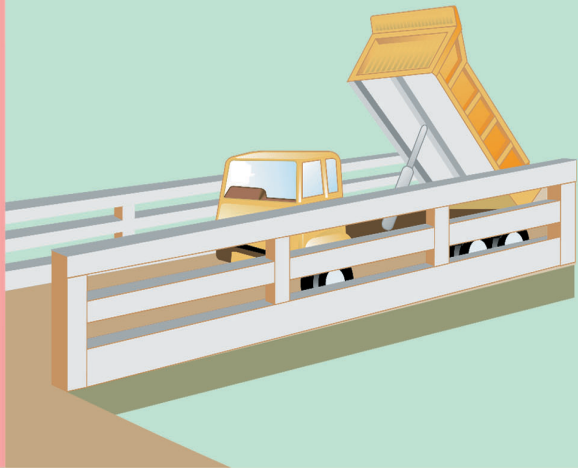


Safety at Work Guidance Notes on Temporary Dumping Jetty



Occupational Safety and Health Branch
Labour Department



Safety at Work Guidance Notes on Temporary Dumping Jetty

This guidebook is prepared by the
Occupational Safety and Health Branch
Labour Department

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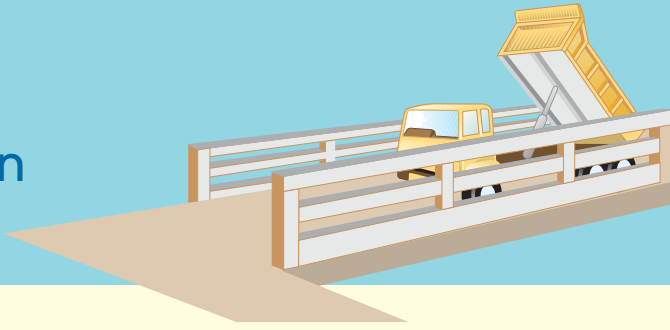
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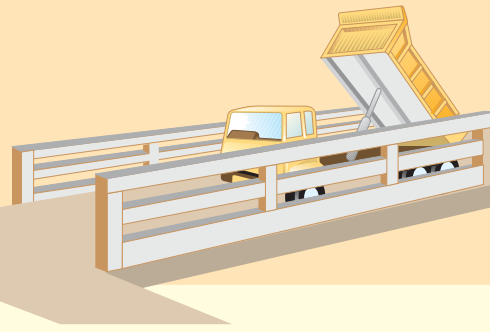
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1. Introduction



- 1.1 In these Guidance Notes, "**a temporary dumping jetty**" refers to a temporary cantilever platform protruding from an elevated area along the sea front. It is used to facilitate dump trucks in unloading materials into lighters on the sea. Collapse of a dumping jetty or toppling of a vehicle over the edge of a dumping jetty may lead to serious accidents which may cause loss of life, damage to vehicle/lighter and delay in work progress. Instability, faulty setting out of dumping jetty and insufficient edge protection are the common causes of these accidents.
- 1.2 These Guidance Notes highlight the safe practices involving the use of a temporary dumping jetty in Hong Kong. They are intended to be read by the contractor, site management personnel, dump truck drivers, engineers and relevant parties in the trade.

2. Safety Features of Temporary Dumping Jetty



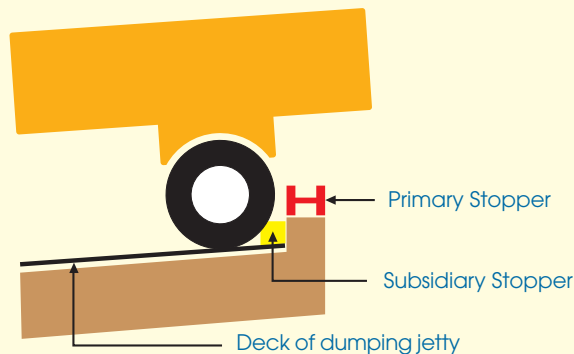
Before unloading materials into a lighter on the sea, a driver has to reverse his truck close to the end of the temporary dumping jetty. If the truck driver cannot stop his vehicle upon reaching the end of the temporary dumping jetty, the vehicle would roll over its edge and fall into the sea. In order to prevent such accidents, the following safety features should be provided to the temporary dumping jetty.

2.1 Stoppers

- 2.1.1 A stopper is a block or barrier on the deck of a dumping jetty, used for preventing a truck from rolling over it. It may be made from structural steel members, steel sheet-piles or concrete blocks, etc.
- 2.1.2 A Primary Stopper should be erected at the end of a temporary dumping jetty. It should be substantially constructed and be capable of sustaining the impact forces resulting from those reversing trucks. The height of the Primary Stopper above the deck of dumping jetty should be at least greater than half the diameter of the rear wheels of the trucks.

2.1.3 In order to prevent the Primary Stopper from being damaged by the reversing trucks, a Subsidiary Stopper should also be erected just in front of the Primary Stopper. This Subsidiary Stopper serves as a buffer in protecting the Primary Stopper from direct impact. The Subsidiary Stopper should also be substantially constructed and be capable of sustaining the impact forces resulting from the reversing trucks. The Subsidiary Stopper should be immediately repaired or replaced when it is found damaged.

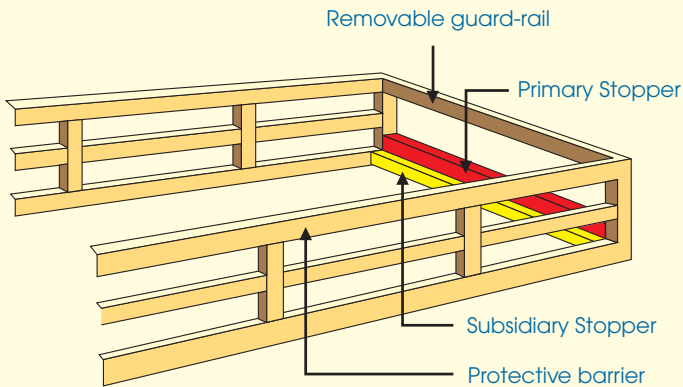
2.1.4 The temporary dumping jetty should not be used unless the Primary Stopper and Subsidiary Stopper are properly erected. The Primary Stopper and Subsidiary Stopper should be painted with distinctive colour to assist the truck drivers to stop their dump trucks before hitting against the stoppers.



The Primary Stopper and Subsidiary Stopper installed on temporary dumping jetty

2.2 Protective Barriers

2.2.1 Wherever practicable, the sides of a temporary dumping jetty should be provided with protective barriers. Their main purpose is to prevent the dump truck on the dumping jetty from rolling over the edge and falling into the sea. The protective barriers should be substantially constructed and be capable of sustaining the impact forces resulting from the moving trucks.



The protective barriers installed on temporary dumping jetty

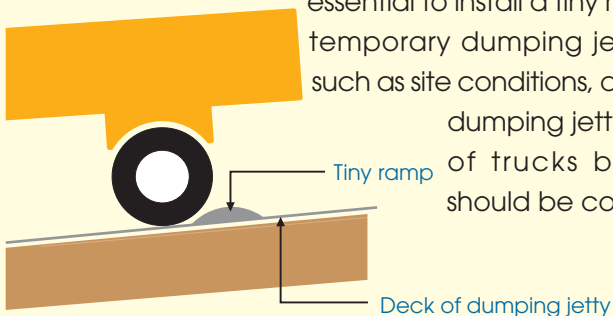
- 2.2.2 If, for whatever reason, a person is required to gain access to the temporary dumping jetty, the end of the dumping jetty should also be provided with, in addition to the stoppers, substantial guard-rails. However, such guard-rails may be removed or remain unerected for the time and to the extent necessary for the access of persons or the movement of materials or other purposes of the work concerned, but shall be replaced or erected as soon as practicable after the expiration of that time.
- 2.2.3 To protect the person from falling into the sea, the protective barriers at the two lateral sides and the guard-rails at the end of the dumping jetty should be erected up to a height between 900mm and 1150mm above the deck. The height of an intermediate guard-rail above the deck should be not less than 450mm and not more than 600mm.
- 2.2.4 The temporary dumping jetty should not be used unless the protective barriers are properly erected. The protective barriers should be painted with distinctive colour so as to give the truck drivers an indication of the width of the dumping jetty.

2.3 Tiny Ramp

2.3.1 A tiny ramp can be installed on the deck of a temporary dumping jetty. It serves to give an indication to the truck driver that his truck has already reversed to a position close to the stoppers. It should be so designed that when the truck rolls over it, the truck driver could sense the existence of it but it would not create any hazard to the driver.

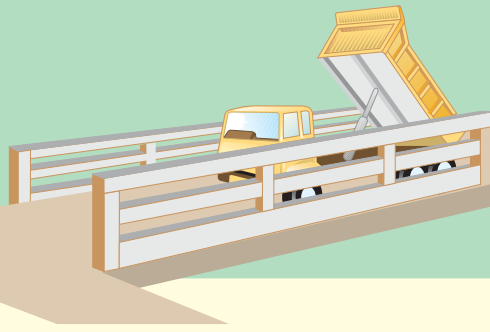
2.3.2 The tiny ramp should normally be located at a position just behind the front or rear wheels of the truck when the truck reverses to the end of the temporary dumping jetty.

2.3.3 This tiny ramp should be able to help the truck driver to stop his truck in an appropriate position for unloading of materials. In determining whether it is essential to install a tiny ramp on the temporary dumping jetty, factors such as site conditions, design of the dumping jetty and types of trucks being used should be considered.



The tiny ramp installed on temporary dumping jetty

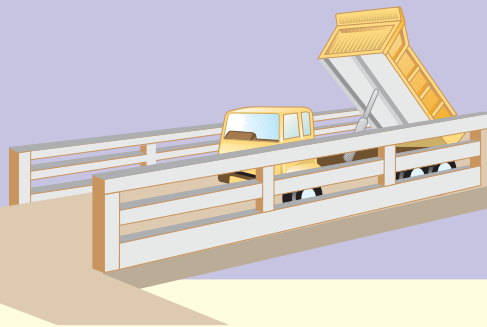
3. Design of Temporary Dumping Jetty



- 3.1 The contractor should ensure that a temporary dumping jetty is of safe design. He should appoint a competent engineer to design the temporary dumping jetty. To qualify as a competent engineer in designing a temporary dumping jetty, the engineer should have adequate training and experience, and the competence in structural mechanics and structural design.
- 3.2 The competent engineer should prepare a set of instructions in the form of drawings and specifications, setting out the framing, dimensions and construction details of the temporary dumping jetty. The safety features of the temporary dumping jetty should also be clearly shown.
- 3.3 The strength and stability of the temporary dumping jetty, its stoppers and its protective barriers should be justified in writing by the competent engineer in accordance with relevant codes of practice issued by the Building Authority or equivalent standards.
- 3.4 The working area of the temporary dumping jetty should be sufficiently large having regard to the size, movement and unloading operations of the dump trucks.

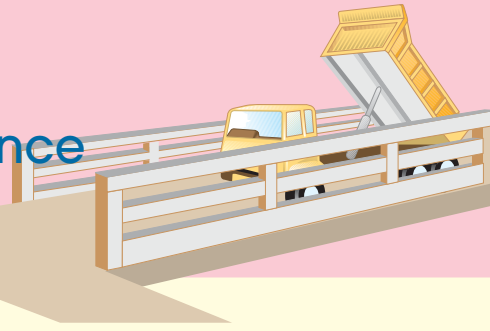
- 3.5 The deck of the temporary dumping jetty should, so far as is reasonably practicable, be designed to slope upwards with a gentle gradient.
- 3.6 Sudden change in gradient at the adjoining area to the deck of temporary dumping jetty should, so far as is reasonably practicable, be avoided.
- 3.7 The Primary Stopper should be so designed that it can withstand larger lateral loads than the Subsidiary Stopper.
- 3.8 The supports to the Primary Stopper and to the Subsidiary Stopper should be independent from each other. And also, the dimension of the gap between the two stoppers should be maximized and designed to suit the unloading operations of dump trucks.

4. Construction of Temporary Dumping Jetty



- 4.1 The contractor should ensure that a temporary dumping jetty is of good construction. The contractor (including the site management personnel) should read and understand the drawings and specifications for the temporary dumping jetty before commencing the construction work. If the contractor has doubts as to any detail or method of construction, he should seek clarification from the competent engineer.
- 4.2 The contractor should construct the temporary dumping jetty together with its safety features in accordance with the drawings and specifications. The contractor should not change the design without prior certification by the competent engineer.
- 4.3 If the design is not compatible with the site conditions, the contractor should consult the competent engineer to re-design the temporary dumping jetty to suit the site conditions.
- 4.4 Site management personnel and workmen involved in the construction of the temporary dumping jetty should be competent, trained and experienced in the work assigned.
- 4.5 The contractor should ensure the safety of all workmen involved in the construction of the temporary dumping jetty.

5. Use and Maintenance of Temporary Dumping Jetty



- 5.1 The contractor should ensure that a temporary dumping jetty is used safely and properly maintained. Before allowing the temporary dumping jetty to be used for unloading of materials, the contractor should check to confirm that the dumping jetty has been properly constructed in accordance with the drawings and specifications, and certified safe by the competent engineer.
- 5.2 Traffic signs should be posted at the temporary dumping jetty or marked on the deck to indicate the correct flow of traffic. If necessary, traffic lights should be used to control the traffic flow.
- 5.3 The temporary dumping jetty together with its safety features should be properly maintained. If any defect is observed, the use of the dumping jetty should be suspended until such defect has been repaired or removed.
- 5.4 All truck drivers using the temporary dumping jetty should possess proper valid driving licenses. They should be informed of all the safety features of the dumping jetty and instructed on how to use the dumping jetty safely.
- 5.5 The deck of the temporary dumping jetty should so far as is reasonably practicable be gritted and kept non-slippery. Any oily or slippery wastes on the deck should be removed immediately.

- 5.6 No spoil/debris should be left on the temporary dumping jetty, especially around the Primary Stopper and Subsidiary Stopper.
- 5.7 Unless a room is properly designed and built on the temporary dumping jetty to house an attendant, no one should stay on the deck of the dumping jetty whenever the dumping jetty is being used by dump trucks for unloading of materials.
- 5.8 Permanent illumination should be provided on the temporary dumping jetty for night work. The illumination lights so provided should not create any hazard to the safe navigation of vessels.
- 5.9 The contractor should provide continuous supervision on the use of the temporary dumping jetty to ensure safety.

6. Useful Information

If you wish to enquire about this guidebook or require advice on occupational safety and health, please contact the Occupational Safety and Health Branch of the Labour Department through:

Telephone : 2559 2297 (auto-recording after office hours)
Fax : 2915 1410
E-mail : enquiry@labour.gov.hk

Information on the services offered by the Labour Department and on major labour legislation can also be found by visiting our Home Page on the Internet. Address of our Home Page is <http://www.info.gov.hk/labour>.



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