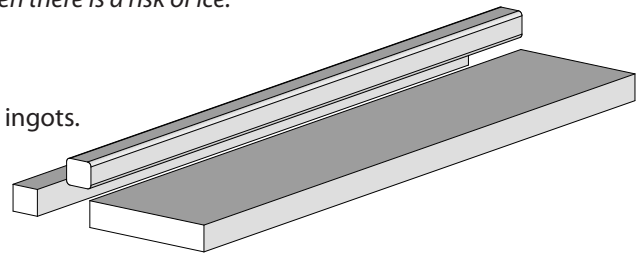
- Air temperature is below 3°C and there is a risk of frost, ice or snow.



*Note: Testing has shown that friction coefficients of steel products can be reduced by as much as 50% in freezing conditions. This means that extra restraints are needed to make loads safe when there is a risk of ice.*

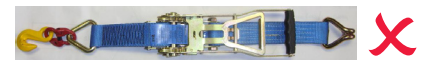
This Technical Advice Document covers the following products:

- Semi-finished products including blooms, billets, slabs and ingots.



### 2. Essential requirements

- Trailers must be clear of debris, snow and ice.
- All restraint equipment must be inspected before use and be in good condition - see relevant Technical Information Sheets for *Belly-wrapping, Timber dunnage, Webbing straps and ratchets, Transport chains and tensioners, Webbing strap edge protection, and Anti-slip matting.*
- Anti-slip matting required for all loads, unless product is hot.
- All webbing straps must be compliant with EN 12195-2 and have a minimum rating of LC 2000 daN. Maximum product temperature for use with webbing straps is 120 °C.
- Edge protection must be applied to webbing straps at all sharp or abrasive edges, including trailer chassis and side rails.
- All chains must be 8 mm minimum and be compliant with EN 12195-3 (Grade 8).
- Webbing ratchets are not an acceptable tensioner type for use with chains.



### 3. Winter weather alert

Throughout the winter period a system will be in place to notify hauliers and Tata Steel despatch points of the risk of freezing conditions.

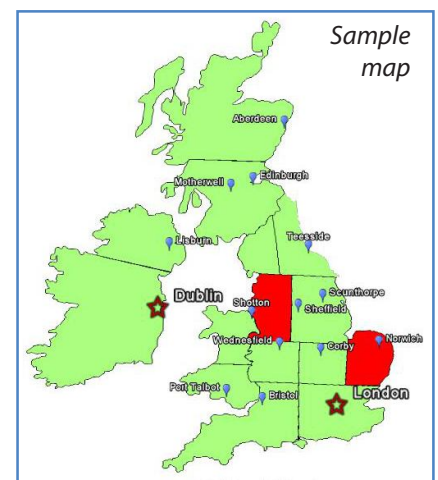
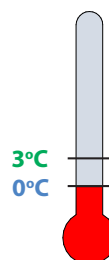
Regions of the UK will be deemed **Red Flag** restraint areas for a period of 24 hours if there is a risk of ice forming on the load. These regions will be coloured **red** on a map sent out daily to all despatch points and hauliers.

Loads despatched from or transiting the **Red Flag** regions will require the restraints identified in this document.

*Note: It is the driver's responsibility to apply the winter weather restraints when the load transits a region identified as **Red Flag**, or conditions deteriorate at the loading point or en-route and there is a risk of ice forming on the load.*



Risk of ice



# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Semi-finished products

### 4. Loading and restraint requirements

#### 4.1 Loading away from the headboard

- ✓ Use dry timbers.
- ✓ Use anti-slip matting on BOTH sides of timbers.
- ✓ Side pins must be fitted.

#### Longs

- ✓ All lashings are belly-wrapped.
- ✓ Number of restraints specified in the tables below.

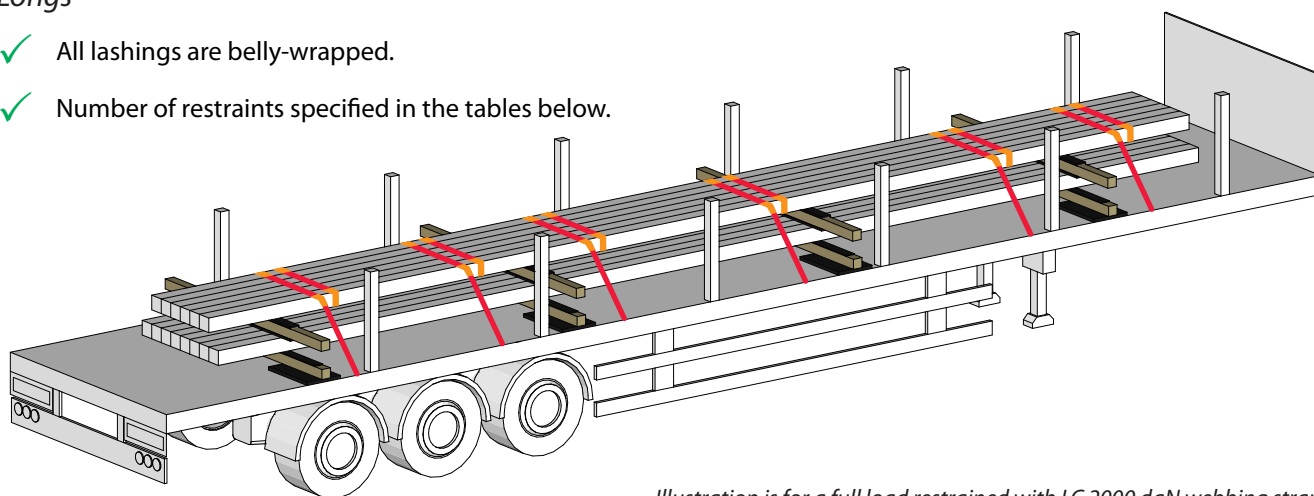


Illustration is for a full load restrained with LC 2000 daN webbing straps.

**Table 1: LC 2000 daN straps**

Load	Belly-wraps
Up to 20 t	4
Over 20 t	6

**Table 2: 8mm chains**

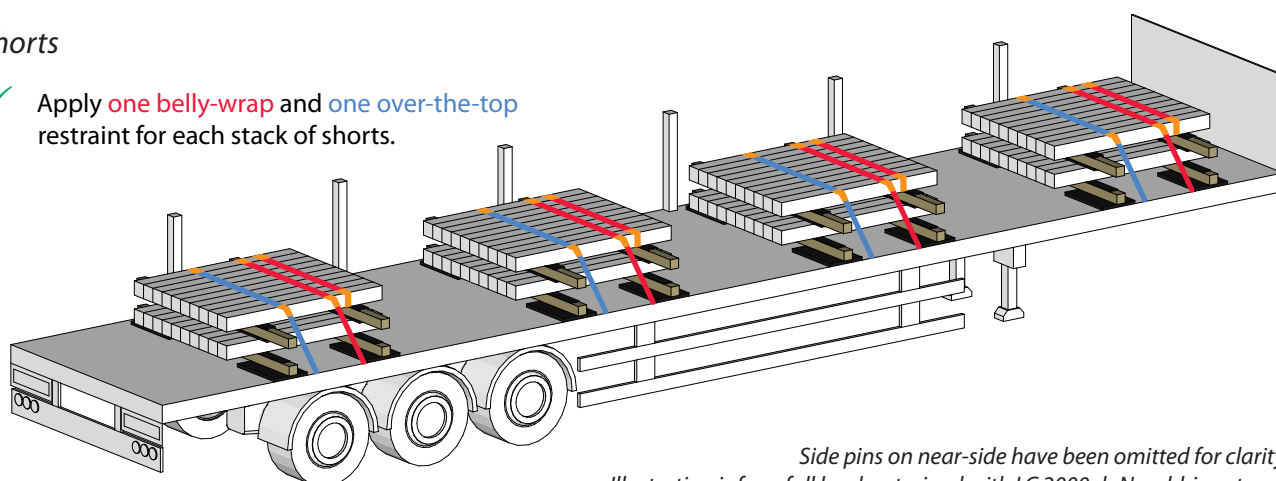
Load	Belly-wraps
Up to 20 t	3
Over 20 t	4

**Table 3: 10mm chains**

Load	Belly-wraps
0 - 10 t	2
10 - 15 t	3

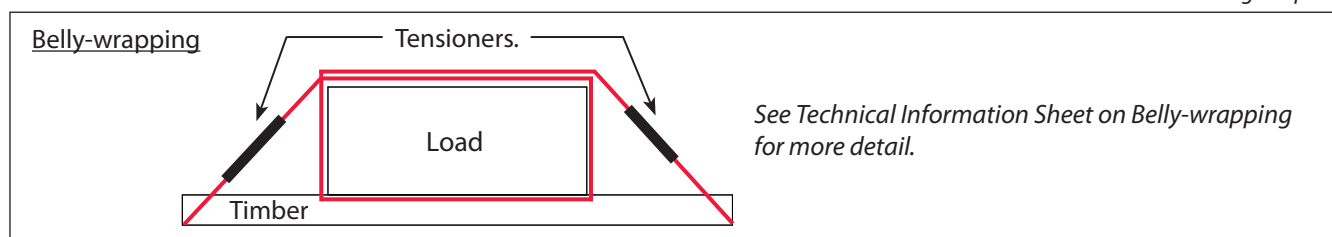
#### Shorts

- ✓ Apply **one belly-wrap** and **one over-the-top** restraint for each stack of shorts.



Side pins on near-side have been omitted for clarity.

Illustration is for a full load restrained with LC 2000 daN webbing straps.

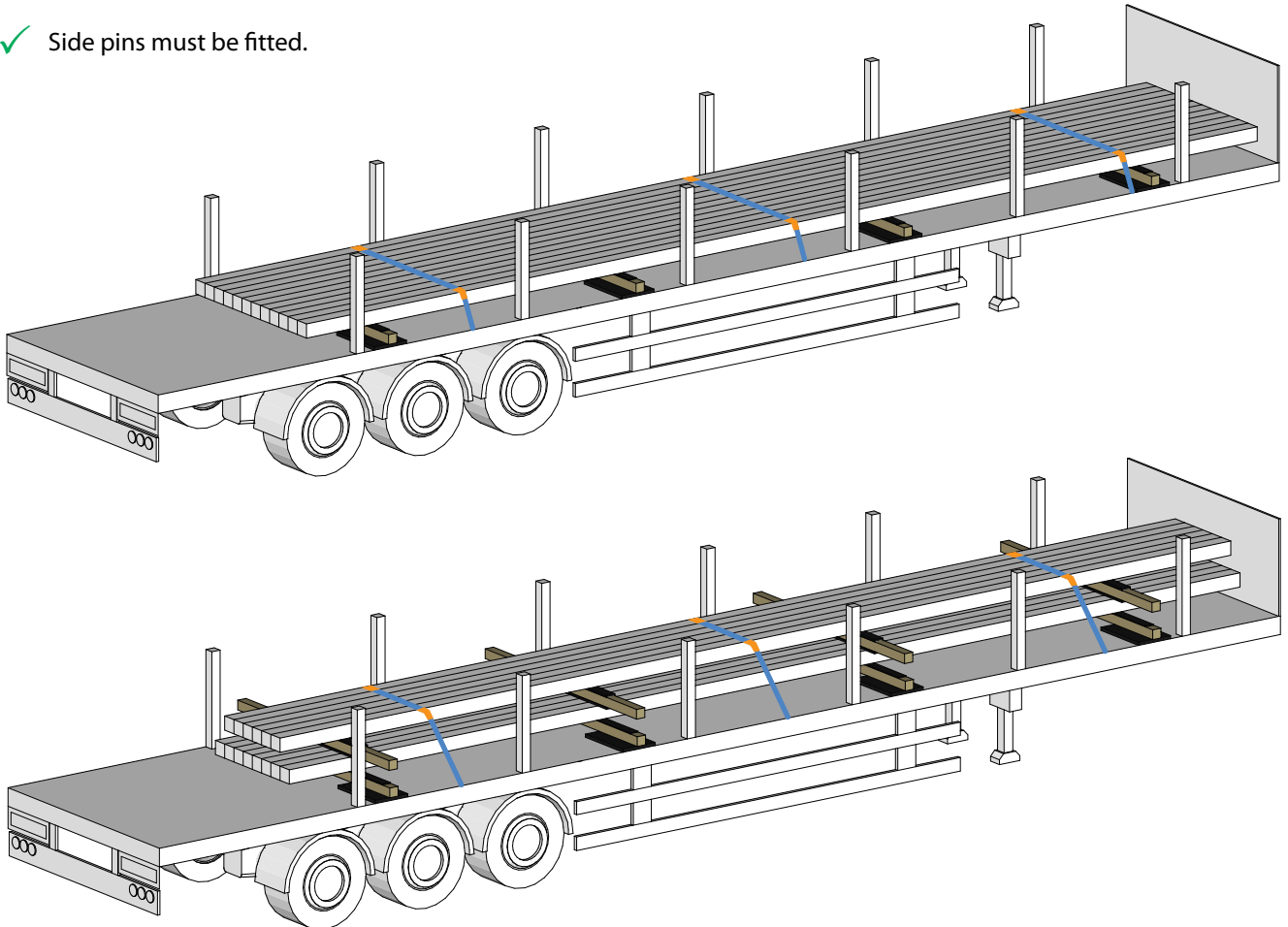


# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Semi-finished products

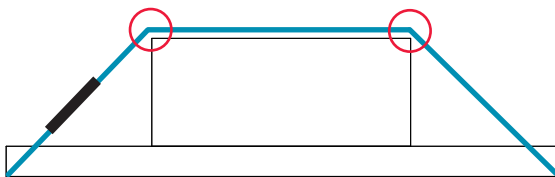
### 4.2 Loading against the headboard

- ✓ Use dry timbers.
- ✓ All products **MUST** be loaded against the trailer headboard.
- ✓ Use anti-slip matting on **BOTH** sides of timbers.
- ✓ Minimum of 3 **over-the-top restraints** must be applied.
- ✓ Side pins must be fitted.

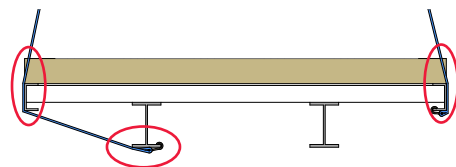


#### Edge protection

Points of high stress on webbing strap due to sharp corners and/or abrasive surfaces require use of edge protection.



Use trailer anchor points where available, but if using trailer chassis or side rails additional edge protection is required around trailer structure.



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# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Non-banded sections - Export loads

### 1. This Technical Advice Document applies when:

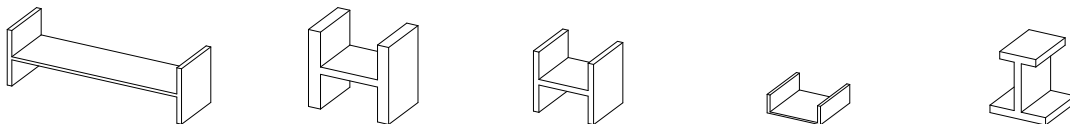
- Air temperature is below 3°C and there is a risk of frost, ice or snow.



*Note: Testing has shown that friction coefficients of steel products can be reduced by as much as 50% in freezing conditions. This means that extra restraints are needed to make loads safe when there is a risk of ice.*

This Technical Advice Document covers the following product:

- Sections loads, including mixed product 'fabricator' loads.



### 2. Essential requirements

- Trailers must be clear of debris, snow and ice.
- Do not load above the height of the headboard.
- All restraint equipment must be inspected before use and be in good condition - see relevant Technical Information Sheets for *Timber dunnage*, *Webbing straps and ratchets*, and *Webbing strap edge Protection*.
- All webbing straps must be compliant with EN 12195-2 and have a minimum rating of LC 2000 daN.
- Edge protection must be applied to webbing straps at all sharp or abrasive edges, including trailer chassis and side rails.

### 3. Winter weather alert

Throughout the winter period a system will be in place to notify hauliers and Tata Steel despatch points of the risk of freezing conditions.

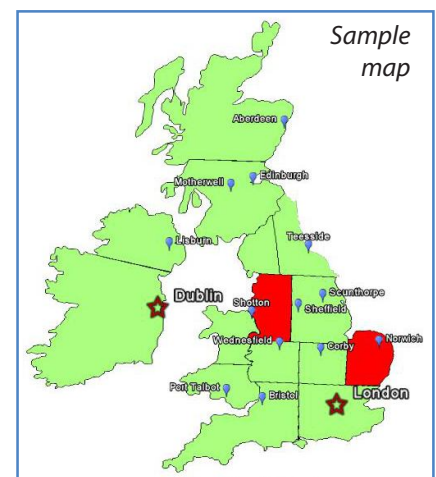
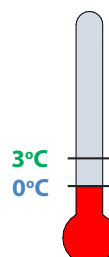
Regions of the UK will be deemed **Red Flag** restraint areas for a period of 24 hours if there is a risk of ice forming on the load. These regions will be coloured **red** on a map sent out daily to all despatch points and hauliers.

Loads despatched from or transiting the **Red Flag** regions will require the restraints identified in this document.

*Note: It is the driver's responsibility to apply the winter weather restraints when the load transits a region identified as **Red Flag**, or conditions deteriorate at the loading point or en-route and there is a risk of ice forming on the load.*



Risk of ice



# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Non-banded sections - Export loads

### 4. Loading and restraint requirements

- ✓ Use dry timbers where possible.
- ✓ Follow Load Restraint Guideline LRG-0003-SS for load configuration requirements.
- ✓ Edge protection applied to webbing strap and ratchet at all points of contact with product.
- ✓ Edge protection applied to webbing strap and ratchet at all points of contact with trailer chassis and side rails.
- ✓ Side pins fitted.

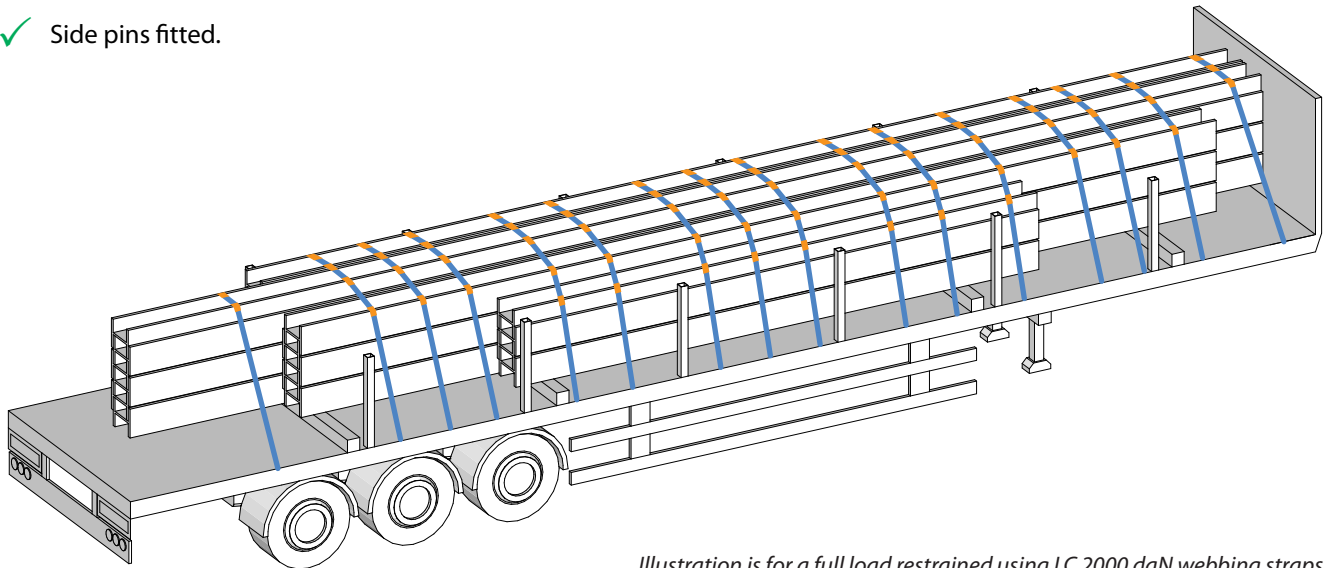
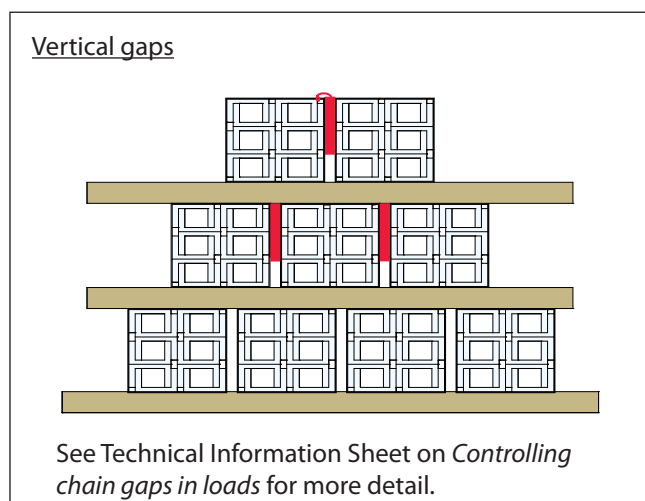


Illustration is for a full load restrained using LC 2000 daN webbing straps.

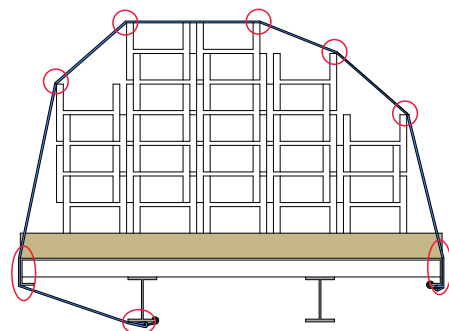
Load	LC 2000daN	LC 2500daN
0 - 10 t	9	8
10 - 15 t	11	10
15 - 20 t	12	10
20 - 25 t	14	12
25 - 28 t	15	13



#### Edge protection

Points of high stress on webbing straps due to sharp corners and/or abrasive surfaces require use of edge protection.

Trailer lashing points are to be used where available, but if using trailer chassis or side rails additional edge protection is required around trailer structure.



See Technical Information Sheet on *Webbing strap edge protection* for more detail.

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# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Banded sections - Export loads

### 1. This Technical Advice Document applies when:

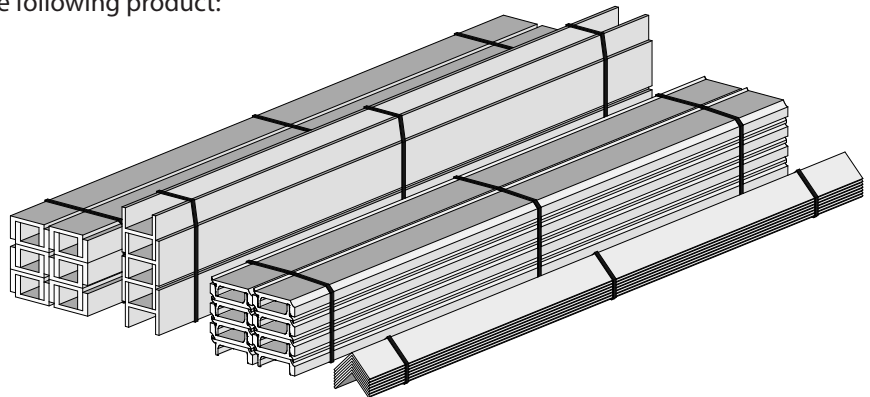
- Air temperature is below 3°C and there is a risk of frost, ice or snow.



*Note: Testing has shown that friction coefficients of steel products can be reduced by as much as 50% in freezing conditions. This means that extra restraints are needed to make loads safe when there is a risk of ice.*

This Technical Advice Document covers the following product:

- Banded structural sections
  - Beams and columns
  - Channels
  - Angles
- Special Profiles



### 2. Essential requirements

- Trailers must be clear of snow.
- All restraint equipment must be inspected before use and be in good condition - see relevant Technical Information Sheets for *Timber Dunnage*, *Webbing straps and ratchets*, and *Webbing strap edge protection*.
- All webbing straps must be compliant with EN 12195-2 and have a minimum rating of LC 2000 daN.
- Edge protection must be applied to webbing straps at all sharp or abrasive edges, including trailer chassis and side rails.

### 3. Winter weather alert

Throughout the winter period a system will be in place to notify hauliers and Tata Steel despatch points of the risk of freezing conditions.

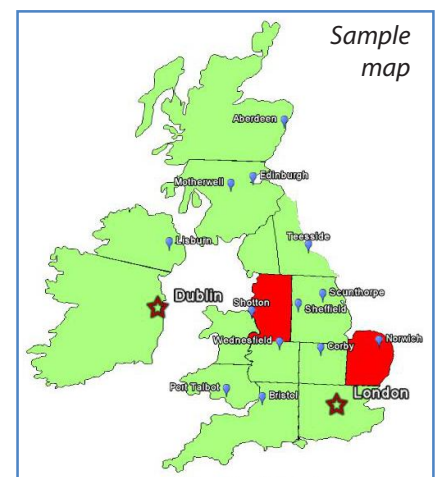
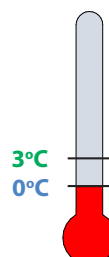
Regions of the UK will be deemed **Red Flag** restraint areas for a period of 24 hours if there is a risk of ice forming on the load. These regions will be coloured **red** on a map sent out daily to all despatch points and hauliers.

Loads despatched from or transiting the **Red Flag** regions will require the restraints identified in this document.

*Note: It is the driver's responsibility to apply the winter weather restraints when the load transits a region identified as **Red Flag**, or conditions deteriorate at the loading point or en-route and there is a risk of ice forming on the load.*



**Risk of ice**





# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Banded sections - Export loads

### 4. Loading and restraint requirements

- ✓ Use dry timbers where possible.
- ✓ Load towards headboard where possible.
- ✓ Follow Load Restraint Guideline LRG-0003-SS for load configuration requirements.
- ✓ Edge protection applied to webbing strap at all points of contact with product, trailer chassis and side rails.
- ✓ Gaps between bundles are controlled using nunchucks.
- ✓ Side pins fitted.

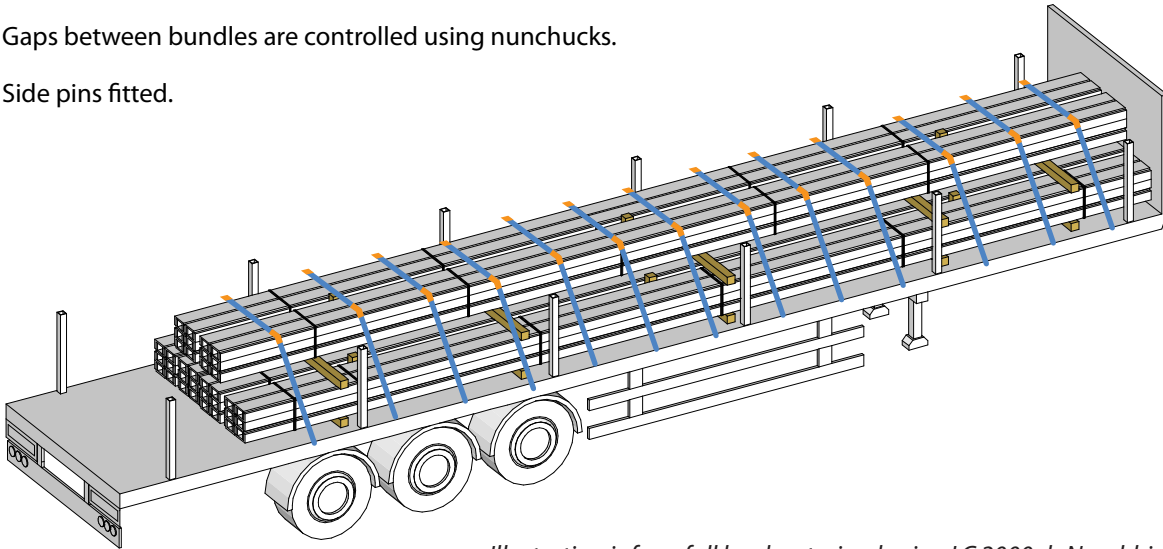


Illustration is for a full load restrained using LC 2000 daN webbing straps.

Load	LC 2000 daN	LC 2500 daN
0 - 10 t	7	6
10 - 15 t	9	8
15 - 20 t	10	8
20 - 25 t	12	10
25 - 28 t	13	11

Vertical gaps

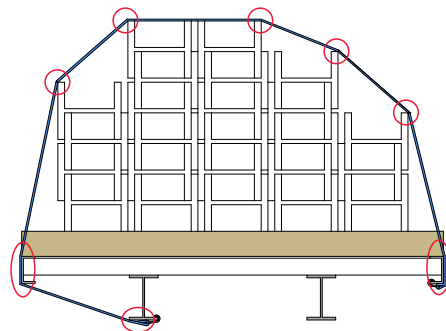
A cross-sectional diagram of a trailer load. It shows two bundles of banded sections stacked on top of each other. Red vertical lines indicate the gaps between the bundles and between the bundles and the trailer deck. The trailer deck is shown as a brown horizontal bar.

See Technical Information Sheet on *Controlling chain gaps in loads* for more detail.

#### Edge protection

Points of high stress on webbing straps due to sharp corners and/or abrasive surfaces require use of edge protection.

Trailer lashing points are to be used where available, but if using trailer chassis or side rails additional edge protection is required around trailer structure.



See Technical Information Sheet on *Webbing strap edge protection* for more detail.

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# TECHNICAL ADVICE DOCUMENT

## Winter conditions - Tube bundles

### 1. This Technical Advice Document applies when:

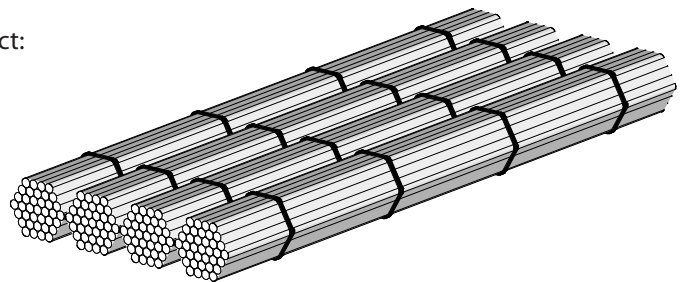
- Air temperature is below 3°C and there is a risk of frost, ice or snow affecting the product.



*Note: Testing has shown that friction coefficients of steel products can be reduced by as much as 50% in freezing conditions. This means that extra restraints are needed to make loads safe when there is a risk of ice.*

This Technical Advice Document covers the following product:

- Banded tube bundles



### 2. Essential requirements

- Trailers must be clear of debris, snow and ice.
- Do not load above the height of the trailer headboard.
- All restraint equipment must be inspected before use and be in good condition - see relevant Technical Information Sheets for *Timber dunnage, Webbing straps and ratchets, Webbing strap edge protection, and Anti-slip matting.*
- All webbing straps must be compliant with EN 12195-2 and have a minimum rating of LC 2000 daN.
- Edge protection must be applied to webbing straps at all sharp or abrasive edges, including trailer chassis frame and side rails.

### 3. Winter weather alert

Throughout the winter period a system will be in place to notify hauliers and Tata Steel despatch points of the risk of freezing conditions.

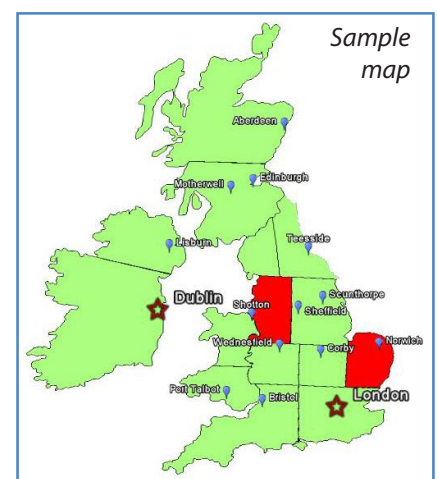
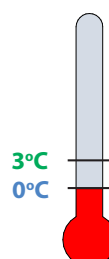
Regions of the UK will be deemed **Red Flag** restraint areas for a period of 24 hours if there is a risk of ice forming on the load. These regions will be coloured **red** on a map sent out daily to all despatch points and hauliers.

Loads despatched from or transiting the **Red Flag** regions will require the restraints identified in this document.

*Note: It is the driver's responsibility to apply the winter weather restraints when the load transits a region identified as **Red Flag**, or conditions deteriorate at the loading point or en-route and there is a risk of ice forming on the load.*



**Risk of ice**



# TECHNICAL ADVICE DOCUMENT

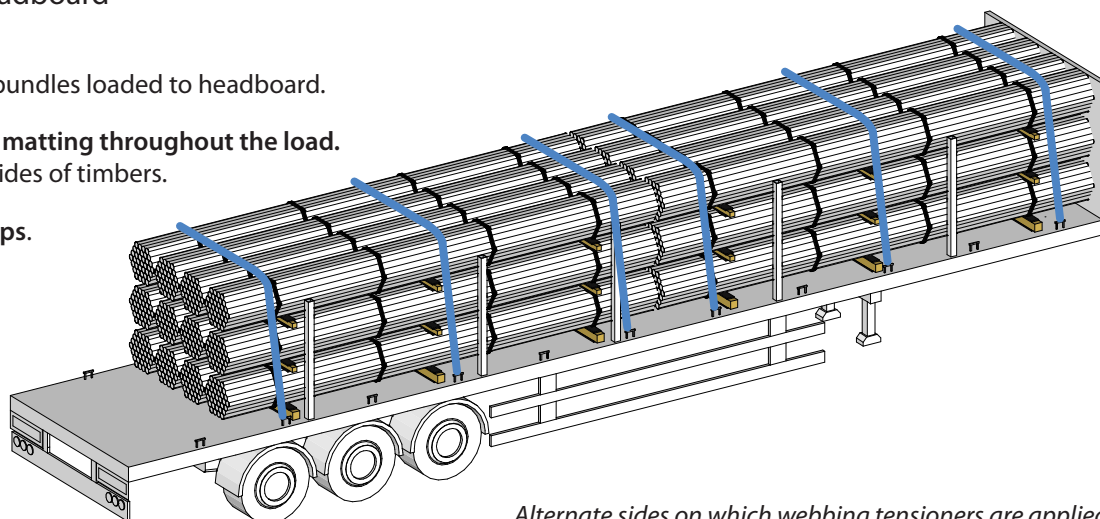
## Winter conditions - Tube bundles

### 4. Loading and restraint requirements

- ✓ Load to the headboard whenever possible.
- ✓ If the load has to be loaded away from the headboard then a maximum of 2 bundles is permitted on the top row.
- ✓ **Apply anti-slip matting throughout the load.** If timber bearers are used, apply the anti-slip matting to both sides of all bearers before loading product.
- ✓ Use goal posts / side pins as per normal practice.
- ✓ Edge protection applied to webbing strap at all points of contact with trailer chassis beam and side rails.

#### 4.1 Loaded to headboard

- ✓ Layers of tube bundles loaded to headboard.
- ✓ **Apply anti-slip matting throughout the load.** Apply to both sides of timbers.
- ✓ **6 webbing straps.**



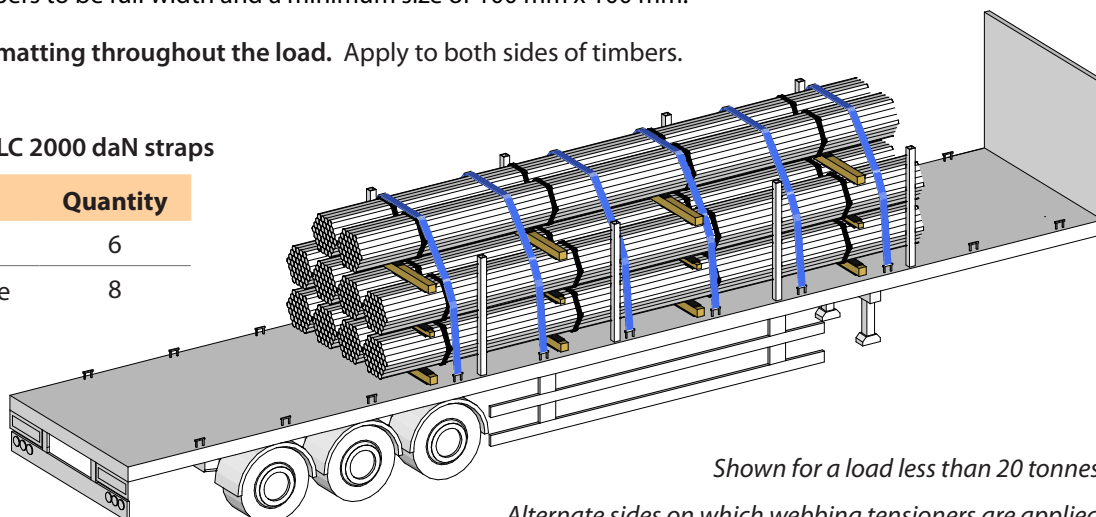
*Alternate sides on which webbing tensioners are applied.*

#### 4.2 Loaded away from headboard

- ✓ Maximum of 2 bundles in upper layer.
- ✓ Upper layer timbers to be full width and a minimum size of 100 mm x 100 mm.
- ✓ **Apply anti-slip matting throughout the load.** Apply to both sides of timbers.

Table 1: Number of LC 2000 daN straps

Load	Quantity
Less than 20 tonnes	6
20 tonnes and above	8



*Shown for a load less than 20 tonnes.*

*Alternate sides on which webbing tensioners are applied.*

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