

## TOOLBOX TALK #27

### SLINGS

Workers use slings, in conjunction with cranes and other lifting devices, to move heavy loads that would be difficult to handle by other means. Slings may be constructed of chain, wire rope, metal mesh, synthetic fibers webbing and other materials. Loading slings can sometimes fail with potentially devastating effects for anyone working nearby.



Slings fail for many reasons, including overloading, improper rigging or components that have been damaged from prior use. One common reason for sling failure in general is hitching at angles that create too much tension in the sling legs, causing the sling to pull apart.

One way many workers rig a load is by using a two-leg bridle hitch. This is where each sling leg is attached separately to the load and where both legs come together at the collector ring at the top, which is then attached to the lifting device. This arrangement gives the bridle-hitch sling its characteristic shape of an inverted “V”.

Slings and bridle hitches are used in many work places, mainly because they are versatile and provide adequate stability for an assortment of loads. Unfortunately, bridle hitches are subjected to substantial internal stresses, especially when the legs are rigged at improper angles.

OSHA requires that any worker who is to rig loads on the jobsite be “qualified” to do so. Employers are responsible to designate who it is that will rig loads onsite. Experience, knowledge and training are all needed to become a qualified rigger. Experience is gained on the job but knowledge is gained in the classroom. Together, they make up training.

If you are asked to rig loads, make sure you take a course or acquire the knowledge needed, things like calculating loads, sling materials and the different configurations. This includes the basic types of hitches: straight pull, choker and basket hitches. You should also know what angle does to the strength of the sling and how to inspect the sling for damage as well as any component used in the lift. This is where a “lift plan” can come in handy. Plan ahead so that problems do not arise later ... when it’s too late.