



Slinging loads in metal manufacturing

In recent years, a significant number of fatalities and serious injuries in the metal fabrication industries have been caused by poor slinging practices when using overhead travelling cranes to move and lift large non-uniform loads.

WorkSafe inspectors have found on occasions welders, boilermakers, fabricators and trade assistants have been left to their own devices when loads need to be moved despite having no training in overhead crane use.

Some of the concerns encountered by WorkSafe inspectors are:-

- loads being moved with no regard to the centre of gravity or how the load will move or react once raised;
- loads simply slipping from unsafe lifting points such as hooks in bolt holes etc;
- steel components and loads being raised with single wrapped steel chains back hooked with open hooks;
- single wrapped two legged chain slings slipping along pipe lengths as they are being lifted because of slippery painted surfaces.
- loads needing to be rotated after components have been added, thus changing the centre of gravity;
- unstable loads slipping or falling during crane operation where chain slings have dragged across uneven surfaces and snagged;
- numerous components positioned upright in an unstable position, close together and not braced. When a mishap occurs several can end up falling, causing a domino effect.

The Occupational Safety and Health Regulations 1996:

- requires a Dogging Work High Risk Work Licence (dogging licence) when dogging work is performed; and

- *Define dogging work to mean:-*
 - applying slinging techniques for the purposes of lifting a load, including selecting the method of lifting (by consideration of the nature of the load, its mass and its centre of gravity) and inspecting lifting gear (for suitability and condition); or
 - directing the operator of a crane or hoist in the movement of a load when the load is out of the view of the operator.

The use of judgement in carrying out the dogging work is:-

- applying slinging techniques means judging the suitability and condition of lifting gear and the method of slinging by considering nature of the load, its mass and its centre of gravity.

Situations where a dogging licence is not required:-

A dogging licence is not required to sling and direct a load when the load remains in the clear view of the plant operator and there is no requirement to exercise judgement in relation to:

- which sling to use;
- how to sling the load; and
- the condition of the sling or the load and its centre of gravity.

Therefore, for a simple load where no judgement is required (a predetermined centre of gravity is marked or lifting lugs are fitted), a dogging licence is not required if the person conducting the lift has:-

- predetermined instructions on how to attach the specific load, e.g. specific directions on how to connect, and what slings to use;
- a maintenance program to ensure the lifting gear provided for the lift is inspected regularly by a competent person and is in a suitable condition for use; and
- the load and the lifting device are positioned so that the load remains within sight of the operator at all times during the lift (this does not prevent a person giving directions, e.g. for final alignment).

The practicality of safely slinging loads without the need for judgement to be exercised will vary from workplace to workplace, depending upon the range of lifting work undertaken, the predictability of the loads and the complexity of the slinging methods.

Legal requirements:-

In general, where high volume repetitive lifting occurs, such as in some manufacturing workshops, and there is no requirement to exercise judgement in relation to which sling to use, how to sling the load and the condition of the sling or the load and its centre of gravity, a High Risk Work Licence with a dogging class is not required.

Where the loads vary within a known weight range and/or a known range of centres of gravity, the specified method of slinging will need to be suitable for the full range without the need to individually identify slinging technique factors such as the condition of the lifting gear or estimate weights or centres of gravity.

For some work, the employer, main contractor or person in control of the workplace will have to consider the circumstances and make a decision about whether a dogging licence is required for the lifting of a load.

In these cases, the employer, main contractor or person in control of the workplace has the duty to ensure:

- a competent person has pre-determined the suitability and condition of the lifting gear and the method of slinging by considering the nature of the load, its mass and its centre of gravity;
- the work instructions given to those engaged in slinging loads are adequate to ensure that the work is carried out safely and without the need to exercise judgement in relation to the lifting of the load;
- lifting gear is regularly inspected by a competent person; and
- there is a clear line of sight between the person doing the work and the load.

People with a dogging licence and rigging licence and professional engineers with the relevant experience and qualifications are generally regarded as competent to determine slinging methods and inspect lifting gear.

Subject to an appropriate assessment by the employer, main contractor or person in control of the workplace, a dogging licence may not be required.

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