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Reverse Electrolysis (Read 334 times)

Scott Sanders
Moderator



I'll look for iron just about anywhere

Posts: 1300

Reverse Electrolysis

Nov 4th, 2011, 11:25pm

OK.....I'm going to move this discussion on "Reverse Electrolysis" from our discussion on the Savery Tea Kettle on the "Dark Side" to the cleaning section. Here goes, hope I don't ramble too much. As we were discussing cleaning the inside of a tea kettle it was suggested to use the "reverse electrolysis" method. I didn't say much about it at the time, because I didn't have the time to say what I wanted to. Actually, reverse electrolysis is probably the wrong term for doing what we were talking about. I know what Roger was saying, but it might have been the wrong term. It was suggested to put the solution inside the kettle and use reverse electro, but it really would not be reverse electro. I would still want to clean the inside of the kettle.....so rust would go from the iron to the sacrificial piece.....I'm not going to get into trying to keep anode and cathode straight, so I would still put the black lead on the iron and the red lead on the sacrificial piece placed inside the solution inside the kettle. The only thing that is reversed is where the solution is as compared to a normal electrolysis.....solution in barrel, iron in solution in barrel. I would keep the leads the same, and would expect the inside of the iron to be cleaned. This was also discussed to some extent in the "See Perry's Barrels Here" thread in the cleaning "sticky" section. We talked about putting a piece of stainless inside a pot or kettle, without it touching the iron, inside the electro barrel and connecting the two pieces (the barrel or sacrificial piece, and the piece inside the pot) to clean both the inside and the outside at the same time.

NOW, on to reverse electrolysis.....We have discussed this in the past, and it was usually referred to when talking about cleaning the sacrificial piece or pieces in an electrolysis system. If your sacrificial piece gets cruddy, whether it be chunks of iron or a stainless steel barrel, it was suggested to take an old broken piece of cast iron or some scrap steel and hang it in your barrel as though you were going to clean it. Only this time "REVERSE" your battery charger leads. This time put the red on the piece hanging in the cleaning position and put the black on your sacrificial connection. Now, when you turn on the battery charger, the rust will come off your sacrificial piece and accumulate on the junk piece hanging in the barrel thus reversing the electrolysis process.

I think I'll leave it at that and if anyone else has anything to add or correct, feel free to jump in. Hope this helps some.

Scott

Curtis Wilford

Re: Reverse Electrolysis

Reply #1 - Nov 5th, 2011, 12:03am

I have done it in a large pot. I used a bucket to move the liquid from my main barrel, got it brim full using shims to level it. I put two 2x4's across then the sacrifice piece. red to sacrifice piece, black to pot. When I thought it was enough I bailed the water back over and scrubbed the tub. Worked as I expected.

Now before you go asking for my before and after pix, I suck in the photojournalism dept and don't have any.

WAGS: Heartbeat of Cast Iron Cookware Collecting

Posts: 244

Cheryl Watson
Forum Administrator
WAGS member



Re: Reverse Electrolysis

Reply #2 - Nov 5th, 2011, 12:17am

Thank you Scott for clarifying! 😊

My plan so far is to wrap a steel can with vinyl mesh, and place inside the teakettle, hooking the 'covered' can to the positive rod with a jumper wire.... Now this is just 'the plan'... haven't attempted it yet.

The one thing I have been pondering is whether to disconnect my plates, and clean the inside of the kettle only, rather than keeping positive flow running thru the plates to clean the outside at the same time.

So anyone who has successfully used this technique to derust the inside of a teakettle....How did you accomplish it????

The HersheyPark Kitty

Posts: 4009

Scott Sanders
Moderator



Re: Reverse Electrolysis

Reply #3 - Nov 5th, 2011, 12:26am

Cheryl.....look here and notice reply #'s 43, 49,50,51,&52. I think this is what you are talking about. <http://www.griswoldandwagner.com/cgi-bin/yabb/YaBB.pl?num=1131658808/40#40> If it were me, I'd try to clean both the inside and the outside at the same time.

I'll look for iron

just about anywhere

Scott

Posts: 1300

Cheryl Watson
Forum Administrator
WAGS member
★★★★★

The HersheyPark
Kitty

Posts: 4009

Re: Reverse Electrolysis

Reply #4 - Nov 5th, 2011, 12:45am

Ah Hah... that's where I saw it!!

Just couldn't remember which thread! 😊

I got the roll of vinyl fencing over a month ago, but with the temps dropping so early, probably will be Spring until I get around to it!

The electro and lye baths are NOT liking the cool/cold weather.....

Where the hang is GLOBAL WARMING when I need it???? 😊

Re: Reverse Electrolysis

Reply #5 - Nov 7th, 2011, 1:12am

Cheryl, I clean pots as you described. I pick up all different sizes of stainless pots and cups at yard sales. I have a 100 gallon electro tank lined with stainless. I hang the DO by the bail and set a mesh lined pot inside it . I use a brass weight to keep the inner pot from shifting. I use a jumper wire to the positive side. I run 20 amp for 5 - 6 hours. It works good inside and out.

Re: Reverse Electrolysis

Reply #6 - Nov 7th, 2011, 1:32am

Thanks Larry...

Good Ideas!!! I now have put together several "jumper" wires for my odd sized pieces.

So I can use them to jump either from the neg or positive.

I am using a two plate system for now.... and having to get innovative with it!

I had not thought of picking up stainless pots and pans and cups, for the interior anodes! Very neat idea! I certainly have been to enough auctions lately!! Added to list!

I also run at 20 AMPS.... although considering pushing it up to 65, just to try to 'heat' things up in the electro!!

The early COLD weather is wreaking havoc with my electro and lye baths!!!

Now the weather forecast just said a WARM spell is coming... I hope so!!

I'm ready to move to Texas... or Florida, or anywhere South!!!

Hey Claudia!! Ya got room for a boarder!???? 😊

I am online shopping for a kerosene heater for my detached Garage... as we speak!!(which will then be able to heat the house during the next Power Outage!!)

Re: Reverse Electrolysis

Reply #7 - Nov 7th, 2011, 11:11am

Let me give you one more ideal for cleaning the inside of a Tea Kettle.

 [tpot.jpg](#)

Larry Brewer
WAGS member
★★★★★

WAGS: Heartbeat of
Cast Iron Cookware
Collecting

Cheryl Watson
Forum Administrator
WAGS member
★★★★★

The HersheyPark
Kitty

Posts: 4009

Sam Roberts
WAGS member
★★★★★
Lodge what? !!!
Posts: 3672



Cheryl Watson
Forum Administrator
WAGS member
★★★★★

The HersheyPark
Kitty

Posts: 4009

 **Re: Reverse Electrolysis**

Reply #8 - Nov 7th, 2011, 12:02pm

[Quote from Sam Roberts on Nov 7th, 2011, 11:11am:](#)

Let me give you one more ideal for cleaning the inside of a Tea Kettle.

Now HOW COOL is that!?!?!?

Custom PVC feet and spacer!!! 😊😊😊

Aha... gotta call the machine shop... bet I can come up with some scraps of 28 ga. SS sheet from them in small sizes! Now I am assuming that you used SS, sure looks like it... but any thin steel sheeting would work!

I luv your pictures!!

Sam Roberts
WAGS member
★★★★★

Lodge what? !!!

Posts: 3672

 **Re: Reverse Electrolysis**
Reply #9 - Nov 7th, 2011, 1:18pm

[Quote from Cheryl Watson on Nov 7th, 2011, 12:02pm:](#)

[Quote from Sam Roberts on Nov 7th, 2011, 11:11am:](#)

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I luv your pictures!!

Yes I used SS and fastened it together with rivets.

Greg Stahl
Forum Administrator
WAGS member
★★★★★

Ole Scratch

Posts: 13454

 **Re: Reverse Electrolysis**

Reply #10 - Nov 7th, 2011, 3:05pm

Sam,

that is slick!

Scott Sanders
Moderator
★★★★★

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Posts: 1300

 **Re: Reverse Electrolysis**

Reply #11 - Nov 7th, 2011, 3:59pm

I also pick up assorted sizes of stainless steel cups, small pots, utensils, etc. when I find them. I haven't utilized any of them yet, but they are there waiting for me to be creative. I guess it is a good time to bring the "Durnk Dutchman" back again. This is Ray's creation. Looks like something I'd dream up.... 😊😊

<http://www.griswoldandwagner.com/cgi-bin/yabb/YaBB.pl?num=1293581609/6#6>

I like to see the different ideas that you all are coming up with to solve this problem. Some good ideas here.

Scott

Dwayne Henson
WAGS member
★★★★★

When the people fear
their government,
there is

Posts: 4254

 **Re: Reverse Electrolysis**

Reply #12 - Nov 16th, 2011, 9:55am

Being lazy and cheap, I have used something like Sam's, except I used an empty tin can wrapped in vinyl mesh. The bottom lid was left in place. I placed the tin can wrapped in mesh in the pot, filled the tin can to keep it from floating, then filled the pot, and hooked up the leads. About the time the tin can was used up, the pot was clean. At the hospital I work at I can get a variety of different sized tin cans from the kitchen, they're just throwing them out.