Slit coil handling

Transport of diverse coils needing delicate handling

In rolling mills red-hot slabs get rolled down to a final thickness of 1 to 18 mm and sent on as hot-rolled sheet coils for further processing. Cold-rolled products are also present in thicknesses of under 1 mm. Depending on the size ordered by the customer, coils get slit lengthways to form narrower strips, known as slit strips. Slitting the coils in this way produces numerous coil sizes and thicknesses.

![Figure 1: Slitting the coil lengthways to form slit strip rings](image)

Slit coils may also be present in zinc-plated, galvanised and painted form. The slit coils get further processed into finished products in the metalworking industry, e.g. in forming and die-cutting operations or in tube manufacturing.

No matter what needs to be done, there is always a TRUNINGER magnet for the job, e.g.:
- Lifting a former single coil width as a slit coil pack
- Carrying individual slit coils

![Figure 2: Stacking a vertical slit coil in a tube manufacturer's warehouse](image)
Using an electromagnet is an alternative to using purely mechanical lifting devices, e.g. a C-hook.

For production reasons in steel mills or slitting plants the entire pack of slit coils gets carried away and placed into storage in one lift (see figure 3). Carrying slit coils magnetically requires a powerful magnet with a deep field penetration in order to ensure that the necessary force is applied to the narrow coil width for a safe and secure transport.

Figure 3: Carrying a pack of slit coil rings in one lift

Advantages

- Coils or complete slit packs can be quickly picked up and set down
- Easy handling, no need for mechanical lifting devices
- More compact storage, no aisles and wooden spacers required
- Coils handled with care, no damage to edges or surfaces
- Delicate handling of thin and coated slit coils
- Direct feeding of machines

Your benefits

- Significant time saving
- Fewer accidents and increased safety
- You can store considerably more slit coils within the same area
- No degradation in coil quality
- No operating assistants required, lower personnel costs
Special applications – Slit coil tilting device

Depending on the type of handling equipment used the slit coils may be delivered either:

- Lying on their side for forklift loading
- Standing upright for crane transport

However, subsequent processing of slit coils often requires them to be rotated from the horizontal into the vertical position or vice versa. TRUNINGER has developed a slit coil magnetic tilting device for this purpose (see 'Coil rotator' document (58) and figure 4).

*Figure 4: Coil tilting device with ring magnet – winding axis horizontal*