

Cleaning Brazed Parts – Mike Brown

I was facing the prospect of brazing together a number of spring hangers for my ongoing (forever!) Hunslett project. One thing that always bothers me about brazing, particularly small or intricate parts, is cleaning off the horrible black scale that forms when the steel is heated to red hot.

As it happened I had been de-rusting a couple of small items recently using a chemical solution. This solution is made up of some commercial powder mixed with water. The stuff was called *Hydrate 80* from a company called *Bilt-Hamber*. I got hold of some of this after reading a review in *Practical Classics* magazine. To quote the company blurb - "*Hydrate 80 provides powerful protection to rusted steel surfaces. The electrochemical function stabilises existing corrosion by converting the iron oxides into a protective metal complex. It also combines with surface moisture and oxygen depriving the corrosion process of the conditions it requires. Paints and coatings applied to a hydrate 80 treated surface demonstrate amazing improvements in long-term performance*". I have used this stuff a couple of times and it seems to work well.

Anyway I was thinking about my de-scaling problem and then it suddenly occurred to me that the black coating after heating is just an oxide of iron, more or less rust (Dennis may have something to say about this though). Maybe the Hydrate 80 would work on scale too. A quick test heating a short steel rod to red hot, letting it cool down and then dipping it in some solution for half an hour showed that it did indeed do the job a treat, and I proceed with the spring hangers.



A nasty black spring hanger after brazing



Hanger soaking in Hydrate 80



A nice clean hanger ready to paint



The full set cleaned up

As you can see in the photos, a very clean result was obtained. Although the finish is clean and all the scale is removed, the resulting finish is not exactly bright steel; the surface has a light grey slightly matt finish (presumably the protective coating). The longer the part is in the solution the deeper the grey colour.

Personally, I will definitely clean up brazed parts this way again in the future.

N.B. there are many such de rusting materials available, I am sure that most of them will do the job much the same.