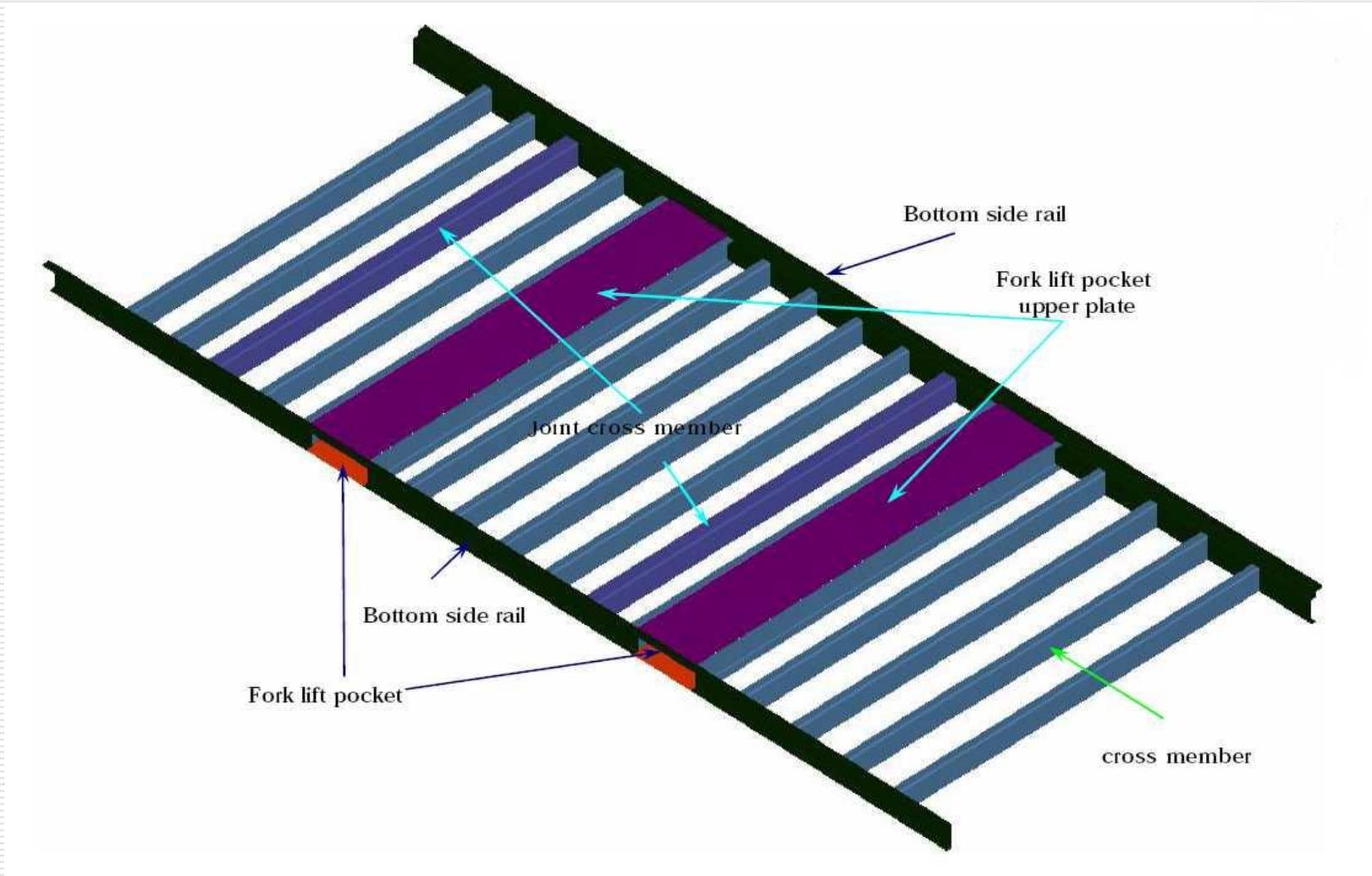


# Bottom Structure of a 20' Container

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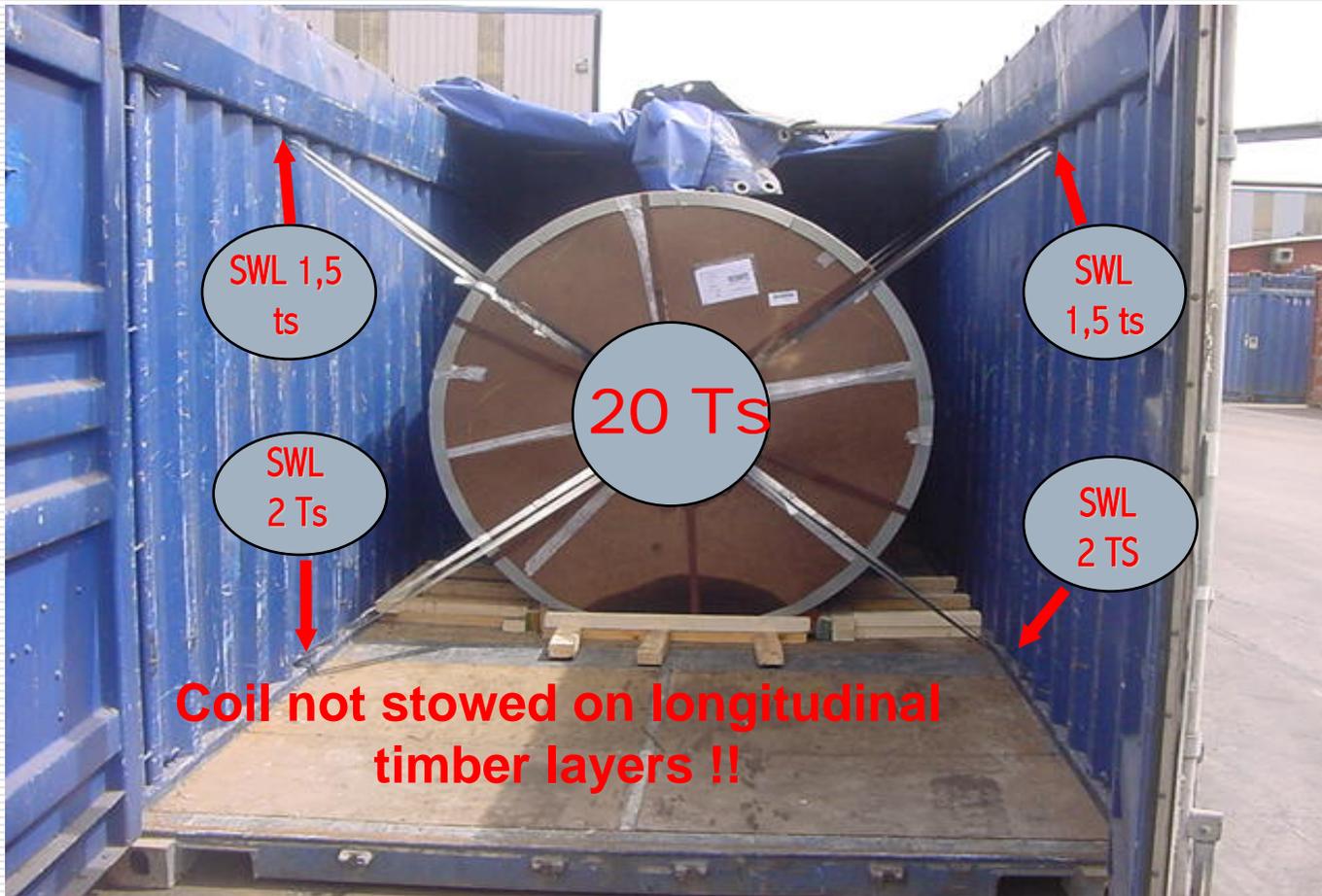
# Examples of Wrong Shipments

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- Not seaworthy at all
  - Weight about 20 tons
  - Underlashed and potential floor damage due to wrong weight distribution as only being on 3-4 crossmembers
-

# Examples of Wrong Shipments



Info in reference to the lashing eyes

- Heavily underlashed since 20 tons only lashed for 3,5 tons each side.
- When ship is rolling, coil breaks out through the side wall.

# Examples of Wrong Shipments

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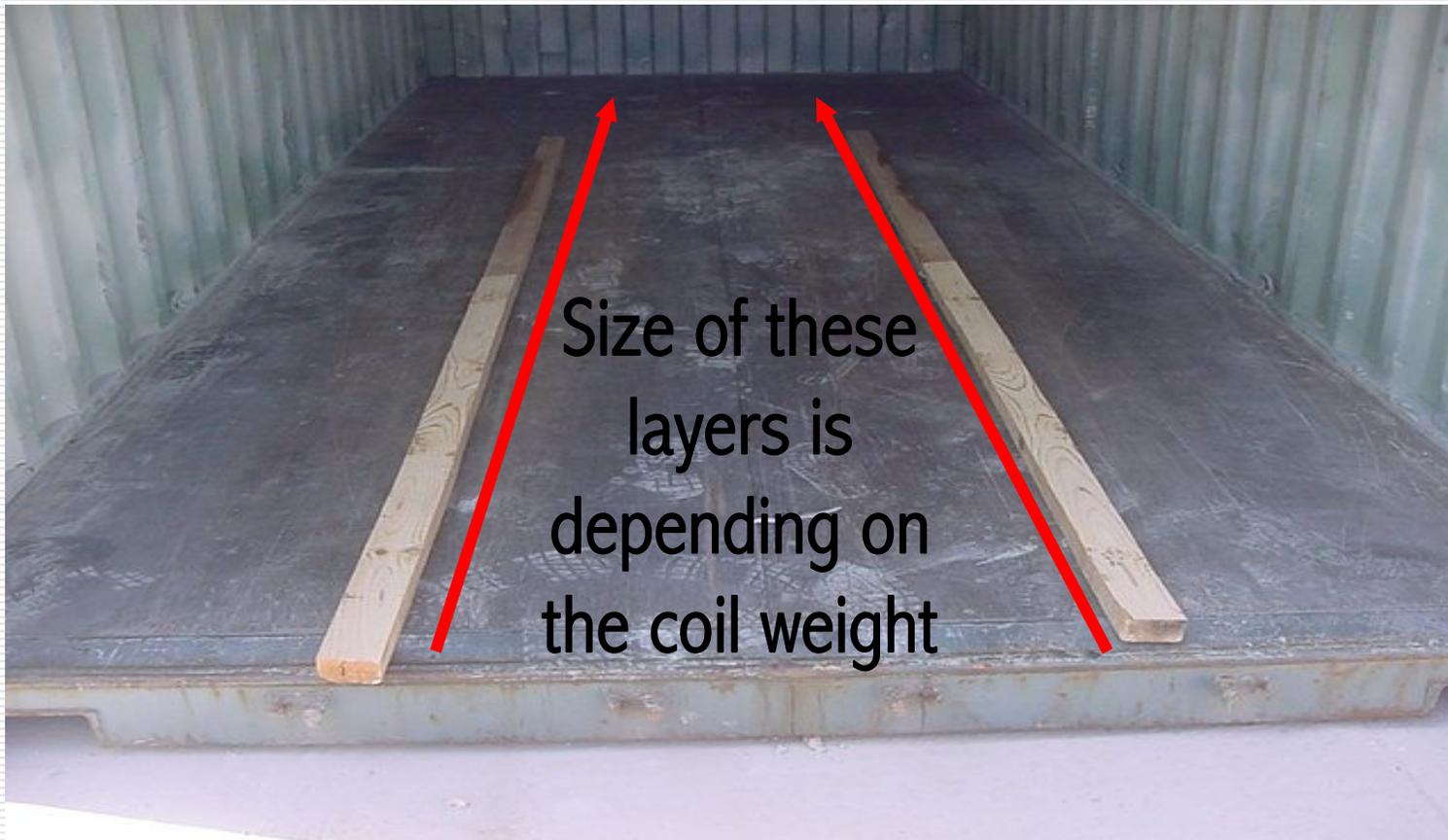
- Coil sagged through the floor



- View from underneath
-

# Avoid Point Pressure

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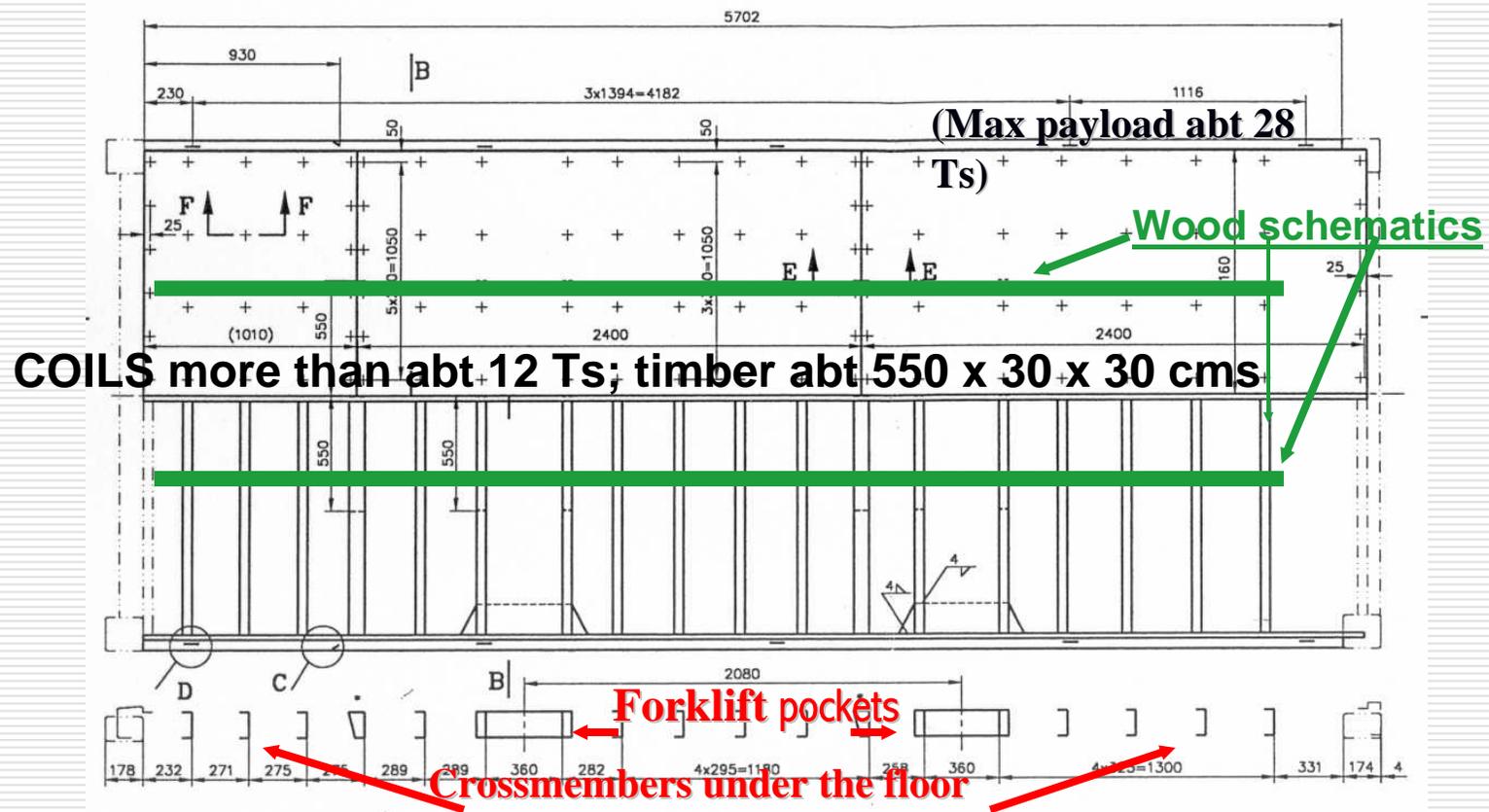


Size of these  
layers is  
depending on  
the coil weight

The weight is to be properly spread along the whole length of the box.

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# Avoid Point Pressure



Always min. 2x layers in the width and never any coil touching the floor.

# Recommendation A

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## Coils stowed with the axis pointed to the end of the container

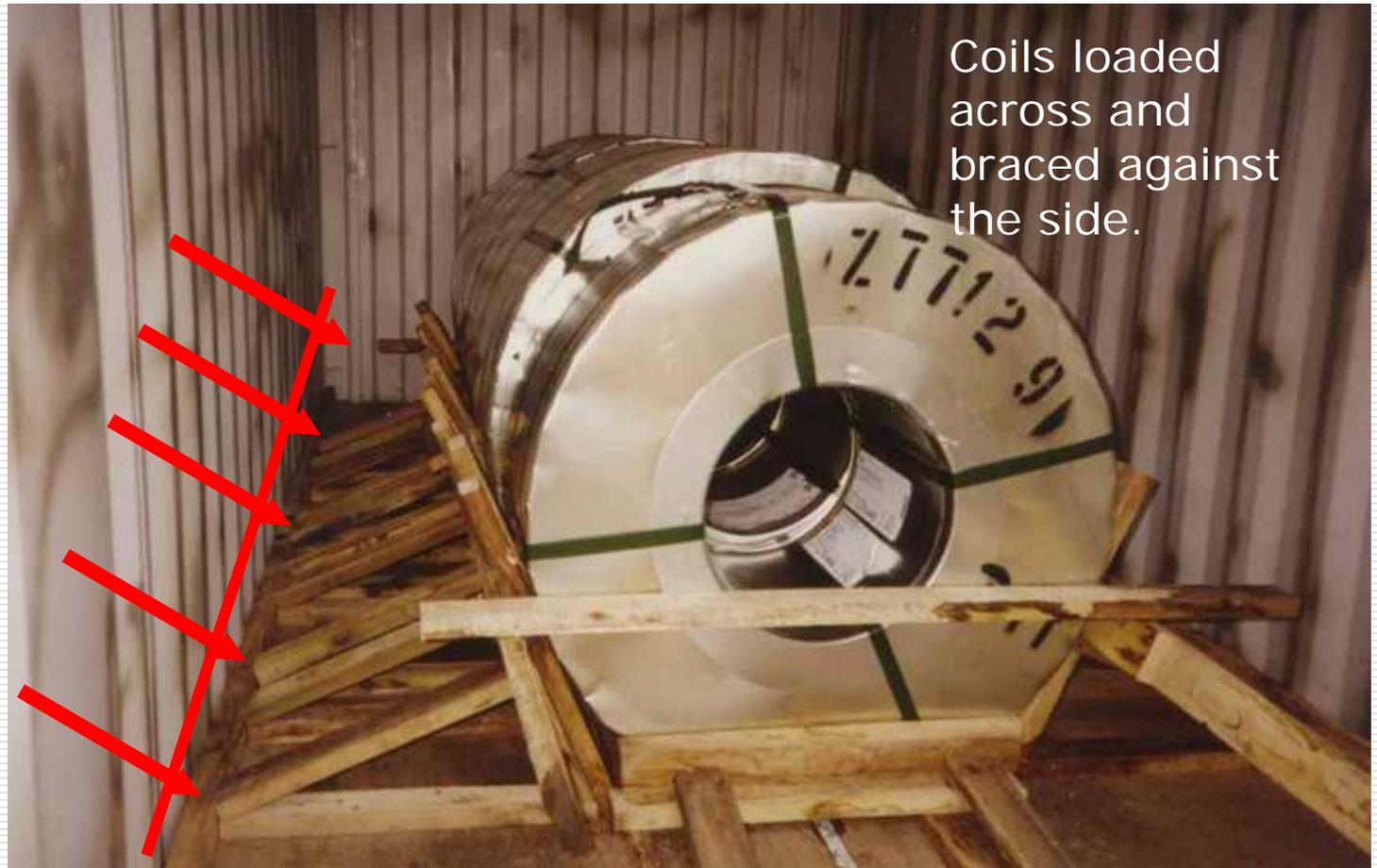
1. Weight of coils always to be distributed as 1.5m.t per cross member equal to max. 5m.t / meter.
2. To distribute the weight, the coils should be stowed on wooden supporting battens. Except for coils less than 3mt, the lowest point of the coil may never be in touch with the floor. Length of supporting batten not to exceed the width (length) of the coil by 60cm.
3. For coils less than 3m.t. battens may not be required but anyway lateral wedging has to be provided in addition to chocking as specified in point 5.

4. Weight of coil	Size of supporting battens	Width
A. Less than 5m.t	Square 15x15cm	1.2m
B. 5 – 9m.t	Square 15x15cm	
C. 9 – 12m.t	Square 20x20cm	
D. More than 12m.t	Square 30x30cm	

5. Lashing to be carried out with use of chocking by 10x10cm batten (square dimension) to half-height of the coil, minimum 3 pieces per coil supporting to the side of the container. Also fore and aft end to be chocked off with dunnage of 10x10cm nailed to for and aft battens on which the coil rests.
  6. Please note: Cord-strap lashing might not be to be adequate due to limited breaking strength (approx. 1,5m.t) of the lashing eyes applied in the bottom of the sides of the container.
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# Example A of a Good Shipment

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Coils loaded across and braced against the side.

Note the longitudinal layers stretching the pressure along the wall

# Recommendation B

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Alternatively, coils loaded with the core axis pointed to the sides

1. Only applicable for coils with weight up to 8 m.t.
  2. Coils to be supported by 3 battens of 15x15cm square over the length of the container.
  3. Coils to be stowed equally spaced over the length of the container.
  4. Adequate chocking to be applied between one third of the coil-height and the side of the container. Refer to above, see A.4.
  5. Very important is to chock off the void space in between the coils and/or the ends of the container with the use of 10x10cm dunnage in order to avoid rolling over of coils during road or rail transport.
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# Example B of a Good Shipment

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Battens should  
be 15 x 15cm

