

INTRODUCTION TO CRANE HOIST TESTING

Crane hoist testing is essential for ensuring the safety and efficiency of cranes and lifting devices. Regular inspections and load tests are mandated by organizations like OSHA and CCOHS to identify potential issues in crane components, which can wear out due to frequent use. This process is vital to prevent operational failures and ensure the safety of personnel and facilities.

Crane load testing is described as *“the process of applying a demand to a software system or computing device and measuring its response.”* It is commonly used to figure out how a device can behave under normal and peak load conditions.



TYPES OF TEST WEIGHTS

1. Steel Crane Test Weights

Usage

Ideal for proof load testing in confined spaces or areas with low headroom.

Advantages

- Time-efficient for testing multiple cranes.
- Compact, movable, and easily handled by forklift or crane hook. Low working height.
- Suitable for hand-carrying smaller weights.
- Accurate and precise due to high-quality steel construction.
- Durable with a longer lifespan, resisting corrosion and wear.
- Safe, with features like handles and lifting eyes for easy maneuvering and are non-toxic and non-sparking.
- Cost-effective and easy to maintain.

Disadvantages

- Higher transportation costs.
- Storage requirements when not in use.

2. Water-filled Weight Bags

Usage

A safe alternative for proof load testing of lifting equipment.

Advantages

- Low freight costs and minimal storage space requirements.
- Safe technique for gradually applying test load.
- Easy drainage of water without lowering the test weight.

Disadvantages

- Need for large amounts of water and associated costs.
- Disposal of water post-testing.

3. Concrete Load Test Weights

Usage

Less common, used similarly to steel weights.

Advantages

- Cheaper than steel or cast-iron weights.

Disadvantages

- Prone to damage and breakdown over time.
- Larger in size and heavier when wet.

LOAD TEST REQUIREMENTS: THE BASICS

Purpose:

To verify the safe performance of cranes and hoists under test loads at least equal to their rated capacity.

Frequency:

Testing must be completed whenever overhead lifting equipment is installed, altered, repaired, or modified before being placed into service and every four years for existing systems.

Test Load:

The test load used must be at least 100% and no more than 125% of the equipment's rated capacity unless otherwise recommended by the original equipment manufacturer (OEM) and certified prior to testing.

Documentation:

All findings and reports should be maintained for the equipment's lifetime.



CONTACT MARS METAL FOR CUSTOM TEST WEIGHTS

Test weights are crucial for the safe and efficient operation of crane hoists and help in identifying defects and ensuring the longevity of the equipment. When selecting test weights, it's important to consider the specific needs of the crane and adhere to safety guidelines.

Mars Metal can assist you with any of your steel crane hoist test weight needs. Contact us for a custom design for a set of test weights fit for your environment, application, and specific requirements.

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