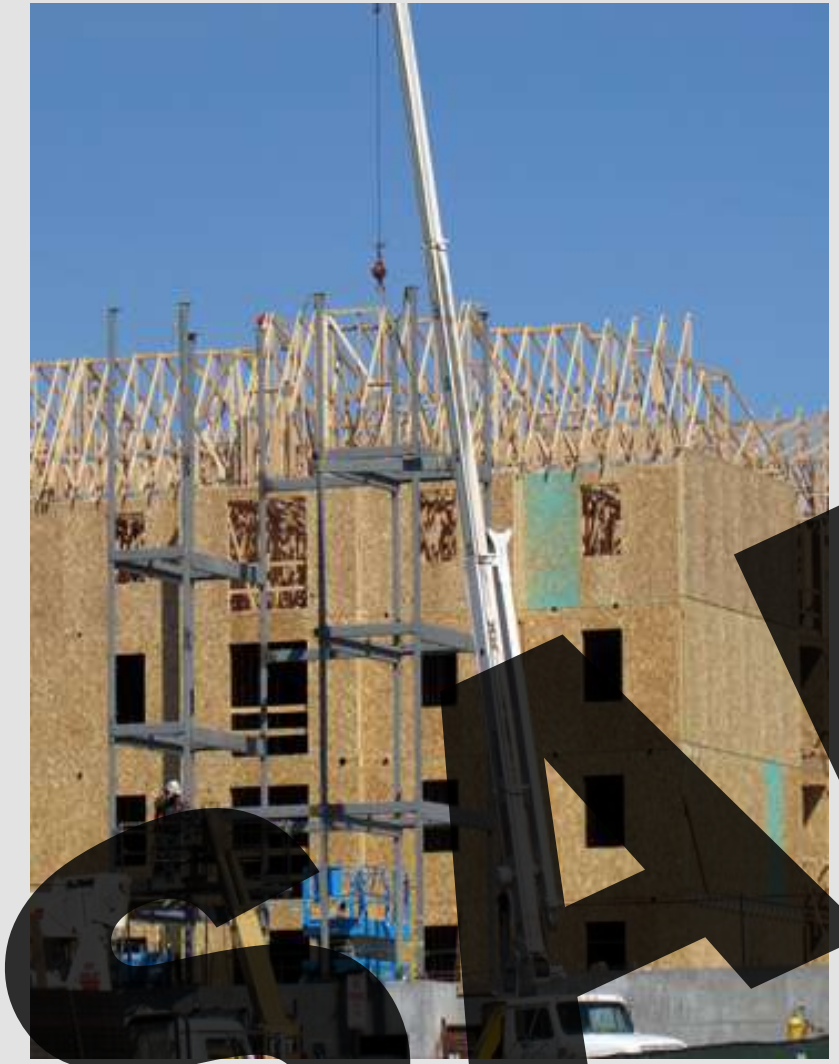
Welcome to the Hard Hat Training Series!

Welcome to the Hard Hat Training Series. Today, we will talk about safe rigging principles. We will give you the knowledge and skills that will prepare you to be a safer operator and rigger-signalperson.

HARD HAT TRAINING SERIES

SAFETY PROVISIONS, inc.

ADVANCED RIGGING & SIGNALING



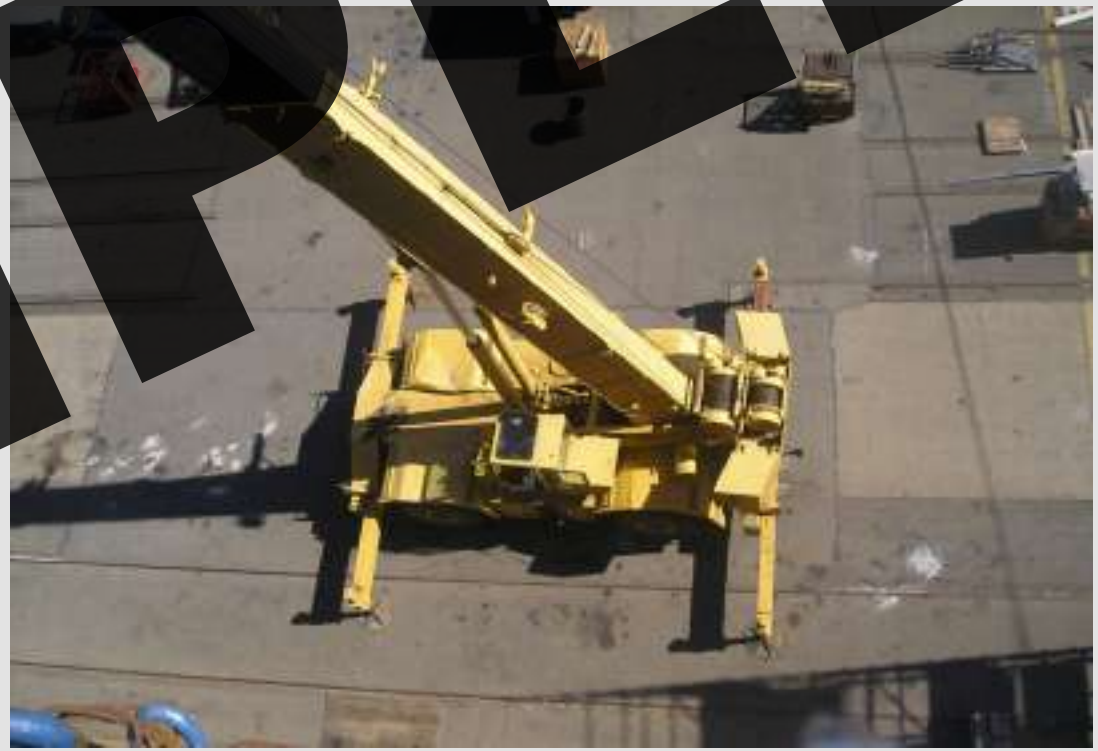
In our highly-mechanized world, cranes are the workhorses that have increased economic growth and productivity in construction, mining, logging, maritime, production, and service facilities. It is not uncommon while driving in urban areas to see mobile cranes, tower cranes, and maritime cranes all in a short period of time performing a wide variety of jobs.

Cranes are versatile machines that can be used for many job applications from loading and unloading materials to placing those materials or personnel up to heights hundreds of feet high. Many are mounted on truck beds and can move between job sites at highway speeds carrying payloads in excess of 15,000 pounds.

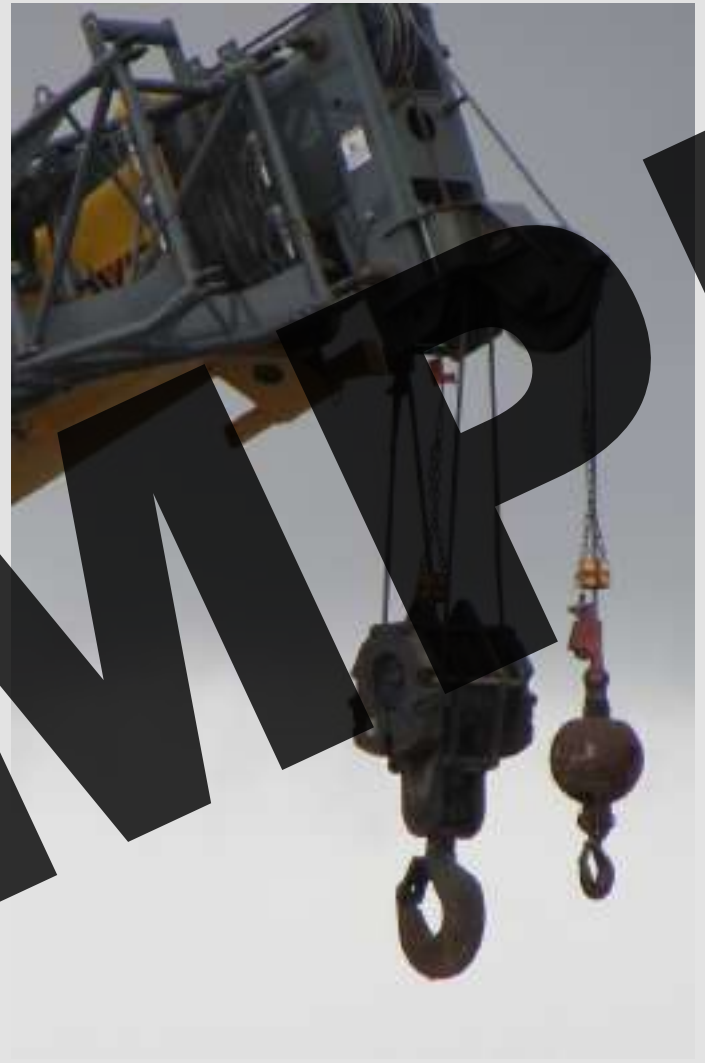
Tower cranes dot the skyline in industrial and urban areas. Because they are high profile, they tend to attract the most attention when something goes wrong.

Overhead cranes are used in most manufacturing plants and are the most numerous. They can be as simple as an electric hoist on a trolley on an I-beam or multiple hoists on a bridge crane that spans the whole facility. Outdoors, they come in the form of rubber-tired gantries or a-frame gantries on rails.

As you can see, cranes come in all sizes — from large all terrain cranes used to lift loads in excess of 75 tons to small-capacity utility truck cranes used for lifting much smaller loads. This training is not intended for any specific crane; rather, it is a wide base of information to draw from.



The goal today, then, is to review the principles of stability as they apply to cranes. We will also discuss what load charts are and how to read them. You will complete some exercises to ensure you fully understand how to properly utilize load charts.



Next, we'll teach you about rigging equipment and safe rigging principles. Then we'll move on to safe operations, where you will learn about safe work habits that can keep you safe on the work site.

STANDARDS

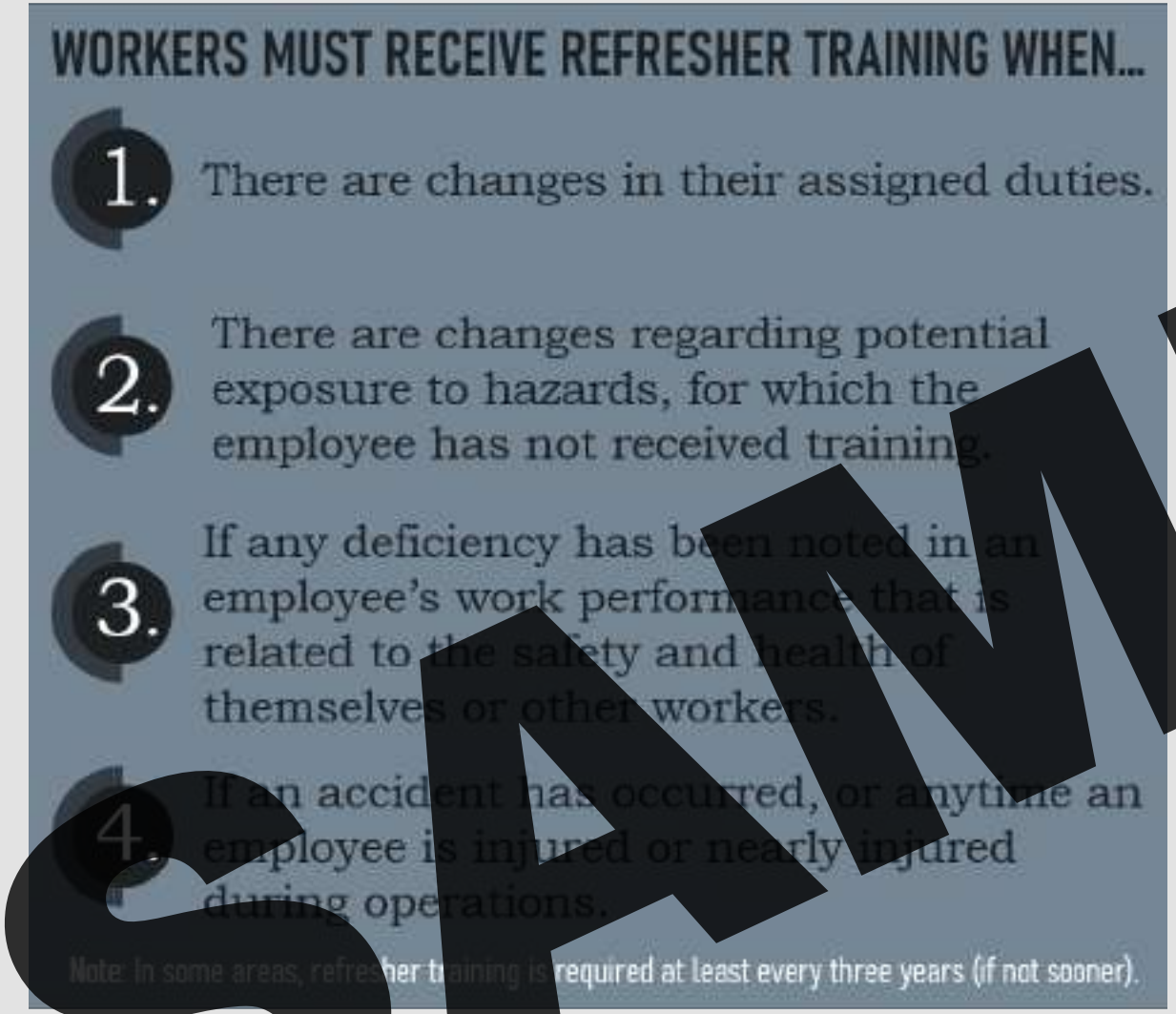
29 CFR 1926 Subpart CC – Cranes and Derricks in Construction
29 CFR 1926.180 – Crawler, locomotive and truck cranes
ASME B30.5 – Mobile and locomotive cranes
ASME B30.22 – Articulating boom cranes
29 CFR 1910.179 – Overhead cranes and gantries
29 CFR 1926.554 – Overhead hoists
ASME B30.2, 11, 16, 17 – Overhead and gantry cranes

These are some of the main standards concerning rigging and signaling. Many states or provinces have additional standards, as do some industries. We have provided these as a guide, but it's your responsibility to know all federal, local, and company rules that apply to your job site.

Why Training?

No matter the situation, it is common to hear workers and even employers ask, “Where does it state we need to be trained?” Can’t a worker also be deemed “qualified” based on experience? The answer is “no.” Experience helps, yes, but regulations are very clear that employees must be trained (no matter how long they’ve been on the job) and that it is the employer who is responsible for overseeing that safety training, ensuring employees have the understanding, knowledge, and skills needed to operate safely.

Initial training and refresher training, as well as any written and practical evaluations, must be documented and filed. At the very least, employers need to show proof of proper and consistent training (in the way of training outlines, class lists, training goals, tests, certificates, and so on.) These documents should include the name of the person who taught the class or conducted the evaluation.



Training is not just a one-and-done occurrence; it is on-going. In fact, training should take place whenever there is a demonstrated need for it. We have listed several instances when refresher training would be required. Can you think of any others?

The extent of training will be determined by the employer, but at the very least it should include classroom instruction followed by a written and practical examination that prove continued competency.

Stability