

Figure 4.6 Peiner SK206/1 tower crane

4.2.2 Lifting equipment and techniques

To ensure safe lifting, appropriate equipment must always be employed. A range of special lifting equipment, which compliments the basic items often preferred by erectors, is available for use with cranes. Examples of special equipment include:

Remote release shackles (Dawson ratchets, see Figure 4.7) : can be used to lift columns into position and avoid chains biting into paintwork or intumescent coatings.

Nylon slings : may be used to reduce damage to coatings, but they should not be used in wet weather (insufficient grip).

Sleeved chains : may also be used to avoid damage, but in practice without some biting in it is difficult to obtain sufficient grip.

Lifting beams : are used for large, slender items. These distribute the weight and effectively stiffen and strengthen the member to prevent damage during erection.

When lifting brackets are provided, they should be properly planned for so the member or sub-frame can support the concentrated loads, If brackets are not used, but lifting positions are critical, then lifting points should be clearly marked on the member or sub-frame (see Figure 4.8).

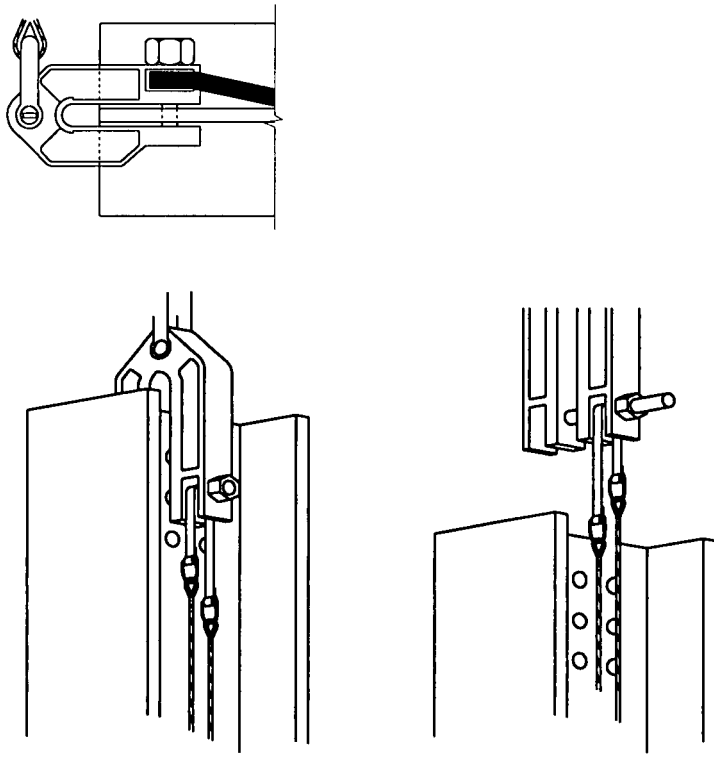
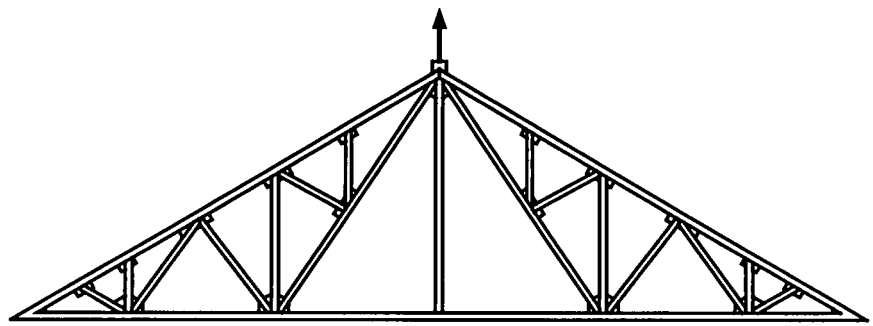
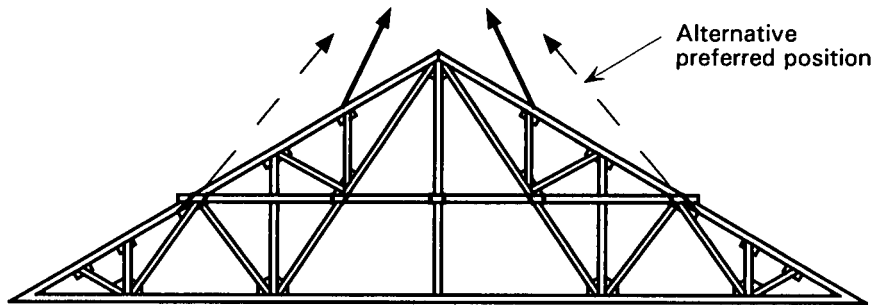


Figure 4.7 *Dawson ratchet*



Incorrect - Bottom boom in compression and liable to buckle



Correct - Strong back or stiffener used to prevent damage

Figure 4.8 *Lifting of a truss*