

2 CTU ladders

2.1 CTUs used for bulk transport will often require access to their tops, in order to gain access to the interiors, to open and close the loading hatches or to sample the cargo. These units usually have some built-in means of access, e.g. ladders or toe-holds, but these are generally for emergency purposes rather than regular use. As such, they may be restrictive with irregularly spaced steps and/or large gaps between ladder rungs.



Figure 8.1 Full frame ladder



Figure 8.2 Partial frame ladder



Figure 8.3 Road tanker

2.2 Tank containers, swap tanks and road tankers will usually have ladders built into their rear frames, some of which may be readily apparent as ladders (see figure 8.3), while others appear to be climbing frames (see figures 8.1 and 8.2).

2.3 Ideally, inbuilt ladders should be constructed with two styles and should have steps that are at least 300 mm wide with high friction surface and the steps uniformly spaced about 300 mm apart. The pictures above show good and less satisfactory versions.

2.4 The designs of tank containers, swap tanks and road tankers generally facilitate placement of feet while accessing their tops. Access to the tops of bulk CTUs is generally far less satisfactory, often only provided by a number of shaped bars attached to the doors (see figure 8.4). The example shows five shaped bars, the bottom and top steps quite narrow and the spacing varies from 480 mm to 640 mm. Operators attempting to climb onto and from the roof may find these steps difficult.



Figure 8.4 Bulk container rungs

2.5 Where routine access to the top of a CTU is necessary, the CTU will bear a warning decal adjacent to the means of access. The decal provides warning of overhead hazards in general and power cables in particular (see figure 8.5). Operators, when deciding whether to access the top of the CTU, should make themselves aware of all potential hazards directly overhead and immediately adjacent to the CTU. This warning is particularly important for operations in rail transfer depots but may affect other handling operations.



Figure 8.5 Overhead warning sign

2.6 As the process of climbing onto the top of a CTU entails risks of slipping and falling, a built-in ladder should only be used for emergency access. Operational access to tank container tops should be made using suitable mobile steps or from a gantry.

2.7 When a tank or dry bulk CTU is loaded onto a chassis, the bottom of the ladder can be as much as 1,600 mm, and the top of the CTU as much as 4.3 m off the ground. Furthermore on some designs of chassis, the CTU will be slightly inclined with the front end elevated which would mean that the ladder would be inclined backwards towards the operator.

2.8 The steps/rungs are generally manufactured from steel or aluminium and can be slippery in the cold and wet. Operators can easily miss their step when climbing these ladders.

2.9 When transitioning from the ladder to the walkway on the CTU top, there are limited hand holds available for the operator to grip (see figure 8.6) making the manoeuvre hazardous. An operator climbing onto the top of the tank container shown in figure 8.7 will be presented with either the walkway securing bracket or the miss-stacking plate, neither of which are ideal handholds. Climbing off the top of the CTU can be more hazardous as the operator is attempting to locate rungs/steps which are not visible and in an awkward position.



Figure 8.6 Freight container handhold



Figure 8.7 Transitioning