TATA STEEL

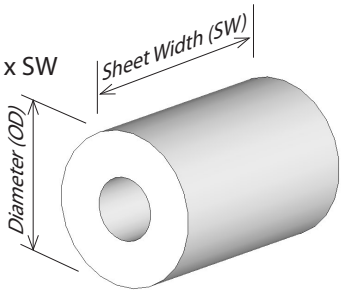
TECHNICAL ADVICE DOCUMENT
Wide coil in well using Hampshire frame

1. This Technical Advice Document applies to:

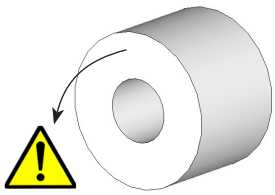
600 mm minimum sheet width
2000 mm maximum diameter
Sheet width > diameter/2.5

- **Wide** coils, loaded bore horizontal in a well trailer.
- Coils are classed as **stable** or **topple sensitive** based on the ratio of outside diameter (OD) to sheet width (SW).
- **Hot rolled coils** (not pickled and oiled) up to **30 tonnes**.
- **Low friction coils** up to **25 tonnes**.

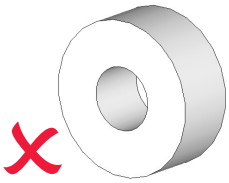
Stable
OD < 1.4 x SW



Topple sensitive
OD > 1.4 x SW



Narrow coil
OD > 2.5 x SW



*Note: Narrow coils are **not** covered by this Load Restraint Guideline.*

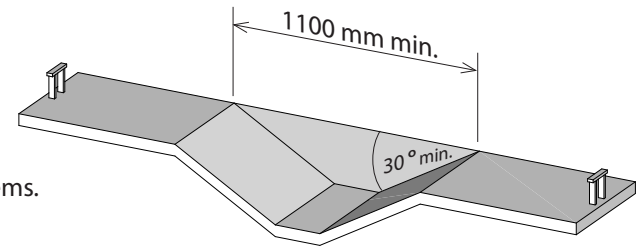
- The following coils are classed as ***low friction***:
  - Coils that have been wrapped in plastic film or paper.
  - Coils that have been pickled and oiled, galvanised, painted or coated.
  - Cold rolled coils.

2. Equipment requirements

- All webbing straps must have a minimum lashing capacity of 2000 daN (unless otherwise stated) and must be compliant with EN 12195-2.
- All lashing points must have a minimum working load limit of 2000 daN (unless otherwise stated).
- Edge protection must be used on all unprotected sharp corners.
- Well posts must be in good condition and have a minimum moment capacity of 14.6 kNm. The following section sizes in S355 steel are acceptable: 80 x 80 x 5; 90 x 90 x 4; 100 x 60 x 5; 100 x 100 x 3.6; 110 x 60 x 4; 120 x 60 x 3.2. ***Note: Rectangular posts must be used in the strongest orientation to prevent bending.***

3. Pre-loading considerations

- ✓ Well width must be a minimum of 1100 mm.
- ✓ Well angle must be a minimum of 30 degrees.
- ✓ Coil well must be dry and clear of debris and other loose items.
- ✓ Coil must be clear of well base by a minimum of 20 mm.



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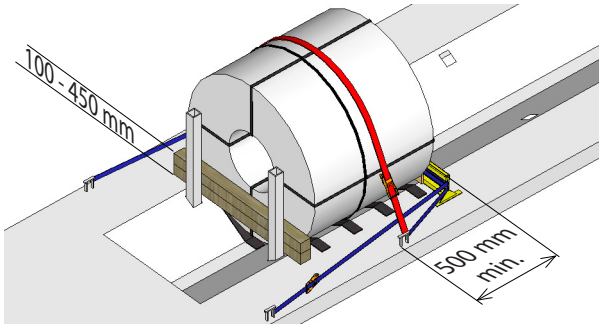
4. Restraint system options

4.1 General restraint system



- ✓ Maximum gap of 20 mm between coil face and blocking.
- ✓ 1 strap over-the-top.
- ✓ Frame straps to be anchored a minimum of 500 mm from rear face of coil.

Anti-slip matting shown for coils originating in mainland Europe.

✓ **Stable coils**

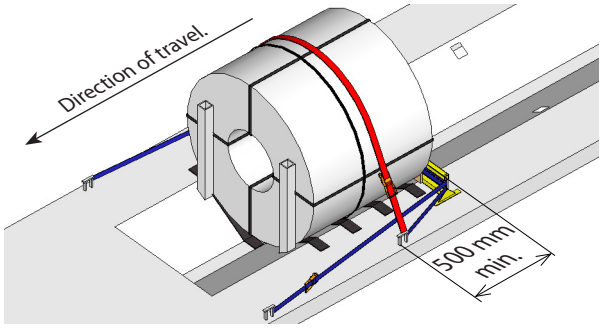
✓ **Topple sensitive**

Table 1: Minimum blocking height (mm)

Coil Outside Diameter	Minimum blocking height
1400	100
1500	150
1600	190
1700	230
1800	270
1900	300
2000	340
Max height	450

- ✓ Timber dunnage stacked between the coil and well posts - minimum recommended timber size 100 x 100 mm (nom).
- ✓ Steel well posts may be used as blocking with anti-slip matting between the horizontal faces of the steel posts.
- ✓ The ***minimum*** blocking height to prevent the coil from toppling is shown in Table 1. The ***maximum*** blocking height is 450 mm to prevent the posts from bending.
- ✓ Well boards may also be used in the upright position as a form of blocking between the vertical well posts and coil providing they do not exceed 450 mm - see TIS-0006.
- ✓ Dunnage must extend beyond outer edges of the trailer well and well posts.

4.2 Option for **stable coils,** and for **topple sensitive** coils up to 10 tonnes



For topple-sensitive coils above 10 tonnes use Section 4.1.

Weight limits for stable coils are as stated in Section 1.

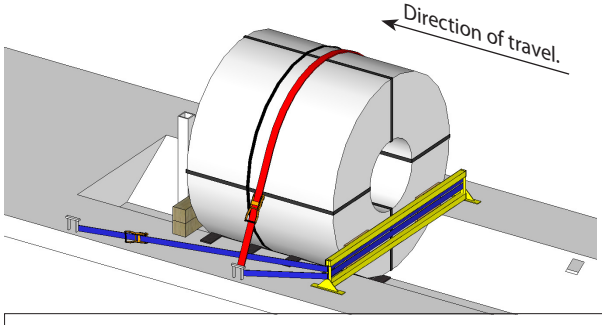
✓ **Stable coils**

! **Topple sensitive**
10 tonnes max

- ✓ Place coil directly against well posts. Maximum gap of 20 mm.
- ✓ Coil diameter must extend beyond the outer edges of the well post.
- ✓ 1 strap over-the-top.
- ✓ Frame straps must be anchored a minimum of 500 mm from rear face of coil.

Anti-slip matting shown for coils originating in mainland Europe.

5. Rearward blocking



- ✓ Frame straps must be anchored a minimum of 500 mm from rear face of coil (see 4.1 and 4.2).

Note:

Number of frame straps can be reduced by 1 when using strap with lashing capacity (LC) of **5000daN** attached to lashing points with minimum working load limit of **3500daN**.

Anti-slip matting shown for coils originating in mainland Europe.