City of San Angelo
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#187108
TAILGATE/TOOLBOX SAFETY TRAINING
Safety Services Company-Safety Meeting Division,
PO Box 6408 Yuma, AZ 85366-6408 Toll Free (866) 204-4786
SAFETY SERVICES COMPANY

Job Name: _____ Job Site Location: _____

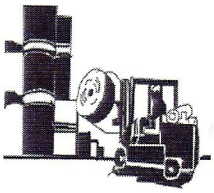
Date: _____ Time Started: _____ Time Finished: _____ Foreman/Supervisor: _____

Topic 151: Safe Handling of Pipe and Steel

Introduction: Steel building materials come in a wide variety of forms that include flat plate, coil, round and squared bar, beams, pipe, and many other shapes, each of which may require its own unique method of handling, storage, and transporting. Specialized fittings, attachments, and implements are often used to handle steel, such as chain, clamps, and hooks which must be inspected before each use and maintained and stored properly to ensure safety. All equipment must also be used properly to keep the material being handled from slipping, or the equipment from failing as follows:

- ***Employees using*** any type of lifting or handling equipment must be competent, and if required, certified in its use.
- ***When handling steel material,*** appropriate Personal Protective Equipment such as hard hats, steel toed boots, and gloves must be worn.
- ***Cranes, forklifts, or hoists*** used to handle steel must be load-rated for the job. Equipment limits and load charts must be prominently displayed.
- ***Lifting attachments*** such as spreader bars, chains, sling hooks, and plate clamps must be load-rated sufficient for the job.
- ***Plate or dog clamps*** must be used to lift only one piece of steel at a time.
- ***Use caution*** when using chain shorteners. If installed improperly, or of insufficient load-rating, the chain may fail causing the load to fall.
- ***Web slings*** must be appropriately load-rated and must be protected from contact with any sharp edges.
- ***Ensure that the crane*** or hoist is positioned directly over the load to prevent the load from swinging as it clears the floor or ground.

The storage of steel materials present many potential hazards. The steel may roll, slip, slide, or fall over if not properly restrained while stored. Shelves or racking may collapse if system is not suitably designed for the purpose.



- ***Racking or shelving*** systems must be cross-braced to prevent collapse.
- ***Bollard posts*** should be installed to prevent damage to storage systems by forklifts or equipment.
- ***The safe load capacity*** of storage systems should be clearly displayed in prominent locations on the system.
- ***Heaviest items*** should be stored in the lowest locations.
- ***Personnel involved*** in storing and handling steel should be knowledgeable in weights of steel in any form they are handling.
- ***Steel plate*** stored on-end or upright should be offset to help facilitate the use of plate clamps for handling.
- ***Round bar, pipe and steel coil*** may be stored in racks if they are inclined or stops are provided to prevent material from rolling off.
- ***Large steel pipe*** should be stored lying flat and chocked, or secured in cradle racks. These pipes should always be transported in pipe cradles.
- ***Coil steel*** is one of many versatile forms of steel and comes in a great variety of sizes and weights; some may weigh up to 15 tons. There is a hazard of violent whipping movement if the coil is allowed to uncoil without restraint. Coiled steel rolls easily, even in high weights. Therefore, there is a great potential for serious injury or even fatal accidents if coil steel is not handled and stored properly.
- ***Larger coils must*** be stacked on the bottom row – or their weight will push apart the smaller coil underneath, creating a potentially lethal hazard.
- ***Coil steel*** should be transported in cradles the same as large diameter steel pipe.

Steel is commonly transported on flatbed trucks and semi-trailers. Trucks should be provided with headboards (headache racks) suitable to protect the driver from the load moving forward, and a tail board to protect other drivers from loose material.

- ***Stanchion pins*** suitable to the load should be place in the rail-post pockets to guard against sideward movement of the load.
- ***Trucks regularly used*** to transport steel should be provided with a catwalk that has grab rails between the cab and the headboard to provide a safe vantage point to direct loading and unloading operations.
- ***Chains used*** to secure the load and tie down the steel material for transport must be properly load rated.
- ***Drivers must check*** the load frequently to ensure the load has not shifted or settled, allowing slack in binding chains or loosening of the material.
- ***Never unload material*** with the transport truck parked on an uneven surface. If the facilities at the destination are not suitable for unloading, the driver should notify supervision and ensure that safe arrangements can be made for unloading.
- ***When unloading steel,*** especially pipe or coil, stanchion pins should be left in place and binders loosened slowly, one at a time, but not entirely removed until all binding chains are loosened and there is no signs that shifting of the load has occurred. While unloading, material should be re-secured between lifts to prevent load-shift hazards.

Conclusion: Steel should always be handled carefully and slowly in any situation. Respect its weight and the destructive capability of the weight in motion. Do not compromise safety to speed up handling processes. Follow these guidelines for safe steel material handling operations.

Work Site Review

Work-Site Hazards and Safety Suggestions: _____

_____

Personnel Safety Violations: _____

Employee Signatures: *(My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)*

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These guidelines do not supercede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.