

Recopper armature electrolysis. (part 1/4)

Contributed by REV Scale
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Disclaimer:

If you use this process to recopper you armatures I am not responsible for any loss or harm this process can cause you. You use this on you own risk. Please don't contact me if you loose a armature due to this process.

Intro:

This how-to will give you the possibility to recopper you armature using electrolysis.

You can find more technical information on this here:

Purification of copper -> BBC electrolysis

ELECTROLYSIS -> Electrolysis

Before you start read the above information to give more technical background on this process work. I have been using electrolysis for about two years with great results. I will be placing this how to in 4 parts.

Part1 -> How to prepare Copper sulphate solution.

Part 2 -> Prepare the armature

Part 3 -> The process electrolysis

Part 4 -> Complete armature

Part 1

Here is list of materials you to have before you start.

1 lt. distilled water
 200 - 230 gr. Copper sulphate

30 ml. sulfuric acid' 84%

You can find the Copper sulphate normally in agriculture centers as it gets used for agriculture. It has a form of blue crystals (see picture). The sulfuric acid you should be able to find in electrical shops as it gets used for lead batteries. If you can not find the 84% don't worry. Just add more sulfuric acid until you get the right percent.

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Get yourself a plastic or glass bottle that can hold about 2 liters and mix the 1lt. distilled water with the 30ml sulfuric acid. Add more sulfuric acid if you don't have 84% until you have about 84 %. Now add the 200 - 230 gr. Copper sulphate (crystals) with the mix of distilled water and sulfuric acid. Now you will need to leave mixture for a couple day so that the Copper sulphate dissolves. You will end up with a blue liquid(see picture). Now you have you Copper sulphate solution which we will use in Part 3.

Now you need to get yourself a 2 Volt battery.

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I am using a old glow plug battery (see picture) that has 2 Volt and 5 amps. Get some copper wire and copper junction tubing. You can find the copper junction tubing in any hardware store as it gets used for water tubes in your house. I have found that these tubes are almost pure copper and leave very little anode slime in the Copper sulphate solution

during the process. You could use any other type copper.

Now the 2 Volt will be too much and will not deposit the copper correctly to the com. Now you need to get a resistor to lower the voltage of the battery to about 0.2 - 0.5 volt. I found that 0,27 Ω - 0,37 gives the best result.

Now we are going to test the Copper sulphate solution.

Get yourself a square plastic container (Tupperware)

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This is the end of part one. (pictures will follow)