Locomotive Safety Means Using the Right Product

By Phil Kimble

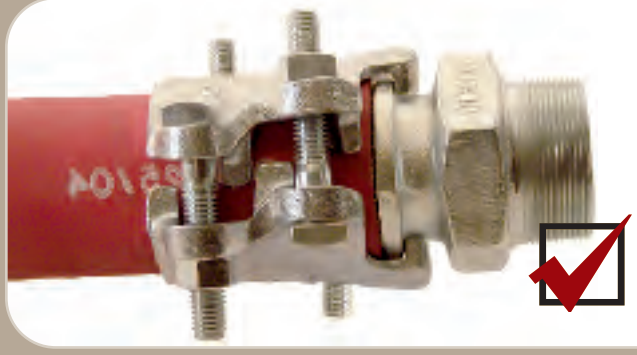
Locomotive. Iron Horse. Train. In the 1800s, trains played a key role in transporting workers, entrepreneurs and adventurers to the western frontier. Trains also fed the West's voracious appetite for building materials, agricultural and industrial equipment, and various supplies. America was infatuated with trains. Today, when almost everyone has a car, jet planes fly coast to coast in a matter of hours and 18-wheelers roar along every highway, trains have faded into obscurity.

Or have they? Trains are the unsung heroes of American industry. Trains still convey vast quantities of product over huge distances to all parts of the country. Approximately 42 percent of U.S. freight moves quickly and efficiently by train.

One of the products routinely transported via train is coal tar pitch. Coal tar pitch has a wide variety of uses, including as roofing materials, pipe coatings and antifouling paints for boats. Coal tar pitch is usually heated to about 350 degrees Fahrenheit for efficient loading and unloading. Typically, a hose with cam and groove couplings connects a pump to a tank car. The hot liquid is then pumped into the tank car.

One coal tar pitch loading facility implemented, as one of its standard operating procedures, the practice of using a piece of wire to tie down the handles of the cam and groove coupler connecting the hose to the tank car. This was done to prevent the cam

BOSS STYLE CLAMPS - DO AND DON'T

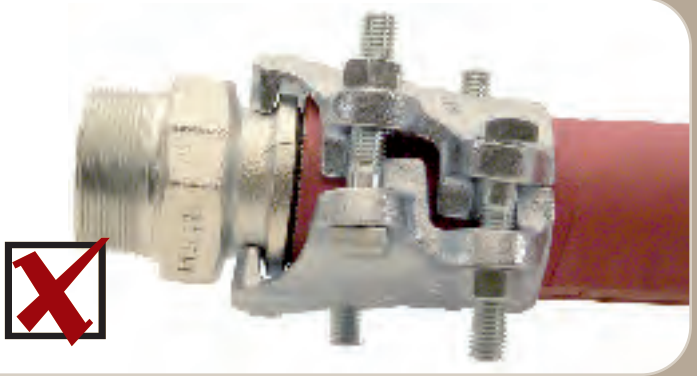


DO:

- Select the proper clamp based on inside and outside diameter of hose.
- Ensure even showing of hose between the clamp sections.
- Tighten bolts to recommended torque.
- Know that clamps are designed to bend.
- Re-torque bolts regularly.

DON'T:

- Allow the individual body sections of the clamp to touch.
- Reuse bolts.
- Replace bolts with bolts of any other strength.
- Reuse clamps.



arms from opening while loading. New employees were instructed, in addition to use of proper safety gear, to attach the coupler to the adapter on the tank car, then insert a wire through the rings on the cam arms, twist the wire until the cam arms were secured in the closed position, and then start the pump.

One new employee began the loading process by connecting the hose to the tank car and then starting the pump. While waiting for the tank to load, the cam arms on the coupler opened up, the hose whipped around, sprayed him with hot coal tar pitch, and then knocked him off the loading platform. The fall broke both of his legs. The hot coal tar pitch left him with second- and third-degree burns on over 80 percent of his legs and torso, even with his safety apparel on.

Positive displacement pumps, such as diaphragm and piston, create pulsations in a line. These pulsations cause the cam arms in standard cam and groove couplers to rock back and forth on the adapter groove. This rocking motion can ultimately lead to the cam arms rotating to the open position and the coupler separating from the adapter. Even if a procedure has been implemented into a company policy, it may be flawed. That flaw may have catastrophic consequences. This tragic accident could have easily been prevented. Hazardous applications require superior products. King Cables prevent hoses from whipping in the event of an accidental disconnection. EZ Boss Lock couplers have handles that lock automatically in the closed position. No wire ties. No Velcro straps. No cumbersome pins. "The Right Connection."