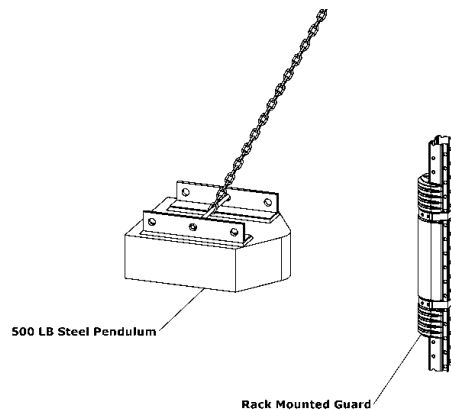


Rack Mounted Guard

Objective

McCue products are tested for compliance and product failure analysis to determine safe working conditions.

Scope



The Rack Mounted Guard was installed on industrial metal racking and impacted with a 500-lb [227 kg] pendulum raised 0.6 ft [0.18 m] from point of impact per EN 15512 resulting in an impact energy of 300 ft-lbs [400 Nm].

Calculations

$$E = mgh$$

$$m_{\text{pendulum}} = 500 \text{ lb} / 32.2 \frac{\text{ft}}{\text{s}^2} = 15.5 \text{ lb}_m$$

$$g = 32.2 \frac{\text{ft}}{\text{s}^2}$$

$$h = 0.6 \text{ ft}$$

$$E = 15.5 \text{ lb}_m \times 32.2 \frac{\text{ft}}{\text{s}^2} \times 0.6 \text{ ft}$$

$$E = 300 \text{ ft-lb}$$

$$m_{\text{pend}} = 226.8 \text{ kg}$$

$$g = 9.8 \text{ m/s}^2$$

$$h = 0.183 \text{ m}$$

$$E = 226.8 \text{ kg} \times 9.8 \text{ m/s}^2 \times 0.183 \text{ m}$$

$$E = 407 \text{ Nm}$$

The Rack Mounted Guard exceeded impact requirements of EN 15512.

The test setup, impact, and measurement of permanent deflection were all witnessed by TRIS and verified to have been performed in accordance with the specifications of BS EN 15512. The permanent deflections were further verified to be in compliance with the acceptance criteria of EN 15635.