

LOAD RESTRAINT GUIDELINE



L LRG0101 As Cast Square Ingots Issue 1

| Partial | UK | Export |
|---------|----|--------|
| ✗ | ✓ | ✓ |

Key: ✓ = Covered in this document
 ✗ = Not permitted
 LLRG... = See referenced LLRG

1. This advice applies to:

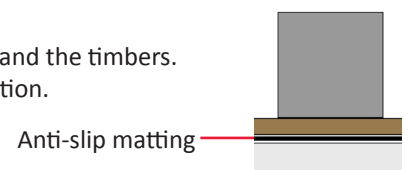
- As cast Square Ingots with 'git end' 5.4t
- As cast Square Ingots with 'git end' 6.6t

2. Essential requirements

- Use transport chains compliant with EN12195-3, minimum 8mm Grade 8, LC 40KN.
- Straps must be compliant with EN 12195-2, minimum LC2000 daN
- Base Dunnage must be a single layer of square section timber minimum 100mm X 100mm softwood.
- Minimum 2 timbers per row of product.
- Headboard to cover the height of the load with a minimum XL standard (13.5T) **EN 12642-XL**
- The maximum number of pieces carried must be within the legal capacity of the vehicle and trailer.

3. Overview of Restraint System

- Each ingot must be secured by at least two 8mm chains or two straps with sleeve protection.
- Chains must be tensioned by bottle type tensioners, "Sylvesta" type tensions must not be used.
- Ingots may not be loaded side by side and must be loaded along the centre line of the vehicle.
- Ingots to be loaded bottom (git end) towards the front of the vehicle with a maximum gap between the headboard and the git end of less than 50mm. If the leading ingot is loaded more than 50mm from the headboard, an 8mm chain over the git end of the leading ingot is required.
- All subsequent ingots to be loaded with the smallest practicable gap between each ingot, a gap no larger than 50mm is permissible.
- Anti-slip matting must be used in all weather conditions between the bed of the trailer and the timbers. It is not required between the timbers and the product due to its high coefficient of friction.



4. Edge Protection

Suitable edge protection is required at all points of contact between the webbing straps and the product. Ideally long heavy-duty webbing sleeves should be used but plastic edge protection is also acceptable.



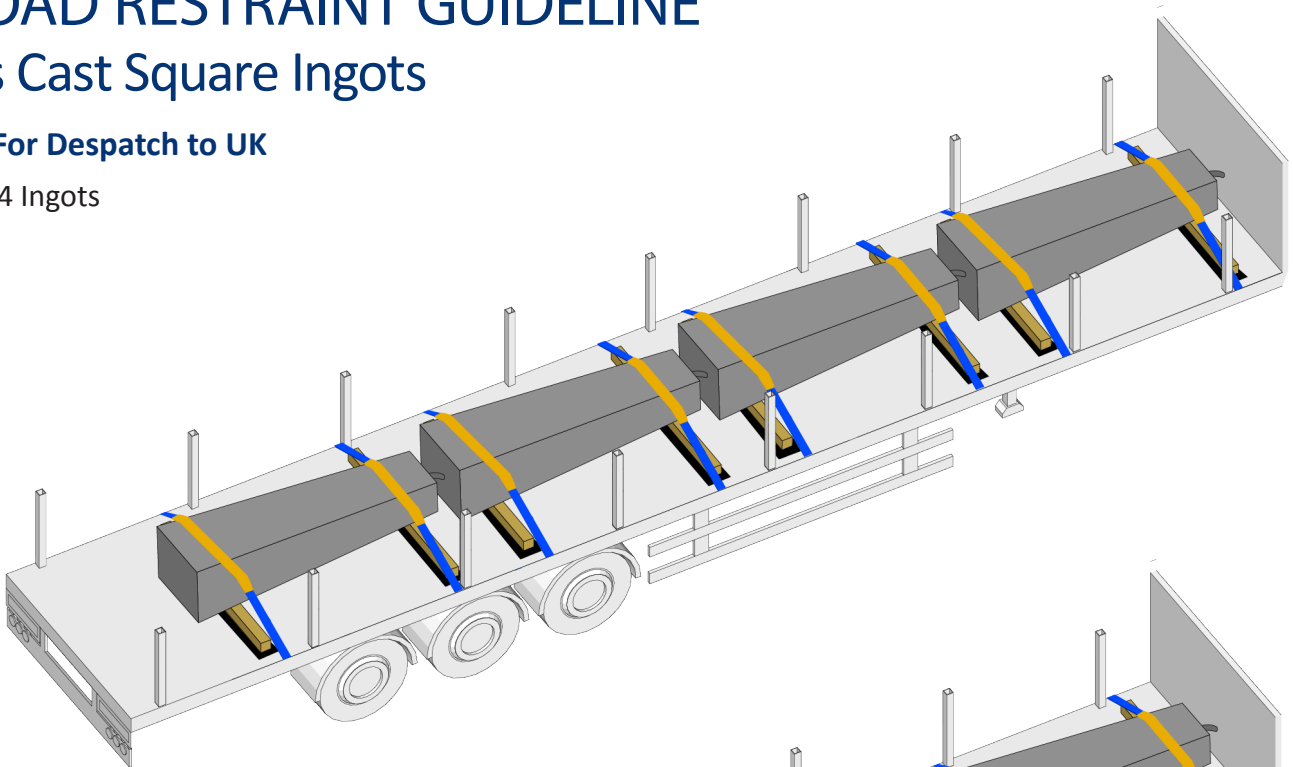
This Load Restraint Guideline is designed to meet the forces specified in EN 12195-1:2010 and VDI 2700 for road and sea transport.

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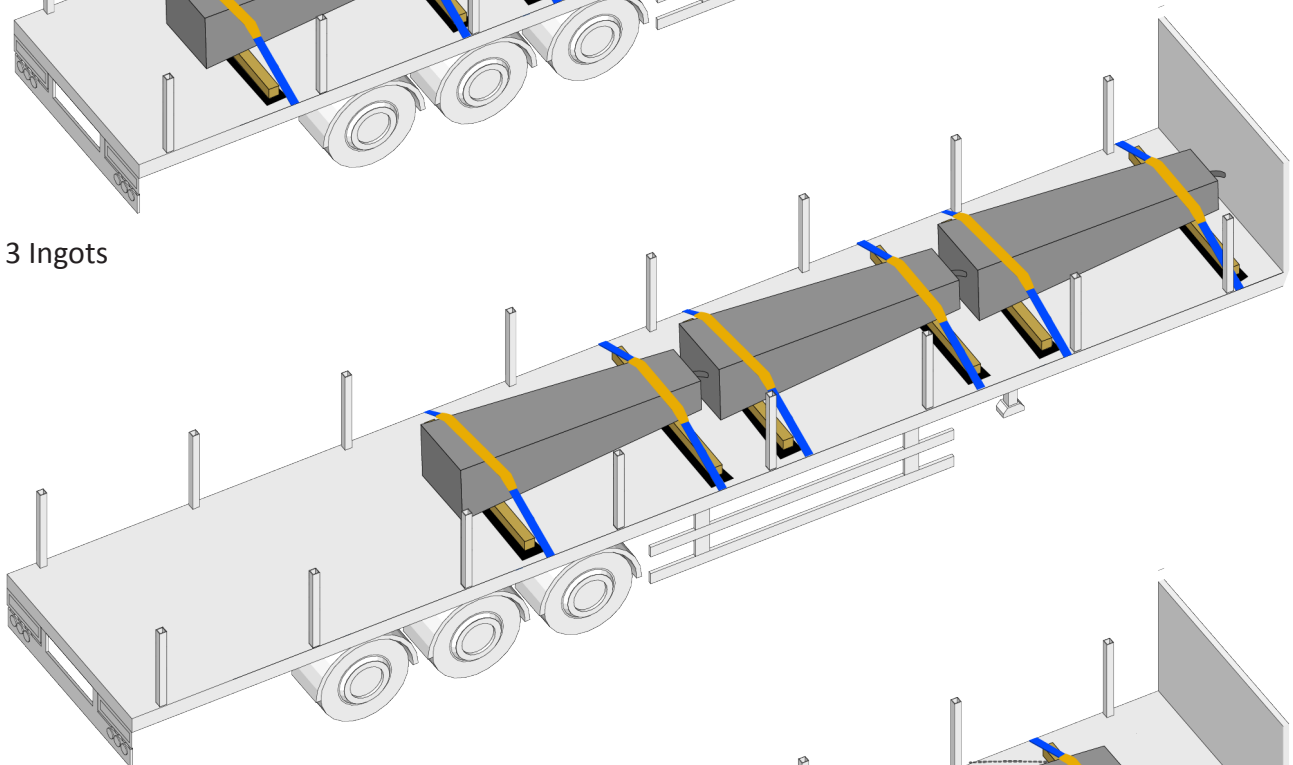
As Cast Square Ingots

5. For Despatch to UK

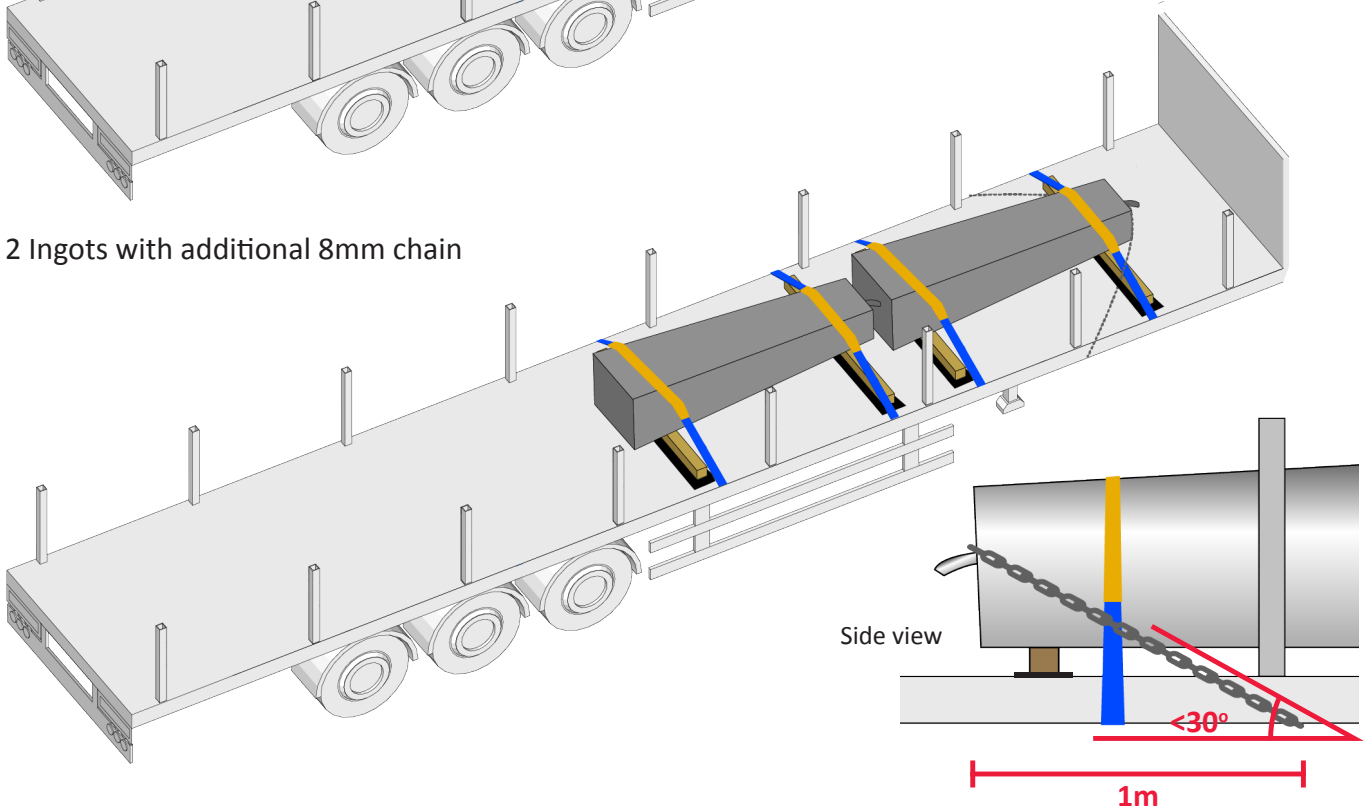
5.1 4 Ingots



5.2 3 Ingots



5.3 2 Ingots with additional 8mm chain



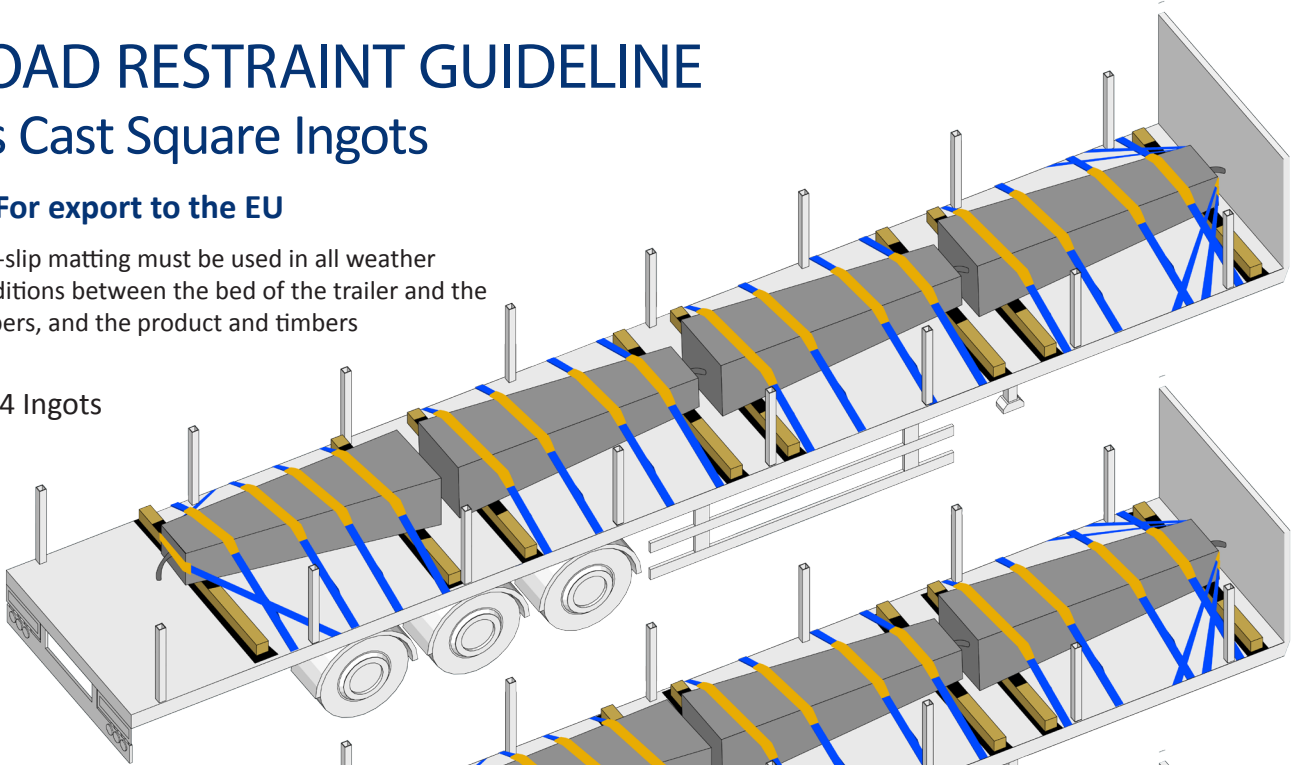
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As Cast Square Ingots

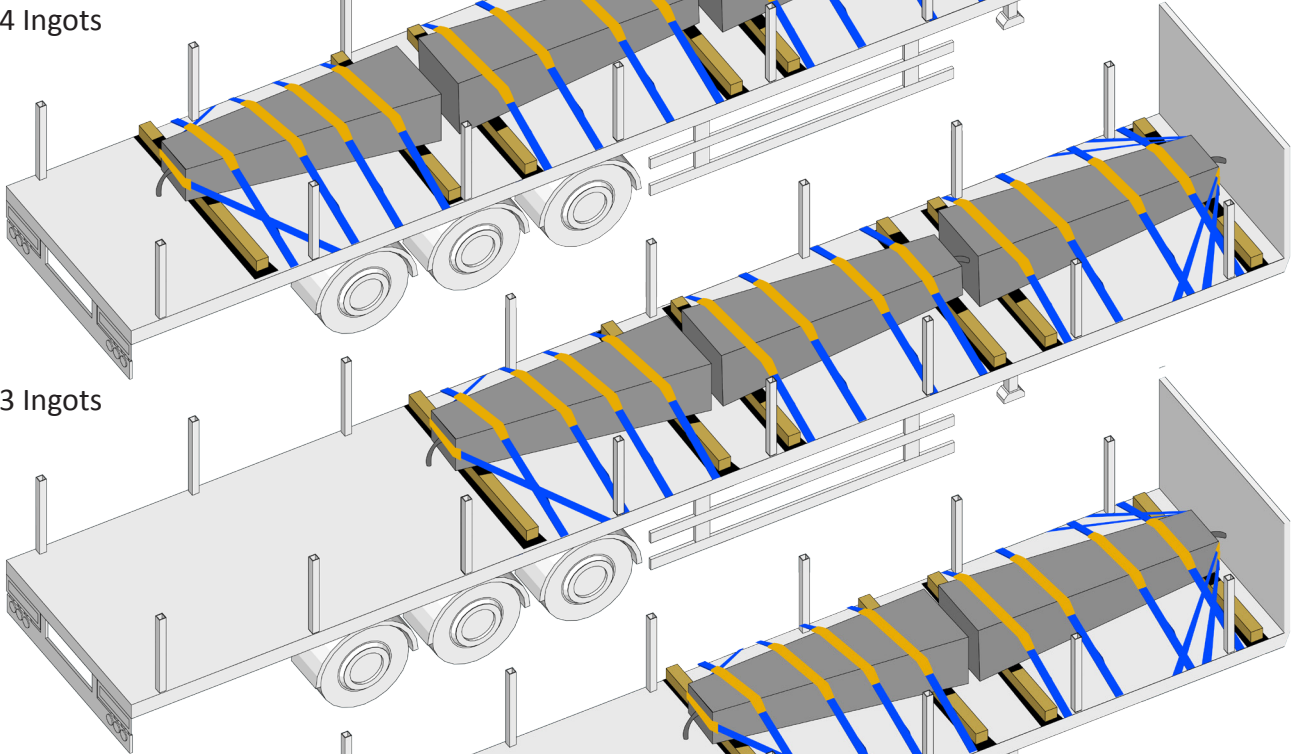
6. For export to the EU

Anti-slip matting must be used in all weather conditions between the bed of the trailer and the timbers, and the product and timbers

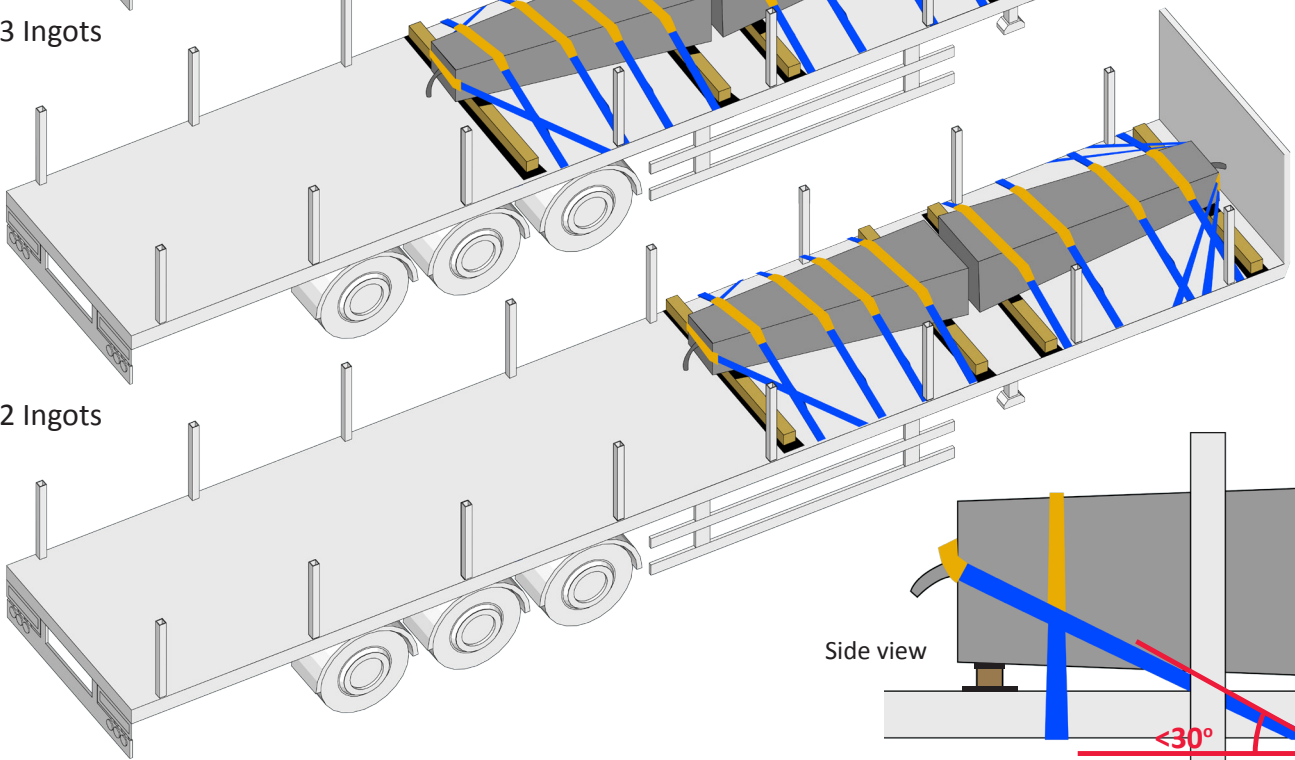
6.1 4 Ingots



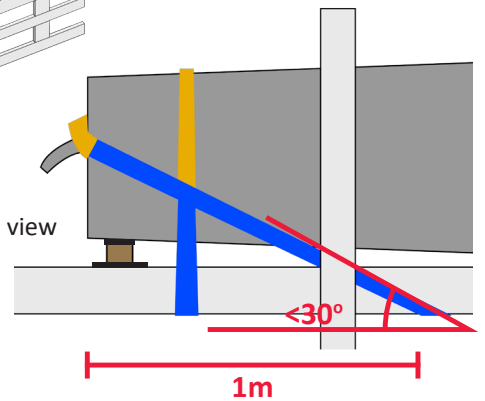
6.2 3 Ingots



6.3 2 Ingots



Side view



7. Using 'Strangle wraps'

Strangle wraps can be used instead of the method shown above - 2 straps per ingot in the configuration shown (right), with 2 front straps on the cab-end ingot, and 1 on the rear ingot. Each strap must have 2 ratchets, one on each side to ensure correct tension.vv

