Table 17.3 Lighting recommendations for chemical and fuel industries

Activity	Horizontal illuminance (lx)	Horizontal illuminance uniformity	Maximum glare rating	Minimum colour rendering index
Handling servicing tools, adjusting manual valves, starting and stopping motors, lighting of burners, operating switch gear	20	0.25	55	20
Moving on walkways	50	-	-	-
Filling and emptying trucks and wagons with risk free substances, inspection of pipes and packages	50	0.4	50	20
Fuel loading and unloading sites	100	0.4	45	20
Filling and emptying trucks and wagons with dangerous substances, replacement of pump packing, general service work, reading of instruments	100	0.4	45	40
Repairs of machines and electric devices	200	0.5	45	60

17.3.6 Sidings, marshalling yards and goods yards

These railway facilities can cover large areas. Lighting is usually done by conventional area floodlighting but there are two features that require special attention. The first is the level of obstruction caused by the closeness of wagons on adjacent lines. The second is the need to ensure good visibility of all signals. To avoid shadows between wagons, confusion with signals and glare to workers, a high mast lighting installation is commonly used.

The masts should be positioned near to those areas that require higher illuminances (see Table 17.4). The floodlights should be aimed along the tracks. This aiming minimises shadows between adjacent wagons and takes advantage of specular reflections to reveal the run of the rails. Where lighting has to be across tracks, reflections from wagon sides make an important contribution to the illumination between wagons. This contribution will only be important if the angle of incidence is more than 45 degrees (Figure 17.4). The lateral spacing of floodlights should not be more than twice the difference between the height of the floodlights and the height of the wagons.