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SAFE DELIVERY AND UNLOADING OF STEEL PRODUCTS

Guidance notes for companies and individuals involved in the
delivery and unloading of steel

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SAFE DELIVERY AND UNLOADING OF STEEL PRODUCTS

1. HAZARDS

Every year people are seriously injured or even killed while loading or unloading steel. The main types of accidents that occur include:

- people falling on and from vehicles (including falls when climbing on and off);
- people being struck by a load during mechanical handling (for example when using a crane or fork-lift truck). This often leads to the victim falling or being crushed between the load and the vehicle;
- people being struck by a load falling from a vehicle or a load moving unexpectedly while on the vehicle;
- people being struck by vehicles, often during reversing;
- people being injured during manual handling operations (often when a load is too heavy or sharp or otherwise awkward);
- people injuring themselves when jumping off a vehicle.

Everyone involved in the loading of steel, its delivery and unloading vehicles must take precautions to reduce the risk of accidents happening. This document gives details of some of the more common precautions that need to be taken. In particular, unloading should never be carried out unless all the risks have been assessed, even if this results in a delay. Such delays can be avoided through proper planning, communication and co-operation between supplier and customer.



2. INTRODUCTION

This document offers practical safety advice to everyone involved in the delivery and unloading of steel, and will be particularly useful for stockholders and steel users who receive steel at their premises, as well as those delivering it. It highlights the planning that should take place to ensure that steel can be safely unloaded on site, as well as the practical precautions necessary during the unloading procedure.

The information contained in this document is based on joint work by NASS (the National Association of Steel Stockholders) and UK Steel (representing the steel producers and steel converters in UK). The Health and Safety Executive (HSE) and Wolverhampton MBC (representing Local Authorities in the Local Authority Partnership Scheme with NASS) were consulted during the preparation of this guidance and endorse it as good industry practice which updates and supercedes the information in HSE guidance 'Safe Unloading of Steel Products' (INDG 313).

3. PLANNING FOR SAFE DELIVERY

'Safe delivery' means proper control of the risks to the health and safety of persons whose safety might be put at risk by the delivery process. It is the joint responsibility of the supplier, contract haulier (where the supplier is not the haulier) and customer. Deliveries must be properly planned, with the supplier and customer agreeing in advance the management arrangements, plant, equipment and systems of work to ensure safe delivery. In many cases this agreement can be documented as a **written Delivery Plan**, which, where necessary, can include specific plans for loading. Many of the accidents that occur during delivery of materials at customer premises could be avoided if plans for the unloading operation were made at an early stage, ideally at the time an order is placed.

Delivery planning begins with a proper assessment of the associated hazards/risks by the customer. The customer or receiver of the goods should carry out an analysis of reported accidents and significant risks associated with steel deliveries, in terms of the main causes of injury which are described in the "Hazards" section of this document.

Damaged twine – may not be robust enough for securing steel tubes



When a customer places an order with a supplier, a supply agreement is entered into between them. Ideally this agreement should make it absolutely clear to both parties where their safety responsibilities begin and end. In all cases, the control of risk and avoidance of accidents will necessarily involve full co-operation between all parties involved in the supply process i.e. supplier, customer and haulier.

The supplier should ensure that a competent person (such as a suitably trained transport manager, transport supervisor or driver) prepares a Delivery Plan, which ensures that all hazards identified by the customer are known to the driver. The format for a written Delivery Plan should be left to individual suppliers.

For the purposes of planning for safe delivery, the 'Supply' process is taken to comprise five stages:

- Order placement by the customer
- Loading
- Transportation
- Delivery
- Consignment to stock



4. ORDER PLACEMENT BY CUSTOMER

The Delivery Plan should not only be based on the types of steel, (i.e. plate, rod, bar, tube, coil, sheet etc), dimensions, weight and properties of material ordered, but also take account of the following information obtained from/agreed with the customer:

- delivery address;
- any limitations on delivery times;
- site access;
- transport restrictions (maximum size of vehicles, if articulated vehicles are acceptable etc);
- route to unloading facilities;

- site-specific hazards and risks to be aware of such as speed limits, reversing constraints, danger areas;
- instructions to be followed by the driver upon arrival at the delivery point;
- roles and responsibilities of vehicle driver in respect of the delivery process, e.g. unsheeting, load checking, unloading, assistance with securing lifting equipment to the load;
- the need to wear high visibility clothing and personal protective equipment;
- details of person(s) responsible for supervising and for unloading the vehicle, and the supervision arrangements for the driver when at the customers site;
- load configuration on the vehicle and unloading sequence;
- if the delivery driver is required to participate in the unloading operation;
- if unloading is part of the driver's responsibilities, the arrangements for safe delivery could include:
 - setting up of an exclusion zone round the vehicle prior to and during unloading;



- arrangements for safe access to the vehicle/load;
- lifting/handling plant and equipment (including attachments) to be used;
- the capacity of the lifting equipment on site to be used for off-loading the specific order;
- arrangements for safe lifting/unloading of material;
- specific requirements for safe slinging or handling of the load;
- any manual handling requirements;
- if unloading is not part of the driver's responsibilities, the details of a refuge or safe location from which to view the unloading operations;
- if there are any other special requirements.

This information, along with details of the material to be delivered, can be recorded by the sales team of the supplier. Often this information will need to be provided only once, i.e. the first time steel is supplied to a particular customer. In particular the customer and the supplier should agree the point at which the goods will become the customer's responsibility in terms of safety. If no point of transfer of responsibility for safety is agreed at the time of order placement, it will be assumed that the delivery is completed when the delivery vehicle has arrived at the delivery address, been parked and is presented for unloading. The supplier needs to advise the haulier of the point of transfer of safety responsibility.

When the supplier and the customer have agreed on the equipment and systems that will be used to ensure the load is delivered safely, it can be documented as a **written Delivery Plan**. An adequate written delivery plan is a practical way of demonstrating that a suitable and sufficient assessment of all the risks has been carried out, involving the close co-operation of all those with legal responsibilities e.g. suppliers, customers and, where appropriate, contract hauliers.

Consideration at an early stage of the precautions outlined in this document should avoid problems on site later. Both parties must keep each other informed of any significant changes that may introduce new risks. For example, customers must inform suppliers of the breakdown or lack of availability of unloading equipment, whilst suppliers need to inform the customers if an alternative size or type of vehicle is being used for the delivery, so that the Delivery Plan can be revised if necessary.

5. LOADING

It is essential that the vehicle planned to transport a load should be suitable for the job and designed to ensure that the load can be transported safely given the nature of normal road conditions. The vehicle dimensions and structural integrity (including that of the headboard) should be of adequate design. Furthermore safety equipment such as straps, chains, load "retention posts" (when transporting coil), or "side posts" (when transporting sections, tubes and other long products) must be capable of restraining the load.

It is recommended that all vehicles should be fitted with hand-brake alarms as they can be a useful addition to safety. However, if they fail they usually do so to danger and should not be relied on as the primary means of safety for handbrake use. Where fitted, they should be checked for faults at regular intervals.

It is preferable to eliminate the need for reversing vehicles for loading and unloading (e.g. by the use of one-way systems) and particular attention should be paid to this aspect when sites are being redeveloped or new sites created. Where reversing is unavoidable, the risks should be reduced by a combination of controls appropriate to the circumstances of the site. It is good practice for vehicles to be fitted with suitable reversing aids such as CCTV and reversing alarms emitting audible warnings. It is accepted that such devices are not currently fitted on all vehicles used for the delivery of

steel products, although it is the longer term aim to encourage use of on-board CCTV or other rearward hazard alerting devices.

Particular care is needed when reversing. If reversing aids are not fitted or enabled, a banksman should be used to guide the driver and to prevent access of pedestrians into the zone where reversing is taking place. The banksman should be properly trained in, and use, the hand signals detailed in the Health and Safety (Safety Signs and Signals) Regulations 1996 or similar defined signals. The banksman should agree with the driver the system of signalling before the driver starts to manoeuvre the vehicle. The banksman needs to be visible to the driver at all times, and should wear highly visible clothing such as a reflective vest. The driver should be instructed to stop immediately if the banksman disappears from view. It is important that the banksman should stand in a safe position where he can guide the reversing vehicle without being in its way.

Where drivers and (un)loaders have to gain access to the load carrying platform of the vehicle, a suitable means of access which facilitates 3 points of contact should be provided, preferably fixed to the vehicle. It should be of sound construction, properly maintained and securely fixed, (and ideally slope inwards towards the top), with horizontal rungs that provide plenty of foothold.

It is strongly recommended that steps are taken to ascertain the competency of the party transporting the load, to ensure that appropriate training of the driver has been undertaken in the safe securing of the load and that the relevant insurances are in place.

Vehicles must be loaded in such a way that they can be safely unloaded at a customer's premises, as well as meeting any requirements for safe transport on the public highway. The information provided by the customer at the time of order acceptance will assist planning of the loading arrangements. Determination of the sequence of loading and the load configuration is likely to require close co-operation between the supplier, haulier and customer to ensure stock can be safely unloaded at the delivery address.

Packaging and banding needs to be of sufficient quality and specification so that the packaged product is capable of safe transportation. The consideration of safety should take account of the possibility of movement sideways, forwards and backwards. Certain types of material (for example oily products) may need special consideration.

Personal Protective Equipment (PPE)

The wearing of correct PPE by all drivers (both own fleet and visiting drivers) should be mandatory in the following circumstances:

- **a hard hat** should be worn where there is a risk of items falling on the driver, of him being struck, or of the driver striking his head against some object. The hard hat should be worn with the chin strap in place to stop the hat from coming off. The hard hat may provide some mitigation of injury in the event of a fall from height;
- **ear and/or eye protection** should be worn in designated areas;
- **a high-visibility jacket or tabard** should be worn at all times when outside the vehicle cab;

- **safety gloves** should be worn when handling steel, securing straps, ropes or chain slings;
- **long sleeved apparel and/or arm protectors** should be worn where there may be loose banding on packs of steel;
- **safety footwear** should be worn when taking part in the loading (or unloading) operations.



The correct PPE needs to be available in the delivery vehicle at the time of loading so that it is also available for use when the vehicle arrives at the delivery destination.

Many of the precautions required for safe working during the loading phase are identical to those which need to be adopted during the delivery and unloading activities. Personnel who are responsible for the loading of vehicles should therefore also refer to the guidance given in the Delivery part (Section 7) of this document.

6. TRANSPORTATION

Guidance on the securing of metal products for safe transport by road is set out in section 8 of the Code of Practice “Safety of Loads on Vehicles” published and enforced by the Department for Transport. It is the responsibility of the vehicle driver to check that the load is secure and safe for transportation on the public highway before the vehicle leaves the supplier's premises.



7. DELIVERY

7.1 Implementing the Delivery Plan

Delivery covers the period from arrival at the delivery address to the pre-agreed point at which the material is to become the receiver or customer's responsibility. If unloading is part of the delivery arrangements, i.e. the pre-agreed transfer point to customer in terms of safety responsibility is after vehicle unloading, then it will need to be included in the supplier's delivery planning process. If the transfer of safety responsibility for the load is before removal of the load from the vehicle, then unloading will be part of the consignment stage and is the responsibility of the customer. In all cases, responsibility for unloading should be established in the Delivery Plan.

As mentioned previously, in cases where there is no pre-agreed point of transfer of responsibility for safety, it will be assumed that the delivery has been completed when the delivery vehicle has arrived at the delivery address, been parked and is presented for unloading in accordance with pre-agreed standards which may be included in the Delivery Plan.

It is important that all persons, responsible for implementing the Delivery Plan, are informed of the extent of their duties and responsibilities, that they are adequately instructed, trained and supervised, and that they co-operate with one another to ensure that the work is carried out safely.

Changes to the Delivery Plan should be avoided wherever possible. In the event of unavoidable changes to the arrangements at any stage in the process, a re-assessment should be carried out and the Plan amended/updated, if possible by the person who originally prepared it.

The Delivery Plan and any other paperwork sent with the load should be checked by the driver for special delivery instructions given at the time of order. The delivery driver should not arrive on site without knowledge of the conditions to be expected there.

The customer receiving the goods will be familiar with the contents of the delivery plan and any special conditions that may apply. Upon arrival at the delivery works, the customer or his receiver should provide the driver with any advice regarding safe systems of work at the premises including information on traffic flows, pedestrian hazards and dangerous overhead movements of material. The customer must also ensure that there are adequate means, on site or accompanying the delivery, to unload the steel safely.

As in the case of loading, it is preferable to eliminate the need for reversing vehicles for unloading (e.g. by the use of one-way systems) and particular attention should be paid to this aspect when sites are being redeveloped or new sites created. However it is likely that reversing for unloading will remain necessary at many sites and the precautions identified in Section 5 for reversing vehicles should be implemented.

The mandatory wearing of correct Personal Protective Equipment (PPE) by all drivers is again critical at the delivery location. As in the case of the loading operation, when the driver is involved in unloading he should wear the PPE as detailed in Section 5.

Particularly important areas requiring close co-operation and effective supervision include:

- (1) manoeuvring/reversing of vehicles;
- (2) setting up of exclusion zones around vehicles before loading/unloading them;
- (3) securing of load components to lifting attachments;
- (4) unloading material from vehicles.



Where a driver experiences concerns over unloading, or issues associated with load security, or the condition of the load, he should contact his supervisor for further instructions. Where these problems cannot be resolved, it may be necessary to delay completion of delivery until a safe means of unloading can be provided.

7.2 Site conditions & vehicle inspection

The area where material is to be unloaded must be suitable for this to be done safely. It should be checked before unloading begins to make sure it is safe to proceed. Look for hazards such as:

- the suitability of the ground for the vehicle and load stability (for example whether the ground is flat and firm). Where vehicles can only be parked on a slope, the parking brakes should be applied and the vehicle left in gear and if appropriate wheel chocks should be used;
- any obstructions in the unloading area (including parked cars, overhead cables and pipes);
- pedestrians in the unloading area (people should be kept clear unless they are immediately involved in the unloading operation and are in a safe place).

The vehicle itself should be checked to make sure that it can access the unloading area safely, taking into account any material which is overhanging the rear of the vehicle or stacked above the cab height.

Particular care is needed when reversing. If reversing aids are not fitted or enabled, a banksman should be used to guide the driver and to prevent access of pedestrians into the zone where reversing is taking place. The banksman should be properly trained in, and use the hand signals detailed in the Health and Safety (Safety Signs and Signals) Regulations 1996 or similar defined signals. The banksman should agree with the driver the system of signalling before the driver starts to manoeuvre the vehicle. The banksman needs to be visible to the driver at all times, and should wear highly visible clothing such as a reflective vest. The driver should be instructed to stop immediately if the banksman disappears from view. It is important that the banksman should stand in a safe position where he can guide the reversing vehicle without being in its way.

The driver should inspect the load before unloading begins, to make sure it has not moved in transit. The load should be inspected from the ground if possible. In addition, a check should be made that any supporting dunnage has not moved or been damaged, as this may make the material unstable or likely to fall when the restraining straps are removed.

Unstable loads

If, on inspection, it is found that the load has moved or become unstable in some way during transport, unloading should not take place until a safe means of unloading has been determined by staff who are competent to make such a decision. Access to the vehicle may be dangerous in these circumstances as the load could move unexpectedly. It may be necessary to take the vehicle slowly and under constant supervision to another

location on the site where there is sufficient load-handling equipment to remove it safely. Do not allow unstable loads to 'tip' or fall onto the ground unless it has been decided by a competent person that this is the only safe option for removing the load. In this case an extended appropriate exclusion zone has to be established.

Unsafe arrival on site



The vehicle must not be taken back onto a public road until the load has been made safe. If a load is found to be unstable when the vehicle is on a public highway, an exclusion zone should be established around the vehicle. It is recommended that the police should be informed and a suitable course of action agreed with them.

Access to the vehicle

If it is concluded that it is safe to unload the vehicle, it may be necessary to gain access to the vehicle. Working arrangements should try to prevent falls and should avoid the need wherever possible for people to work at height. Falls from vehicles in the workplace cause about a third of workplace transport major injuries and can result in fatalities. Even falls of less than one metre can prove fatal.



The following need careful consideration:

- The need for people to go up onto the load carrying platform of vehicles should be minimised. It is recognised that the elimination of the need for access onto the vehicle or trailer may only be possible in limited cases, for example when off-loading coils of strip or when steel has been loaded on pallets;
- Only those people who need access to the vehicle for unloading should be allowed onto it;
- Wherever possible the physical unloading of the vehicle should take place without anybody being on the vehicle;
- The Delivery Plan should aim to minimise the amount of time that anyone is on the vehicle;
- Where people have to climb onto a vehicle or trailer, access should be via a well constructed ladder fixed to the vehicle, or by steps, or a loading gantry provided by the site operator;
- No one should ever jump onto or off a vehicle;
- The load carrying platform of the vehicle should always be inspected to ensure that it is safe to walk on, that there are no holes in it that may lead to tripping, and that it is not slippery (e.g. due to water, oil, grease or ice);
- Fall restraint and fall arrest devices, airbags and other devices designed to reduce the risk of falls from vehicles should be considered to mitigate the consequences of a fall. However it is recognised that such devices may not be applicable or practical in companies where there are a variety of off-loading locations



Safe refuge

If the driver is not required to take part in the unloading operation, or if he has partly assisted with unloading by attaching slings to the steel products and has returned to ground level, then he should move to a safe location whilst the unloading operation is completed. This location may be a position where he can observe the unloading operation, but at a safe distance. He should not remain in the vehicle cab nor return to it whilst unloading operations are taking place.



Vehicle driver outside the offloading operating area

7.3 Unloading

During unloading:

- ensure the vehicle brakes have been applied before unloading begins;
- keep secondary load restraints in position during unloading;
- keep the material under control at all times and do not allow it to roll off the vehicle;
- don't tie the load to an object to drag it off by moving the vehicle;
- don't 'bar off' the loads (see later comments on *Manual unloading*).

If the load becomes unstable in some way during unloading, unloading should stop immediately and the relevant competent person should be informed. Access to the vehicle may be dangerous in these circumstances as the load could move unexpectedly and a larger exclusion zone should be imposed around the vehicle. A decision to recommence unloading should only be made by staff who are competent to make such a decision.

In all cases where unloading cannot be done safely, it may be necessary to leave the load on the vehicle until safe unloading conditions can be provided. This may mean arranging for lifting equipment to be brought onto site.

Loading and unloading will normally involve lifting and/or manual handling operations. These must be planned and adequately supervised by the employer of the person carrying out the work, in accordance with the requirements of the Lifting Operations & Lifting Equipment Regulations ("LOLER") and/or the Manual Handling Operations Regulations.

Overhead/mobile cranes

Cranes are commonly used to unload material. The following points must be considered as part of the risk assessment when using them:

- The person who is responsible for the lifting operation and control of the lifting equipment must ensure that the lifting operation can be carried out safely before work starts;
- Select and use lifting equipment and lifting accessories (tackle) which are suitable for the task. In particular, do not exceed their safe working load;
- A safe exclusion zone should be established around the vehicle and lifting equipment, prior to commencing the operation;
- Drivers or anyone else attaching lifting accessories to material ('slinging') must be away from the load before it is lifted, preferably off the vehicle. Never stand on a load once it has been attached to lifting equipment;
- Do not use the banding wire or straps to lift the material;
- Where single-use slings are used to offload material, these must be disposed of, to prevent them being reused;
- The load will often need to be loaded onto suitable dunnage so that there is enough clearance to get a sling or chains around and under it (or the forks of a fork-lift truck under it) when unloading;
- Workers operating the crane should have been trained in its safe use and safe slinging techniques (see *Further Reading*, for details of relevant guidance and British Standards).



Beware of crushing when slinging product – keep hands clear

Vehicle-mounted cranes

These cranes can be of particular use for unloading at a site where no other lifting equipment is available. They should only be operated by a trained and competent person. People who have been trained to use overhead cranes should not assume that this makes them competent to use vehicle-mounted cranes as well. The precautions listed above for overhead cranes also apply to vehicle-mounted types.

Fork-lift trucks and Side-Loaders

When using fork-lift trucks for unloading, it is essential to consider not only the lifting capacity of the truck but also the size and spread of the forks and the ground on which the truck is being used. Long items, such as lengths of bar or tube, may fall off if they are not balanced properly on the forks and, in particular, if the forks are too close together. Also, they may fall off the forks if the truck is driven too quickly round corners or over rough ground. Material such as small bars and sections may need to be bundled to prevent the load from shifting or falling off the forks.

Attachments such as sideshift forks and load clamps can allow long items to be handled safely. Fork-lift truck and side-loader drivers must be trained and competent. As well as being trained in the operation of trucks/loaders and their attachments, drivers should also be competent to handle routinely supplied long items. For non-routine items, a lifting plan, formulated and supervised by a competent person, will be necessary.

It may be impossible to get the forks sufficiently under the material in the centre of the delivery vehicle to allow the load to be manipulated safely into a position where it can be lifted. Under these circumstances the load should not be lifted. To avoid this problem, the delivery plan should consider how to position the load on the vehicle, so that it can be unloaded safely.

When a side-loader is being used, the load must be at rest on the platform of the side-loader before the vehicle is moved.

Over-reaching equals instability!



When fork-lift trucks or side-loaders are being used, the driver of the delivery vehicle must stand away from the load while it is being lifted or manipulated. No one should ever stand on a load to balance it on the forks.

Manual unloading

Manual unloading operations which involve a risk of workers being injured must be avoided where it is reasonably practicable to do so. The unloading task should be mechanised and in most cases, manual handling of loads can be avoided. If it is not reasonably practicable to avoid manual handling, an assessment of the manual handling operation must be carried out and steps must be taken to reduce the risk of injury to the lowest level reasonably practicable.

Loads that may be suitable for manual unloading (for example small amounts of lightweight material) should be identified as such in the Delivery Plan. Goods should then only be unloaded manually if this can be done safely. Manual handling should not be seen as an option merely because no other means of unloading is available. The Plan should specify the precautions to be taken to reduce the risk of injury, and should include sufficient instructions for those people doing the work. If the risk assessment shows that a load cannot be unloaded safely by manual means, and there are no alternative ways of unloading, the operation will have to be abandoned and the load returned to the supplier.

A decision to unload manually should not be taken by workers at the delivery point - it should always be specified in the Delivery Plan, and then only following a suitable and sufficient assessment identifying the precautions needed to reduce the risk of injury to the lowest level reasonably practicable.

Employers should refer to the detailed HSE guidance on manual handling (see *Further Reading*).

Barring off

Barring off is not a safe means of moving steel and should be avoided. This technique can cause a person to overbalance forwards, or the lever may come loose and the person fall over backwards. In addition, it is impossible to control the movements of the load. Fatal accidents have occurred when people barring off have fallen from the vehicle, sometimes with the load falling on top of them. Alternative means of unloading to barring off should be sought in all cases.

Movement of the vehicle after starting unloading

Should a vehicle be required to move after unloading has commenced, it will be necessary to complete an assessment of the further steps to determine if the movement can be completed safely. Before any movement of the vehicle, it is necessary to secure the remainder of the load.

Feedback and Review

It is important to obtain good feedback from drivers who visit a specific customer site on a regular basis. If these feedback reports raise concerns about unsafe aspects of the delivery or unloading operations, then a discussion should be held with the management of the customer's works which may lead to a low-key visit to the customer site to review the concerns. The outcome of these discussions should be reported to the drivers involved and should be reflected in changes to the Delivery Plan.

8. CONSIGNMENT

Consignment to the customer's storage location requires further movement of the material within the customer's works. In general, the overall assessment of risks to safety after delivery rests with the receiver or customer, although implementation of control measures is likely to require close co-operation between supplier/haulier and receiver/customer.

9. LEGAL REQUIREMENTS

Employers have duties under the Health and Safety at Work etc. Act 1974 to ensure, so far as is reasonably practicable, the health and safety at work of their employees and others who are not their employees (such as drivers).

Under the Management of Health and Safety at Work Regulations 1999, where two or more employers share a workplace, even on a temporary basis, they must co-operate with each other to make sure that they both comply with their legal duties. These Regulations also require employers to carry out a risk assessment of the hazards involved and to identify the measures needed to comply with other health and safety legislation.

The Work at Height Regulations 2005 apply to all work at height where there is a risk of a fall liable to cause personal injury. The Regulations place duties on employers, the self-employed, and any person that controls the work of others. The Regulations include requirements to avoid work at height where possible. Where work at height is carried out, falls should be prevented if possible, or if not, the effect of falls should be minimised. The Regulations require that: the risks from work at height are assessed; all work at height is properly planned and organised; those involved in work at height are competent; appropriate work equipment is selected and used and that equipment for work at height is properly inspected and maintained. The Regulations also provide a simple hierarchy for managing and selecting equipment for work at height.

The Manual Handling Operations Regulations require employers to avoid hazardous manual handling operations if this is reasonably practicable and in all other cases to reduce the risk of injury to the lowest level reasonably practicable.

The Lifting Operations and Lifting Equipment Regulations require employers to ensure that all lifting operations, such as unloading of steel, are properly planned by a competent person, appropriately supervised, and carried out in a safe manner. Lifting equipment needs to be suitable for the use to which it is being put, properly maintained, marked with its safe working load, and periodically thoroughly examined and inspected.

FURTHER READING

Safety in the storage and handling of steel and other metal stock, HSG 214, HSE Books

Safe working with overhead travelling cranes PM55 HSE Books

Safe use of work equipment. Provision and Use of Work Equipment Regulations 1998. Approved Code of Practice and guidance, L22 HSE Books

Management of health and safety at work. Management of Health and Safety at Work Regulations 1999. Approved Code of Practice and guidance, L21 HSE Books

Safe use of lifting equipment. Lifting Operations and Lifting Equipment Regulations 1998. Approved Code of Practice and guidance, L113 HSE Books

Manual handling. Manual Handling Operations Regulations 1992. Guidance on Regulations, L23 HSE Books

The Work at Height Regulations 2005 HSE

Rider-operated lift-trucks: Operator training. Approved Code of Practice and guidance, L117 HSE Books

Safety in working with lift trucks HSG6, HSE Books

Workplace transport safety – An employers guide HSG136, HSE Books

Workplace transport safety – An overview INDG199 (rev1), HSE Books

Safety signs and signals – Guidance on the Regulations L64, HSE Books

Code of Practice: Safety of loads on vehicles, DfT 2002

British Standard BS 7121-1:1989 Code of practice for safe use of cranes: Part 1 - General

British Standard BS 7121-4:1997 Code of practice for safe use of cranes: Part 4 - Lorry loaders

British Standard BS 5744:1979 Code of practice for safe use of cranes - Overhead/underhung travelling and Goliath cranes etc

Further information on workplace transport safety can also be found on HSE's website at <http://www.hse.gov.uk/workplacetransport/index.htm>

NASS Safety Guidelines, NASS

Moving Steel by Crane Video, NASS

Safe Delivery and Unloading of Steel Products