TIN 002 Raising and Lowering of Small Material

From time to time, there is a requirement for tower crane operators and maintenance personnel to take small tools and material up to, and down from, the cabs and machinery decks of tower cranes. It is essential that this is accomplished safely, with minimum risk to the personnel carrying out the transfer and those below.

The primary means of accomplishing this task is by the use of a rucksack worn on the chest of the person ascending the tower (see Figure 1). Care should be taken to ensure that loads are light enough not to cause muscular-skeletal problems and small enough to avoid jamming on ladder hoops etc.

If loads are too heavy or bulky to be transferred using the rucksack method, they should be raised using a rope and pulley system, together with a suitable brake unit, with the load being placed in a bag having a certified rated capacity. The person raising the load should be situated on the counter jib of the crane, within an edge-protected area.

Lifting should be planned, following a site-specific risk assessment which should take account of hazards such as rope snagging, high winds and people directly beneath the load. Planning should consider the requirement for an exclusion zone when raising and lowering materials.

If such a rope lifting system is used, it should be inspected by the user before and after use for defects and deterioration and thoroughly examined by a competent person at intervals not exceeding six months. When not in use, the system should be stored securely in a weatherproof container to prevent damage and deterioration.

Hand powered rope lifting systems should only be used for loads within the capacity of the user with an upper limit of 25 kg. If heavier loads are to be raised, this should be carried out using powered lifting equipment following a suitable and sufficient risk assessment.

Figure 1 - Use of Rucksack

Technical Information Note