

WORK EQUIPMENT



Lifting of 'Franka' Slabs and Hollow Bricks in Construction



When the local *franka* stone was more widely used by builders, it was common to see the traditional *franka* slabs being lifted by a crane on a construction site with a chain wrapped round a number of slabs and tied around the crane's hook (Fig. 1).

This method relies on the friction of the slabs with each other held tightly together by the chain. A cracked slab or a jolt while lifting could easily send the full load (*rużata*) crashing down to the ground and in fact such incidents have been reported.

This method is certainly not the safest way to lift *franka* slabs and fortunately it is rarely used today (mainly due to the diminished use of the *franka* slab which has been replaced by the hollow concrete bricks).



Fig. 1. © OHSA (Malta)

A safer way to lift the *franka* slabs is by positioning them on a pallet and placing them in an appropriate cage which can be lifted by a crane to the desired location as shown in Figs. 2 and 3.



Fig. 2.

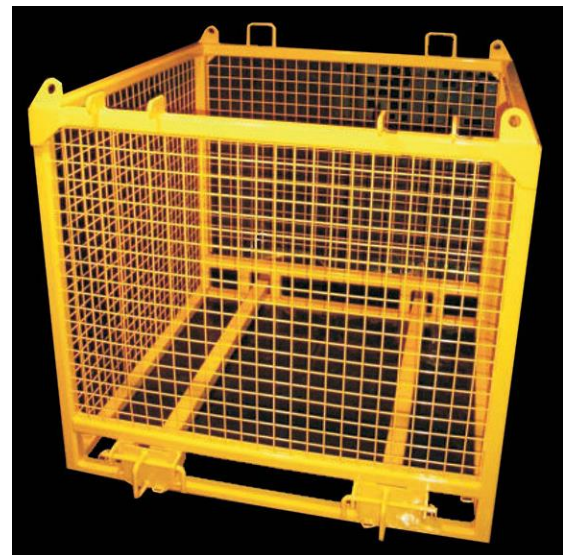


Fig. 3.

The same can be said for hollow concrete blocks. Where a cage is not being used, slabs and hollow bricks should be placed on pallets. In the case of bricks, the forks of the pallet fork should engage the pallet and **not** the hollow bricks. Fig. 4 shows a typical crane fork used locally to lift hollow bricks from the truck onto the construction site. This equipment shall have a CE mark.



Fig. 4.

Figs. 5 and 6 show the unsafe practice of lifting bricks with the pallet fork inserted into the lower row of bricks.



Fig. 5. © OHSA (Malta)

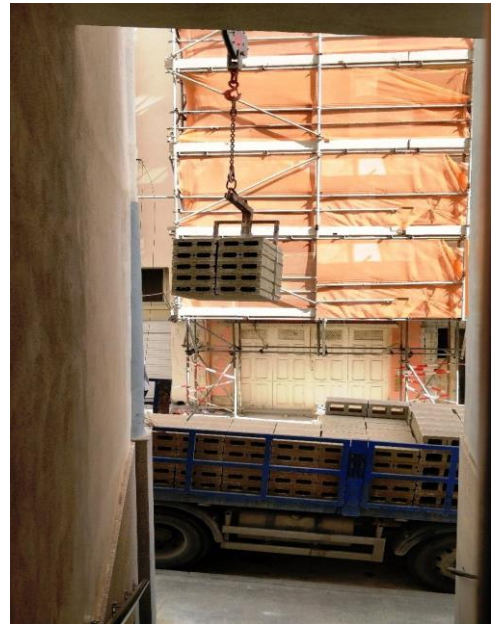


Fig. 6. © OHSA (Malta)

When lifting a pallet of bricks or slabs with crane forks, it is highly recommended that the load is secured with a safety restraint net. This is stated in *SM EN 13155:2020 - Cranes. Safety. Non-fixed load lifting attachments* which specifies the safety requirements for non-fixed load lifting attachments for cranes, hoists and manually controlled load manipulating devices. This standard includes lifting forks and states that when lifting loose material such as bricks, there shall be a secondary holding device such as a suitably-sized safety net or cage. The use of the safety net is to safeguard against falling material and should be used in accordance with the manufacturer's instructions.

Examples of this arrangement are shown in as in Figs. 7 and 8.



Fig. 7.



Fig. 8.

LIFTING LOADS SAFELY WITH A CRANE

In any work activity, it is essential to select and use the correct equipment that enables the work to be carried out safely. There are various types of equipment that can be used for lifting materials with a crane. If in doubt about which equipment is most suitable, one can refer to the manufacturer's manual or consult a competent person¹ on the subject.

- When lifting any load with a crane, it is imperative that those responsible for the operation are competent, follow the manufacturer's instructions and take the necessary measures to minimise the risks as much as possible.
- Amongst other things, one should ensure that the crane is positioned and erected properly, the weight of the load is known and it can be ensured that the crane is capable of lifting the load from the initial lifting point to the point of destination.
- It is the responsibility of the crane operator to ensure that the load is secured and balanced.
- It is imperative that no workers or third parties are present at any time beneath the load while in transit. Alternative pedestrian routes and traffic management should be provided in case the load has to be transported over roads and, or pavements. This information must be included in the lifting plan.
- One should also consult and adhere to the provisions of the *Environment Management Construction Site Regulations, S.L. 552.09*.²

REGULATIONS ON THE SAFE USE OF WORK EQUIPMENT

Any equipment used to lift material using a crane falls under the provisions of Schedule III of the *Work Equipment (Minimum Safety and Health Requirements) Regulations S.L. 424.35*.³

The **employer** (that is the person whose employee operates the crane or the self-employed person operating the crane) must ensure that this equipment, including the crane, slings, chains and other attachments, is examined by a competent person as required by the *Work Equipment Regulations, S.L.424.35*. A copy of the examination report shall accompany the equipment at the workplace where it is being used and it shall be kept available for inspection.

The employer is obliged to provide employees with work equipment which is safe for use. The employer must carry out a risk assessment of all work activities and take the necessary measures to safeguard the health and safety of the employees and other persons who may be

¹ A 'competent person' is a person possessing adequate qualifications, suitable training and sufficient knowledge, experience and skill for the safe performance of the specific task or work required.

² Available at: <https://bca.org.mt/files/552-09EN.pdf>

³ Available at: <https://legislation.mt/eli/sl/424.35/eng/pdf>



affected by the work being done for the said employer. The risk assessment must identify the safest method of performing the work with the appropriate equipment, including the use of the necessary personal protective equipment.

The employer must ensure that the operator has received adequate training, is fully competent to carry out his duties and is supervised to ensure the safe use of the crane and its attachments. The use of such work equipment must be restricted to those persons given the task of using it, since it is likely to involve a specific risk.

Besides the employer's responsibilities, the **employees** have the duty to cooperate with the employer, use the equipment for its intended use and safeguard their own health and safety and that of other persons who can be affected by their actions or omissions. It is imperative that the safe working load is not exceeded, and the crane and its attachments are used within the operating parameters according to the manufacturer's instructions. The employee is required to report any hazards, equipment faults, near misses, incidents or accidents to his employer.

CONSTRUCTION SITES

When this type of equipment is used in construction sites, the specific requirements of the *Work Place (Minimum Health and Safety Requirements for Work at Construction Sites) Regulations, S.L.424.36 (L.N. 88/2018)*⁴ also apply. The **project supervisor**⁵ must ensure that the health and safety plan contains the plan for performing this work and that this is communicated and understood by all contractors concerned. The contractor/s must take into account directions from the project supervisor.

The **Client**⁶ must take account of any report given in writing by the project supervisor and must also take all reasonable measures to ensure that duty holders abide by their obligations within the limits of their respective responsibilities for the adequate safeguard of occupational health and safety.

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Every effort has been made to ensure that the information in this document is correct and provided in good faith according to current best practice. The information provided in this document does not, and is not intended to constitute legal advice. It is also strongly recommended that one considers all relevant regulations related to this subject.

⁴ Available at: <https://legislation.mt/eli/sl/424.36/eng/pdf>

⁵ The Project Supervisor is the natural or legal person appointed by the Client in terms of regulation 3 of the Work Place (Minimum Health and Safety Requirements for Work at Construction Sites), S.L.424.36 (*ibid.*). The project supervisor is responsible for the health and safety supervision of the project.

⁶ The Client is the natural or legal person for whom a project is carried out i.e. the owner of the site. (*ibid.*)

REFERENCES

<https://cqegroup.com/uk/blog/2018/03/28/safely-crane-lift-bricks-and-other-building-materials/>

<https://legislation.mt/eli/sl/424.35/eng/pdf>

<https://legislation.mt/eli/sl/424.36/eng/pdf>

<https://legislation.mt/eli/sl/552.9/eng/pdf>

IMAGE SOURCE

Fig 2: <https://www.directindustry.com/prod/eichinger-equipement/product-50018-685877.html>

Fig 3: <https://maxirig.com.au/shop/brick-pallet-lifting-cage/>

Fig 4: <https://www.directindustry.com/industrial-manufacturer/crane-pallet-fork-132245.html>

Fig 7: <https://cqegroup.com/uk/product/accessories/safety-restraint-net/>

Fig 8: <https://www.whitneyeng.com/product/GER-AU-Self-Levelling-Brick-Forks/0/33/>

CONTACT INFORMATION

Occupational Health and Safety Authority

Address: 17, Triq Edgar Ferro, Pietà PTA 1533, Malta

Tel No: 21247677

Contact in Case of Emergency After Office Hours: 99496786

Email: ohsa@gov.mt

Website: www.ohsa.org.mt

Facebook: @ohsamalta

Download the free mobile App **BSafe@Work**

