

TECHNICAL ADVICE DOCUMENT

Severe winter conditions

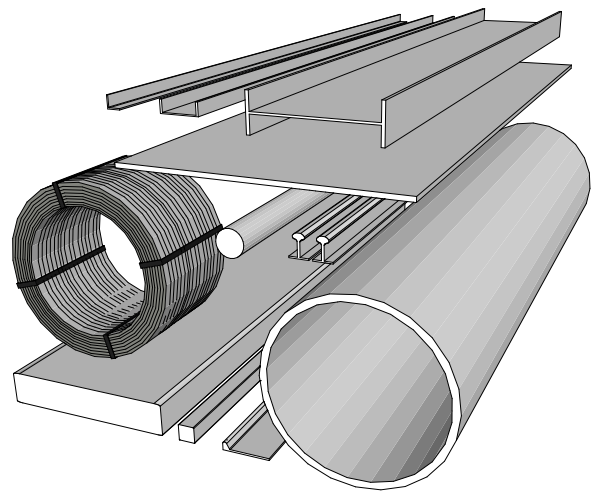
1. This Technical Advice Document applies when:

- Air temperature is below 3°C and loading conditions are exposed to frost, ice and snow.



The advice covers the following products:

- Sections loads, including mixed product 'fabricator' loads
- Rail
- Plates
- Rod/bar in coil
- Bar
- Special profiles
- Pipe
- Semi-finished products (blooms, billets, slabs, ingots).




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, Transport Chains and Edge Protection.
- All webbing straps must have a minimum lashing capacity of 2000daN, and must be compliant with EN 12195-2.
- 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 8mm, Grade 8 with a lashing capacity of 4 tonnes and be compliant with EN 12195-3.

3. Winter alert levels

Amber alert - less than 3°C

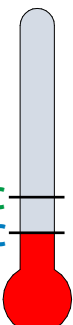


- ✓ Use dry timbers

OR

- ✓ Apply additional restraints - see overleaf.

Red alert - less than 0°C



- ✓ Use dry timbers where possible

AND

- ✓ Apply additional restraints - see overleaf.

Note: Testing has shown that friction coefficients can be reduced by as much as 50% in freezing conditions.

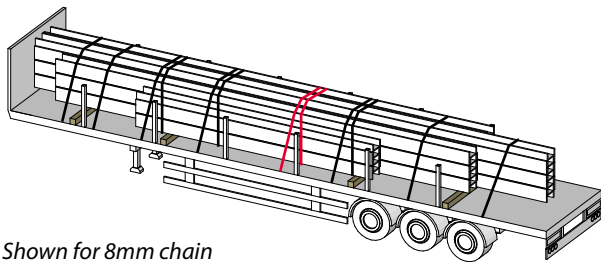
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4. Additional restraints required for freezing conditions

4.1 Sections, non-banded including mixed product 'fabricator' loads

4.1.1 Chains

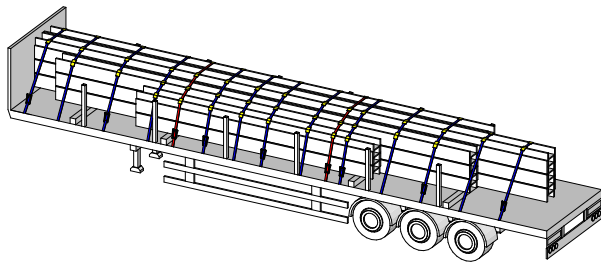


Shown for 8mm chain

Note: Banded sections loads should move to a minimum of 3 belly-wrapped and 3 over-the-top chains.

- ✓ Use dry timbers where possible.
- ✓ Follow Load Restraint Guideline LRG-0002-SS for load configuration requirements.
- ✓ Add 1 belly-wrapped chain to standard restraint system.
- ✓ Full load requires one of the following options:
 - 8mm chains - 4 belly-wrapped and 4 over-the-top.
 - 10mm chains - 3 belly-wrapped and 3 over-the-top.
- ✓ Side pins fitted.

4.1.2 Webbing straps

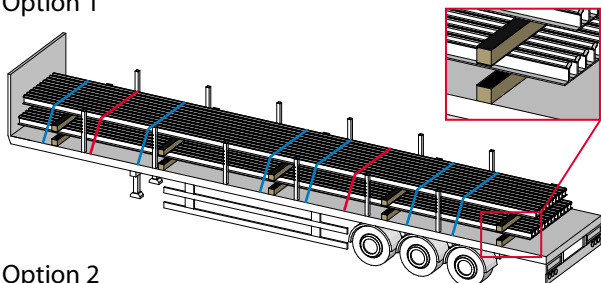


Shown for LC 2000 daN straps

- ✓ Use dry timbers where possible.
- ✓ Follow Load Restraint Guideline LRG-0003-SS for load configuration requirements.
- ✓ Add 2 over-the-top straps to standard restraint system.
- ✓ Full load requires one of the following options:
 - LC 2000daN straps - 15 over-the-top.
 - LC 2500daN straps - 13 over-the-top.
- ✓ Side pins fitted.

4.2 Rail

Option 1

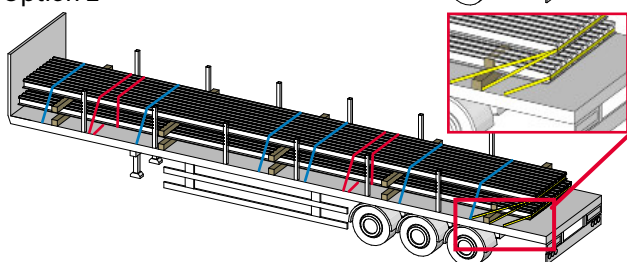


- ✓ Use dry timbers.
- ✓ Load to the headboard.
- ✓ Fit side pins.

Option 1

- ✓ Add anti-slip matting and 2 over-the-top straps.
- ✓ Full load requires anti-slip matting between all rail and timber surfaces and 8 over-the-top straps.

Option 2



Option 2

- ✓ Add 2 pairs of opposing loops and 3 straps at rear.
- ✓ Full load requires 6 over-the-top straps, 2 pairs of opposing loops and 3 direct restraints at rear of load, as depicted.

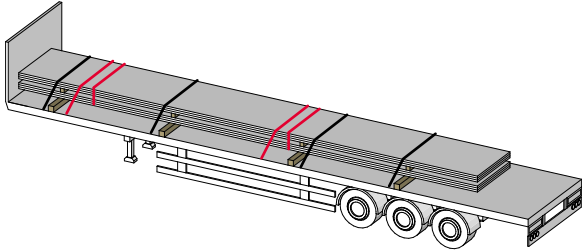
Shown for LC 2000 daN straps

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4.3 Plate

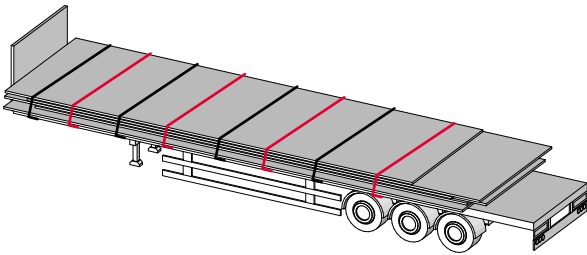
4.3.1 Narrower than trailer



Shown for 8mm chain with webbing tensioners

- ✓ Use dry timbers where possible.
- ✓ Load to the headboard where possible.
- ✓ **Add a minimum of 2 belly-wrapped chains.**
- ✓ Full load requires one of the following options:
 - 3 over-the-top chains with bottle tensioners + 2 belly-wrapped chains.
 - 4 over-the-top chains with webbing tensioners + 2 belly-wrapped chains.
 - 6 over-the-top straps + 3 belly-wrapped straps.

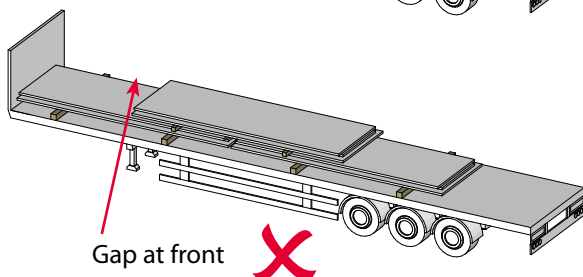
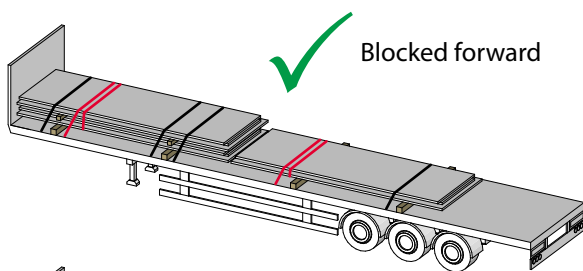
4.3.2 Wide plate



Shown for 8mm chain with webbing tensioners

- ✓ Use dry timbers where possible.
- ✓ Load to the headboard where possible.
- ✓ **Double the normal restraints used.**
- ✓ Full load requires one of the following options:
 - 6 over-the-top chains with bottle tensioners.
 - 8 over-the-top chains with webbing tensioners.
 - 12 over-the-top straps.

4.3.3 Mixed length loads



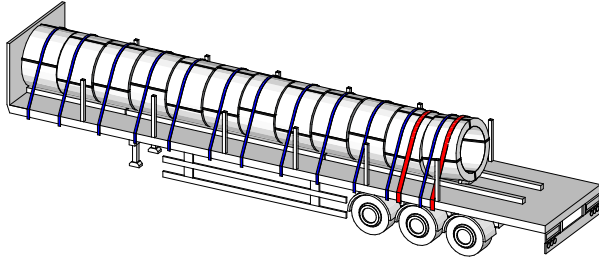
Shown for narrow plate using 8mm chain with webbing tensioners

- ✓ Use dry timbers where possible.
- ✓ Load front plates to the headboard and butt rear plates to them.
- ✓ For narrow plate **add 2 belly-wraps** as per Section 4.3.1.
- ✓ For wide plate **double the normal restraints** as per Section 4.3.2.

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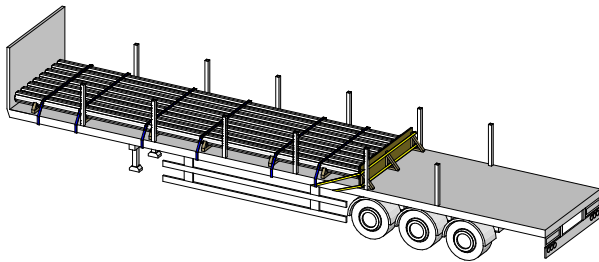
4.4 Rod/bar in coil - gunbarrel



- ✓ Loaded against headboard or A-frame; 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.

Note: The same principle applies to rod in coil loaded across the trailer and blocked at the rear with a pair of gunbarrel coils, i.e. the rear coils require 2 additional straps.

4.5 Black bar



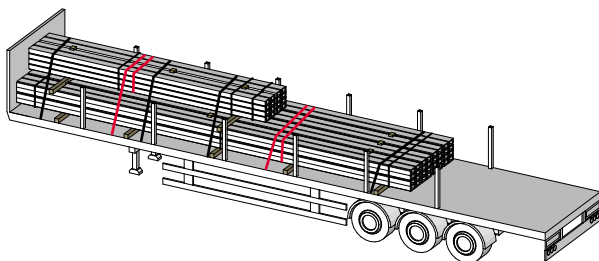
- ✓ Use dry timbers where possible.
- ✓ Timbers should have side chocks fitted.
- ✓ Load against headboard or block forward.
- ✓ Block rearward.

Alternatively:

- ✓ Use anti-slip matting between bars and timbers.
- ✓ Side pins fitted.

Note: Bright Bar should be blocked forward and rearward, and chocked sideways as per current practice.

4.6 Special profiles



- ✓ Use dry timbers where possible.
- ✓ Load against headboard where possible.
- ✓ 2 additional belly-wrapped chains fitted above normal restraint system.

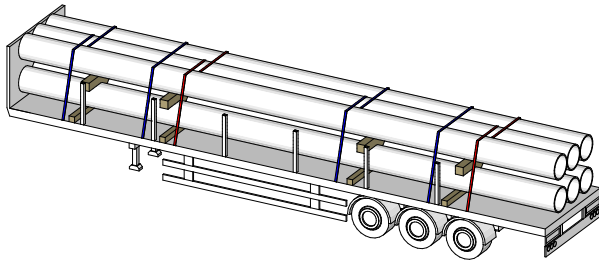
Note: If product cannot be loaded against headboard, add an additional belly-wrap restraint.

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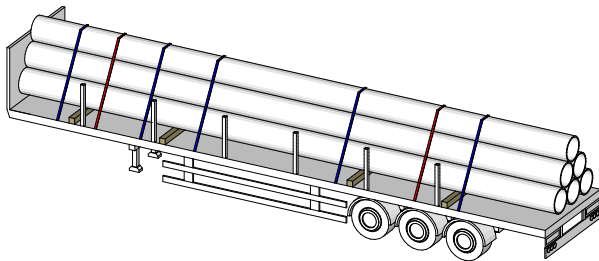
4.7 Pipe

4.7.1 Timbered loads



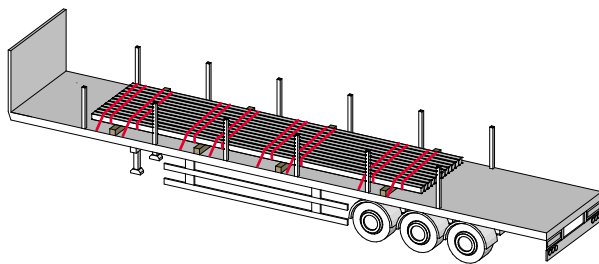
- ✓ Use dry timbers where possible.
- ✓ 2 additional belly-wraps fitted.

4.7.2 Nested loads

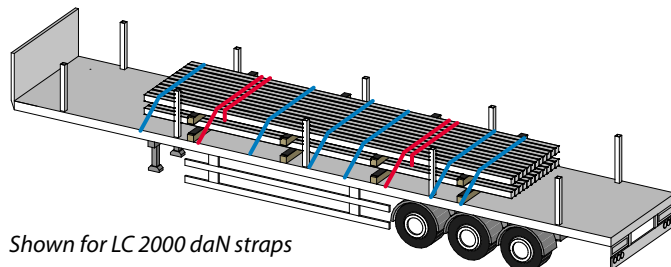


- ✓ Use dry base timbers where possible.
- ✓ 2 additional restraints fitted.

4.8 Semi-finished product (blooms, billets, slabs, ingots)



Shown for LC 2000 daN straps



Shown for LC 2000 daN straps

Option 1

- ✓ Use dry timbers where possible.
- ✓ All belly-wrapped restraints fitted.
- ✓ Full load requires one of the following options:
 - Chains - 5 belly-wrapped.
 - Straps - 8 belly-wrapped.
- ✓ Side pins fitted where possible.

Option 2

- ✓ Use anti-slip matting between timbers and product.
- ✓ Full load requires one of the following options:
 - Chains - 2 belly-wrapped and 4 over-the-top.
 - Straps - 2 belly-wrapped and 6 over-the-top.
- ✓ Side pins fitted where possible.

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