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Why not pink?

As with any object that's painted and left outside, a steel bridge needs to be repainted on a regular basis. A fresh coat of paint provides a protective coating to the steel to prevent corrosion and it just looks nice. But there's more to painting a bridge than a quick trip to Home Depot and a brush.

WHKS engineers have been helping the Iowa DOT Bridges and Structures Bureau keep its bridges clean and shiny for 15 years and have become more than a little knowledgeable about the three major steps that are involved

Just like painting the antique dresser you found at an auction, the first step is to prepare the old surface. Most often the existing bridge is abrasive blasted to remove loose paint, dirt, grease, exhaust residue and rust. The engineers prepare the requirements and then work with the contractor to ensure that all the surfaces to be painted have been adequately prepared and those that should not be blasted or painted are carefully protected.

When painting the dresser you'll want to lay down a drop sheet to keep dust and paint splatters from getting all over the floor. When painting a bridge, the work area needs to be contained to prevent blasting abrasives and dust from falling onto passing cars and being released into the atmosphere. One of the big sources of airborne pollution and respiratory illness is something called 'fugitive dust.' It's that big cloud that follows a tractor when it's cultivating a dry field or a car drives down an unpaved road. The engineers again work closely with the contractor to enclose the work area and contain the dust and fumes that come from the preparation and paint application.

When it's time to apply the paint, the engineers make sure the paint components are properly mixed and applied in the right weather conditions. They check the thickness of the paint, ensure that nothing contaminates the surface between coats and watch that the right amount of time - not too much, not too little - is left between applying subsequent coats of paint.

Not all steel bridges are painted, though. Many newer ones are made from a particular type of steel that's designed to naturally weather. The surface is treated at the mill with water mist to initiate the weathering process and develop a patina that naturally protects the steel underneath. But salt spray from the roadway can damage this surface. While they don't need to be painted, these bridges need a good bath on a regular basis and the engineers work with the contractor to ensure the pressure spraying is done correctly and the same kinds of environmental and safety precautions are taken.

So why are virtually all the highway bridges we see painted that particular shade of sage green? Back in 1931, a steel suspension bridge was built across the Willamette River in Portland, Oregon. The work of engineer David Steinman, the bridge was designed to enhance the local environment and evoke the towering evergreens in the region. Steinman insisted that the bridge be painted a natural green. So pleased with the result, Steinman, who designed bridges across the country, used the color on all his subsequent bridges and it became the unofficial, yet highly-popular shade we see all over the country to this day.