

DOSCH DESIGN

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Dosch Textures: ***Texture Aging Kit – Tutorial***

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Texture Aging

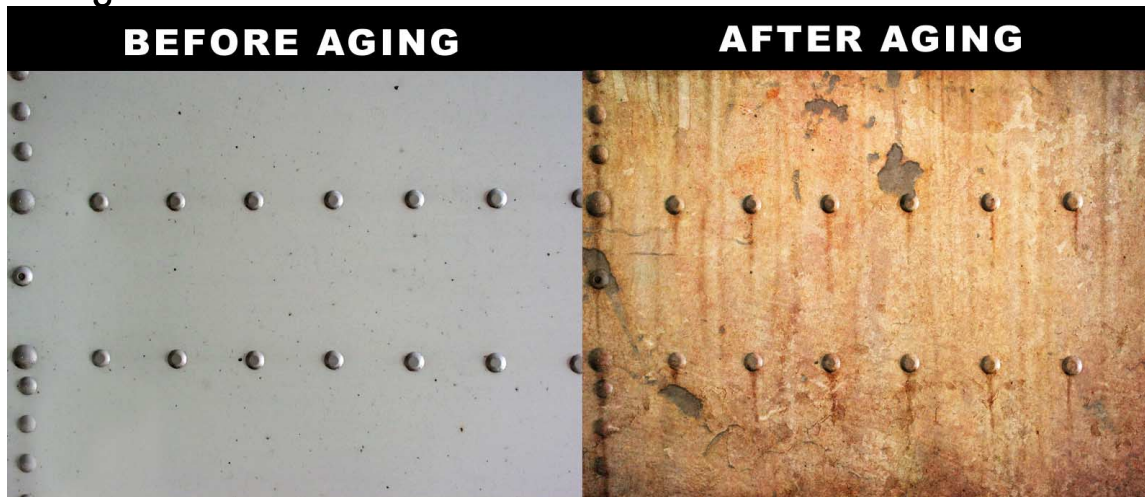
In this tutorial we'll be aging a relatively clean and new metal texture to appear like the same metal roughly 500 years into the future in a post nuclear holocaust period. The metal is part of an industrial building that is now in ruins. After 500 years of exposure to the elements, including 100+ mph desert winds, countless chemicals from warfare and the scorching heat of the sun that hovers over the now barren landscape, this metal is definitely in bad shape. It has become brittle and shows so much wear from being sand blasted by the powerful winds that is now more closely resembles stucco than metal. There is also some residual rust from the ever so rare thunderstorm and healthy amount of oxidation. Basically it's a real mess but definitely a very cool looking texture.

Finding a texture like this in reality would have been nearly impossible. The only place to find it would be in a desert environment and old rusted buildings aren't exactly common landmarks in deserts.



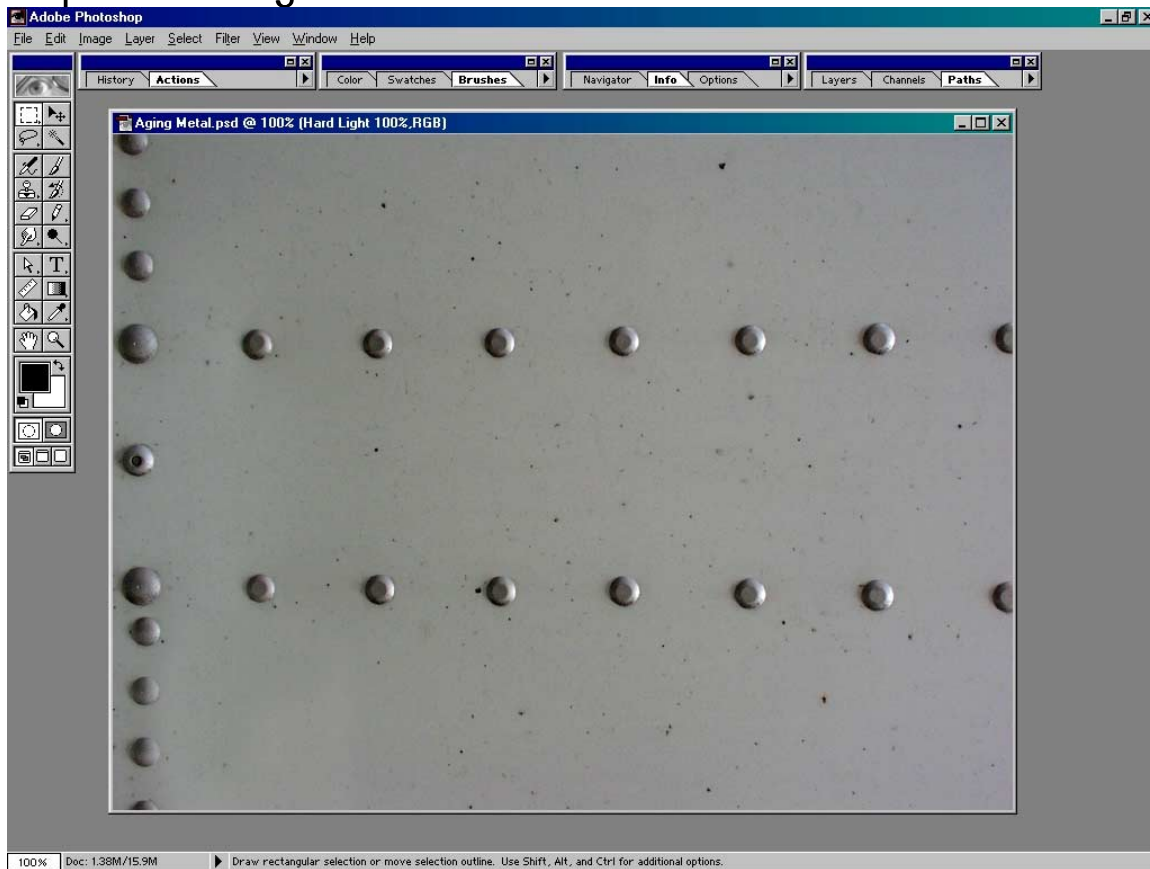
The samples used in this tutorial are NOT seamless-tileable. If you want to use seamless-tileable textures in your 3D-application, please have a look on [Dosch Textures: Texture Aging Kit](#)

An aged texture



As you can see the difference is significant, yet the aged texture retains some of the original attributes of the original texture. In fact, if you look closely you'll see the black flecks of the original texture in the new aged version. It's the retention of these subtle details that makes the aged texture look like a natural progression of the original.

Step 1: The original metal texture



First we'll start by loading the "Metal.jpg" image. This is the original texture. I chose this texture because it has the distinguishing rivets that will really help drive home the effectiveness of the Texture Aging technique. Now we Duplicate the layer and name the copy "Metal." We'll need this layer above the background so we can properly apply the layer blends.

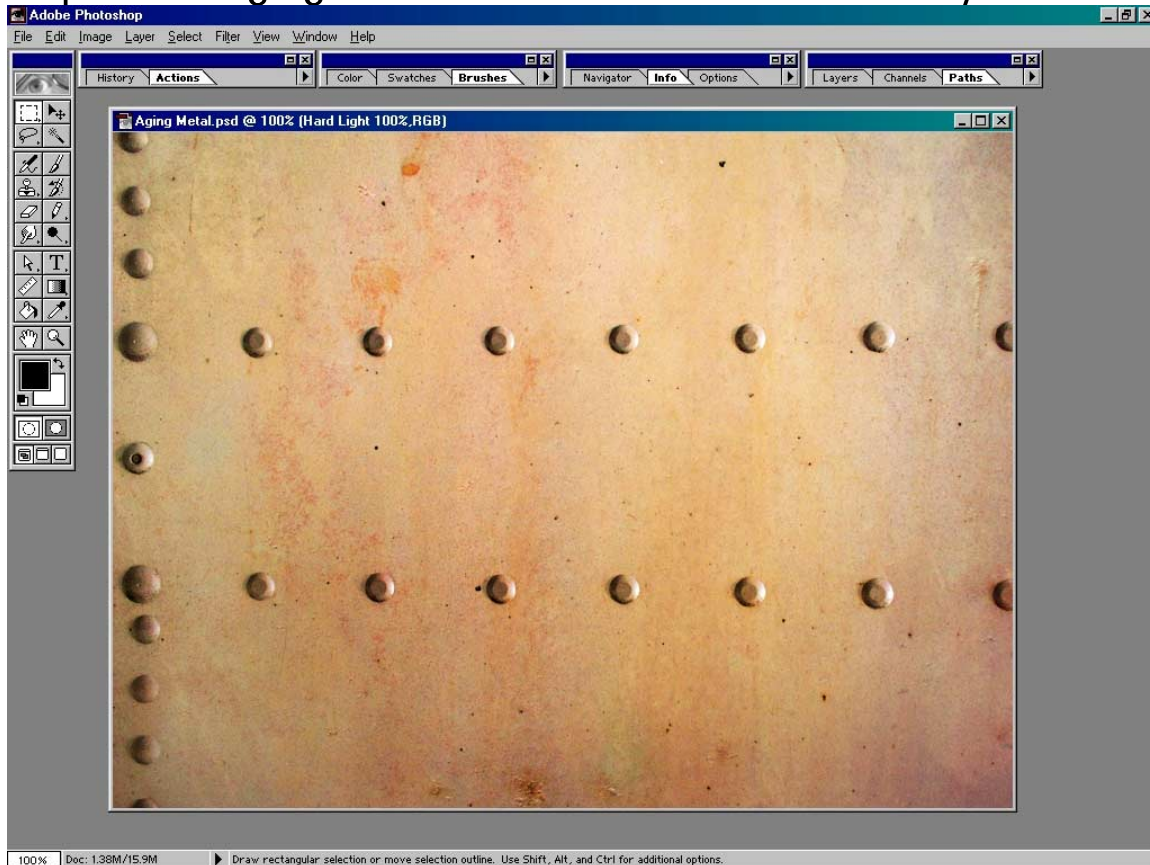
Step 2: Adding texture detail with layer blends



Now we load the "RedMetal.jpg" image. Select All and Copy the image. Then we click on the Background layer of the "Metal" file and Paste the image to create a new layer above the Background layer. Next we name the layer "RedMetal."

To combine the layers we make the Metal layer blend Hard Light with an Opacity of 100%. Notice how all the texture details of the "RedMetal" texture are now rendered onto our clean metal. In an instant we have aged the clean metal texture with a great deal of detail. Of course we aren't finished yet, we still need to age the texture more.

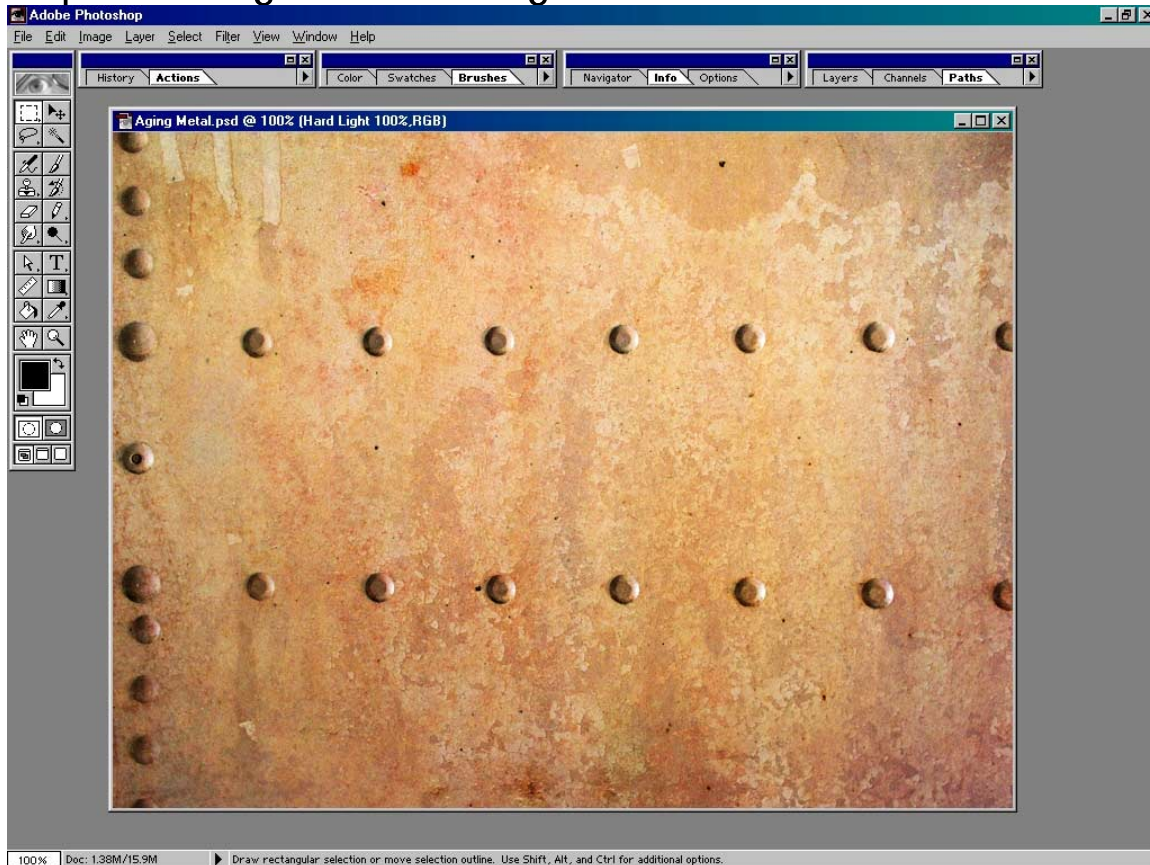
Step 3: Changing the color and texture with a new layer



Next we load the "LimeMetal.jpg" image. Then copy it to a new layer above the "RedMetal" layer, naming it "LimeMetal." This texture is actually a piece of cement that was under a water drain on an old building. The aging metal of the roof was bleeding a lovely green color that stained the cement under the drain.

Finally we change the layer blend to Overlay. The metal texture now becomes a more natural yellow color and gains a few more chaotic details, particularly some larger dark blotches and raised pimples. While we could stop here with this wonderful rusted metal texture we need to age it even more if we want it to follow our storyline.

Step 4: Adding surface flaking



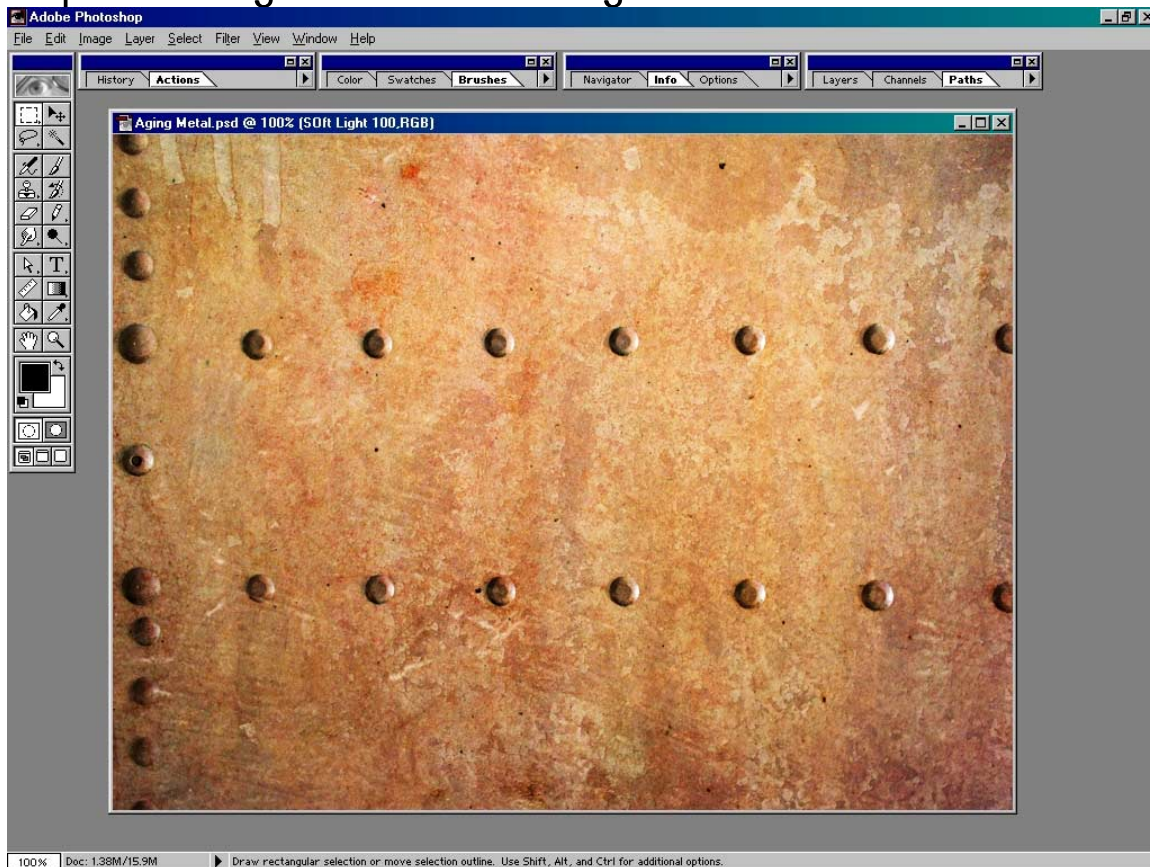
First we load the "Corrosion.jpg" image. Then copy it to a new layer above the "LimeMetal" layer and name the new layer "Corrosion." This is a picture of an old piece of sheet metal. It was exposed to the elements so it rusted quite a bit.

Next we change the layer blend to Soft Light. This layer blend adds the nice detail of the metal surface flaking away. It's not a real overt detail but one that is necessary. We need several layers of destruction on the metal for it to be realistic. It needs to show both severe damage caused by years of aging and newer subtle damage, which is the start of something more serious.

We also gained some rather interesting gouges in the upper left corner of the image. It looks like a heavy metal object was making contact with the metal after it started to flake on the surface.

Speaking of gouges, it would stand to reason we would see more scarring of the metal since it's suffered 500 years of exposure to a variety of elements, not to mention nuclear warfare, so let's add more gouges by blending yet another picture.

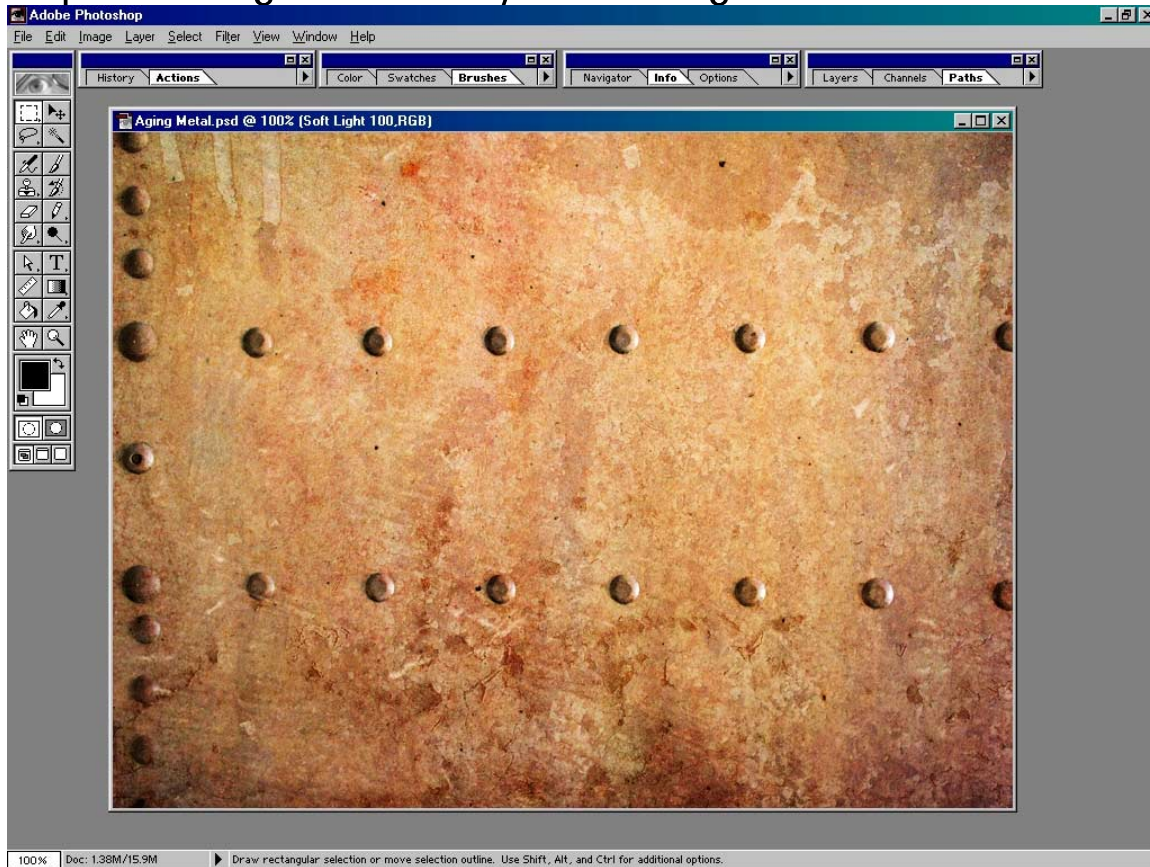
Step 5: Adding additional scarring



First we load the "ScarredMetal.jpg" image. Then copy it to a new layer above the "Metal" layer, naming it "ScarredMetal." This new layer is added above the "Metal" layer so the effects are more prominent. This texture is a piece of iron. From the damage it looks like it was used as a platform for working on metal items.

Now we change the layer blend to Soft Light, which renders a variety of scars on the metal texture. It also adds richness to the texture by saturating its colors. I'd say we probably have enough scarring to do the job. Next we can focus on the final and most interesting detail, which is the flaking. We already have one subtle flaking layer but we need to add a few more to show the progressive aging of the metal.

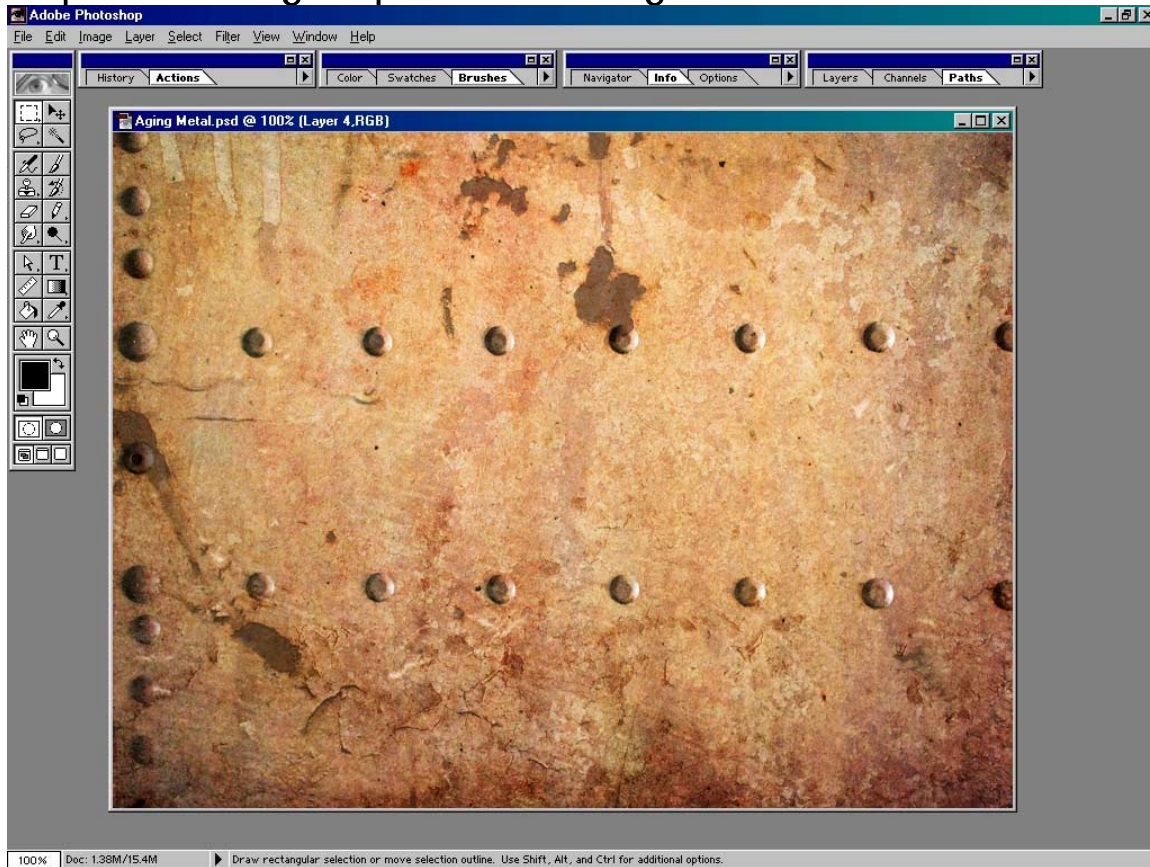
Step 6: Adding a second layer of flaking



We start by loading the "FlakedMetal.jpg". Then copy it to a new layer above the "ScarredMetal" layer and name the new layer "FlakedMetal."

Finally we change the layer blend to Soft Light, which renders a flaked area down the middle of the texture. It also adds richness to the lower portion of the texture. This newly flaked area looks great but we have one more layer of flaking to add, the most severe. We're going to add some large areas where the metal has completely flaked away revealing the metal beneath.

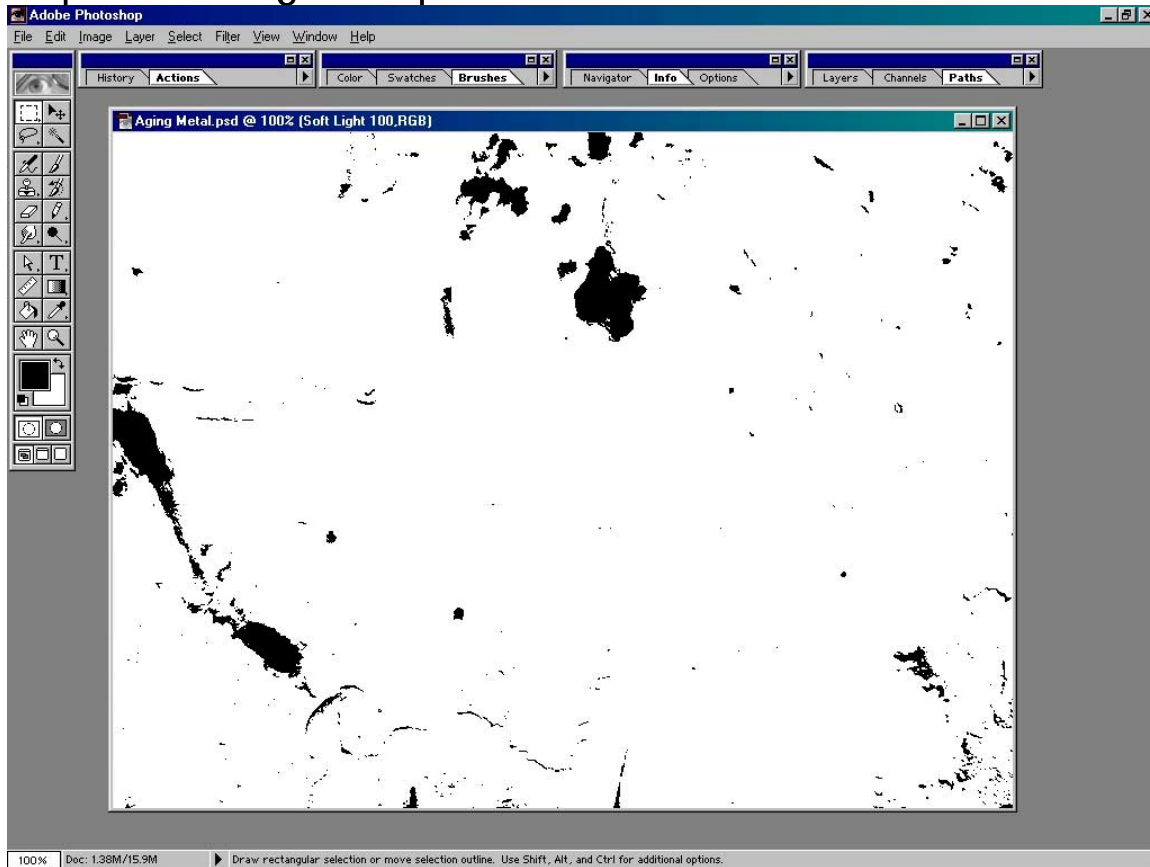
Step 7: Creating major metal flaking



First we load the “ChippedPaint.jpg” image. Then copy it to a new layer above the “FlakedMetal” and name the new layer “ChippedPaint.” The texture has some great paint flaking, which when combined with our metal texture will appear like flaking metal.

Next we change the layer blend to Hard Light with an Opacity of 60%. This renders the major flaked areas to the metal texture and also de-saturates the image giving it the appearance of oxidation, which is a definite plus. There is one problem though. The texture in the exposed areas of the major flaking is the wrong color and style. We want this area to be more of a gray metal since the metal beneath is aluminum and won’t age as fast as the steel sheet metal over it. To change the metal in the exposed areas we’ll be using another aging texture, but first we must define the exposed area to fill with the new metal.

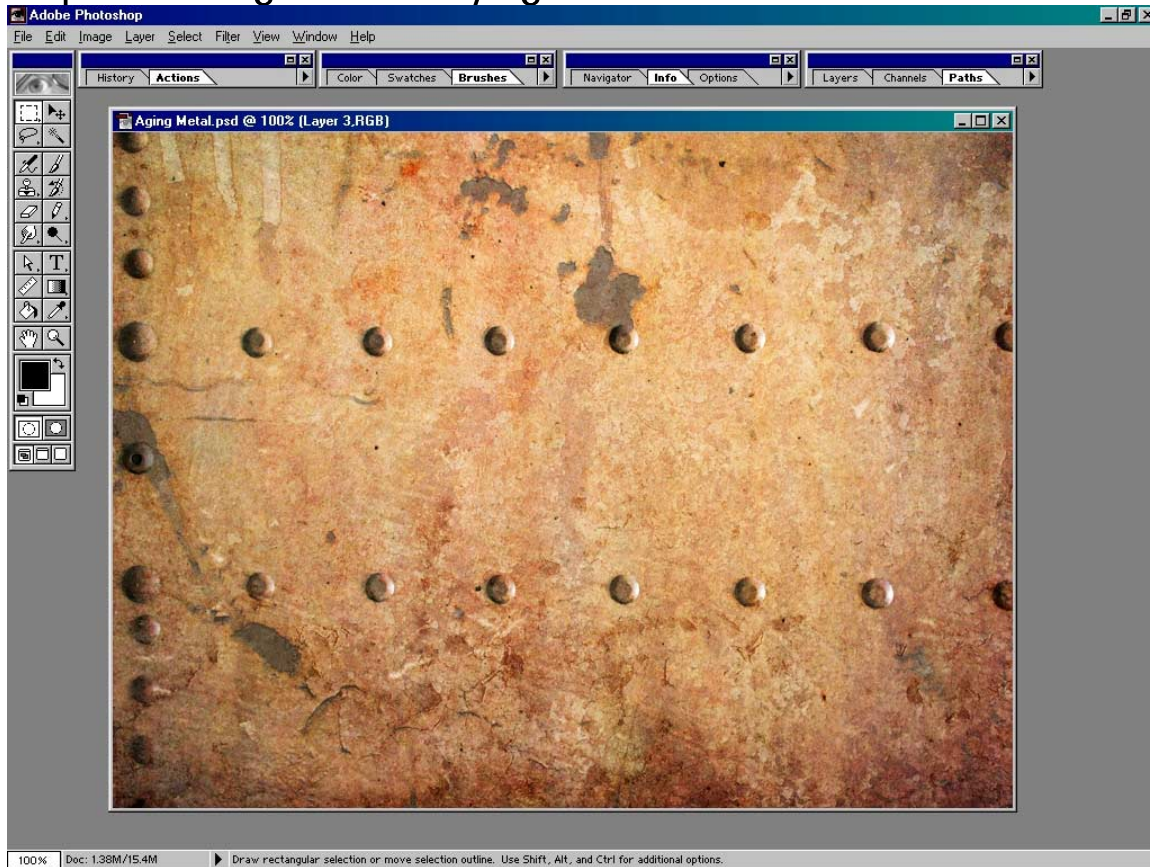
Step 8: Defining the exposed metal selection



First we make a copy of the “ChippedPaint” layer and name it “Exposed Metal.” Now we de-saturate the layer, then set the Brightness to 25 and the Contrast to 100, which isolates the exposed areas as black spots on a white background.

Next we Select All and Copy. Then switch to the Channels tab and add a new channel called “Exposed Metal”, then Paste the selection into this channel. This is the selection we’ll be using to fill the exposed areas.

Step 9: Adding the underlying metal

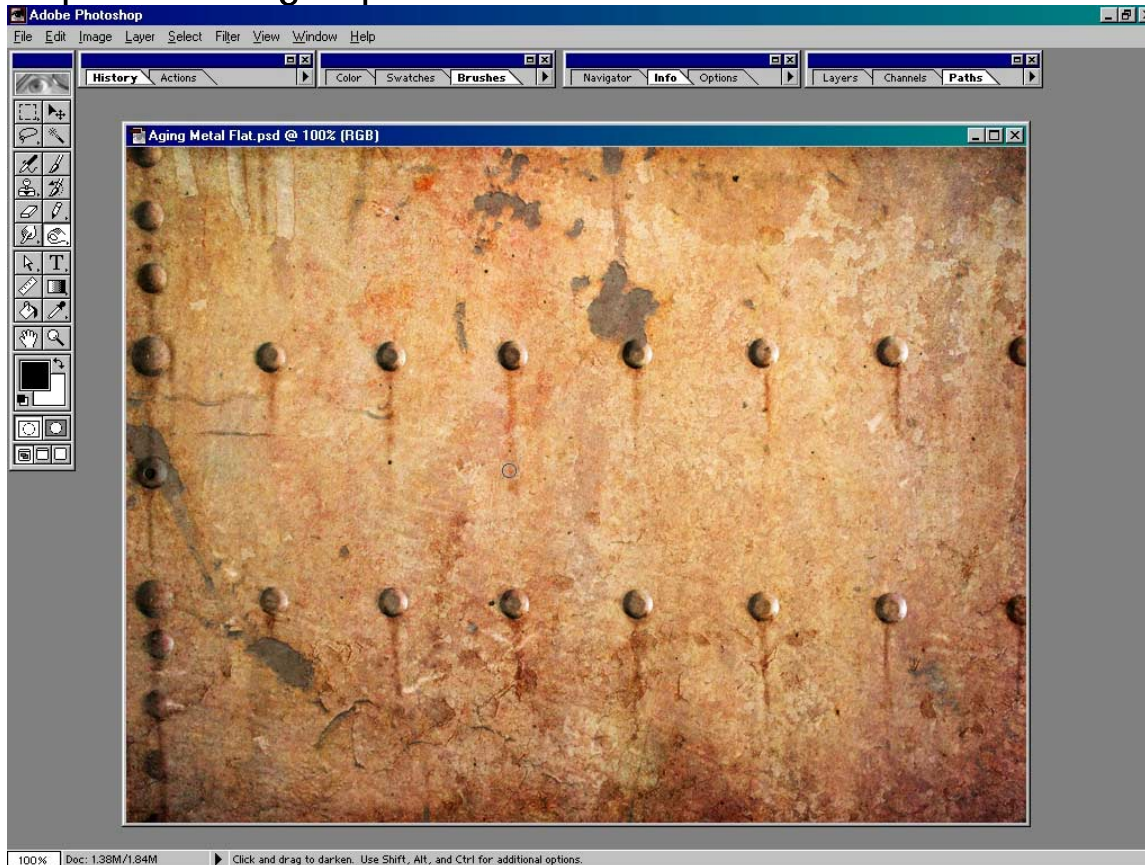


Now we load the "ScratchedMetal.jpg" image. Then copy it to a new layer above the "ChippedPaint" layer, naming it "ScratchedMetal." This texture is part of a relatively new piece of sheet metal. To finish the underlying metal we load the "ExposedMetal" selection and then press Delete to remove the selected area. This leaves us with gray metal pieces over the exposed areas. Now we set the layer blend to Color with an Opacity of 40%, which changes the exposed metal to a soft gray metal texture.

The texture is definitely looking very aged. It's come a long way from the relatively clean texture at the start, but still holds the major details of the original texture such as the rivets and dark flecks. By combining a few textures we've managed to age the metal 500 years, but we aren't finished yet. We need to add some custom details to make the texture realistic. For example, after 500 years of exposure we'd expect to see some rust stains dripping down underneath the rivets. We'd also see oxidation streaks and of course we'd see dust/sand covering the metal. This is where we grab our brush and paint some specific custom details. Fortunately with the great foundation of color we already have this is a snap.

Before we paint the details we first need to save the file as "Aged Metal", and then flatten Layers so all the detail is on a single editable layer.

Step 10: Adding drip stains

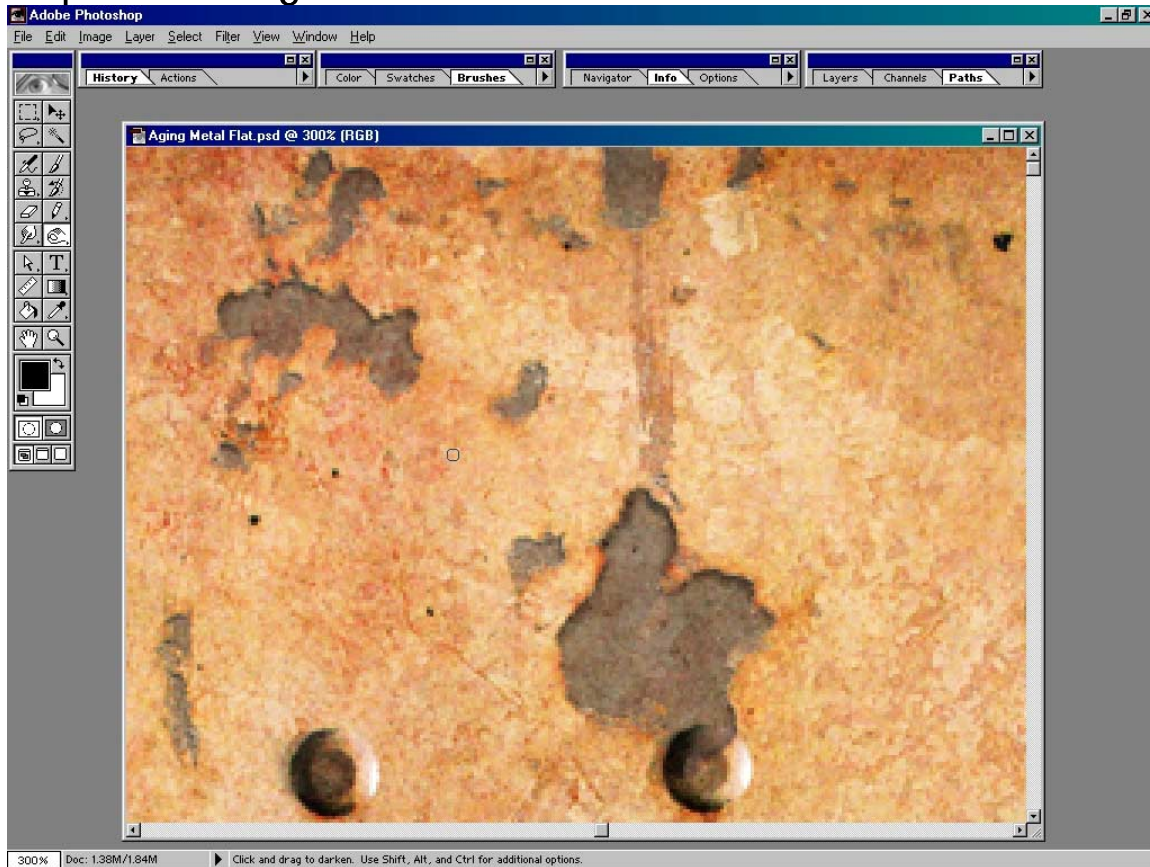


Adding dripping rust is actually extremely simple. The foundation color is already present. We just need to take advantage of it. For the rust to appear realistic it needs to have chaotic color variations, which could take plenty of time to paint by hand but since the aged metal already has this chaos we can use it for the rust. First we select the Burn tool, and then we set the Brush Size to 13 pixels and the Exposure to 20%. Then we paint strokes underneath the rivets.

Notice how the color becomes a rust tone. All we are doing is saturating the color that is already present, which is basically what happens in reality. As we paint the strokes under the rivets on the left we see the color is a darker shade of brown, which is the predominant color in this region. Burning the rust using the actual image colors ensures the rust we create looks natural.

With the dripping rust now complete we're ready to lift the foreground metal off the background in the exposed areas. Right now the surface metal is a bit too close.

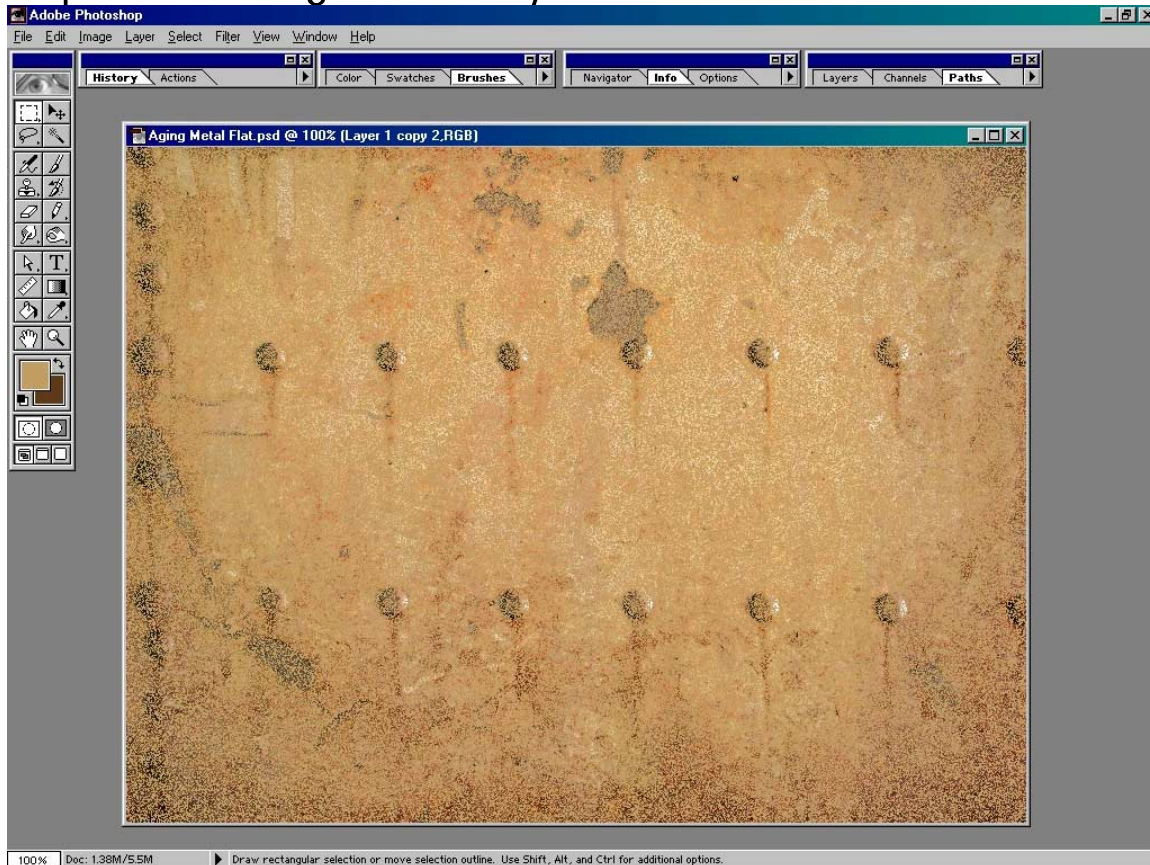
Step 11: Raising the surface metal



To raise the surface metal we set the Brush Size to 5 pixels and paint strokes under the top edge of the exposed areas. Burning this area darkens it, creating a shadow that lifts the surface metal off the underlying metal.

Okay, we're now finished with the Burn tool. Our next step is to add dust over the entire image.

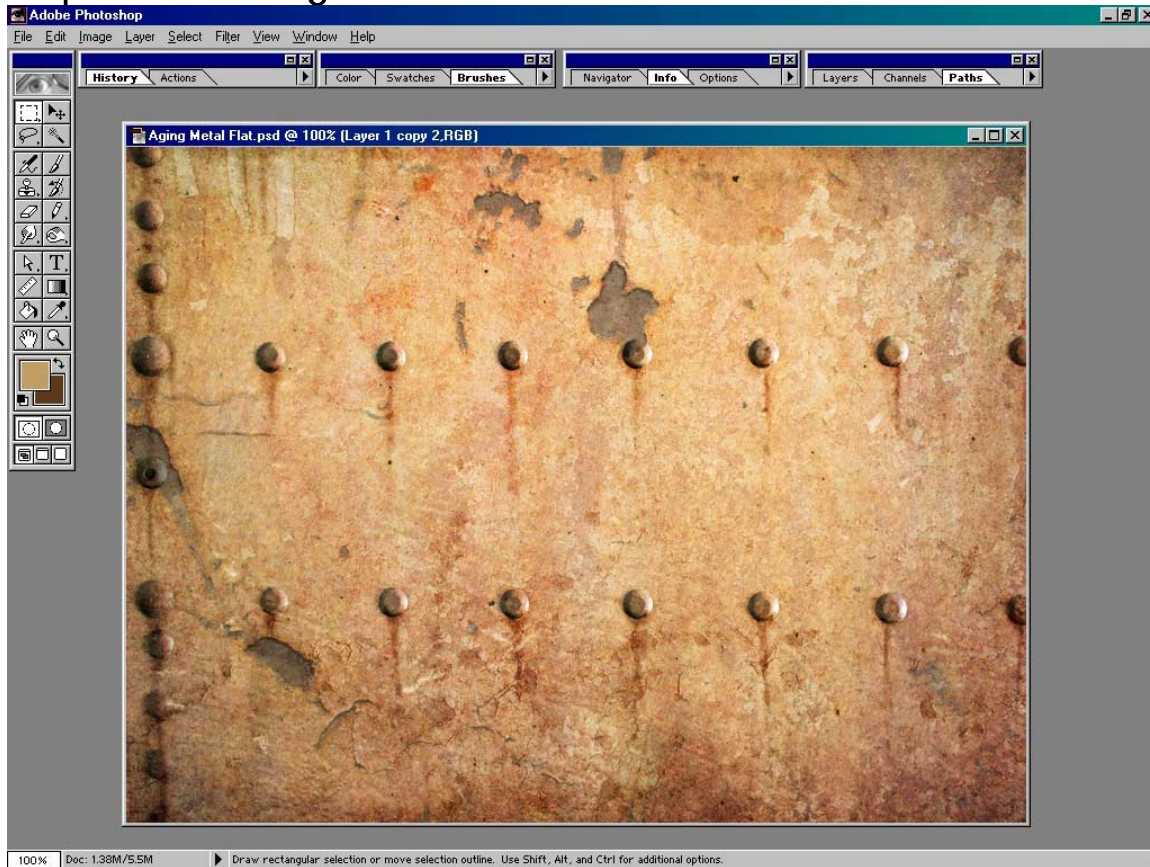
Step 12: Creating the dust layer



First we add a new layer called "Dust", then we set the layer blend to Dissolve and the Opacity to 51. Now we need to soften the dust speckles but first we need to make the layer editable. To make the dissolve editable we'll need to render the layer so we have the dissolved pixels but on a Normal Layer Blend. First we add a new layer, then we Merge Visible to combine the layers. Now the layer is editable.

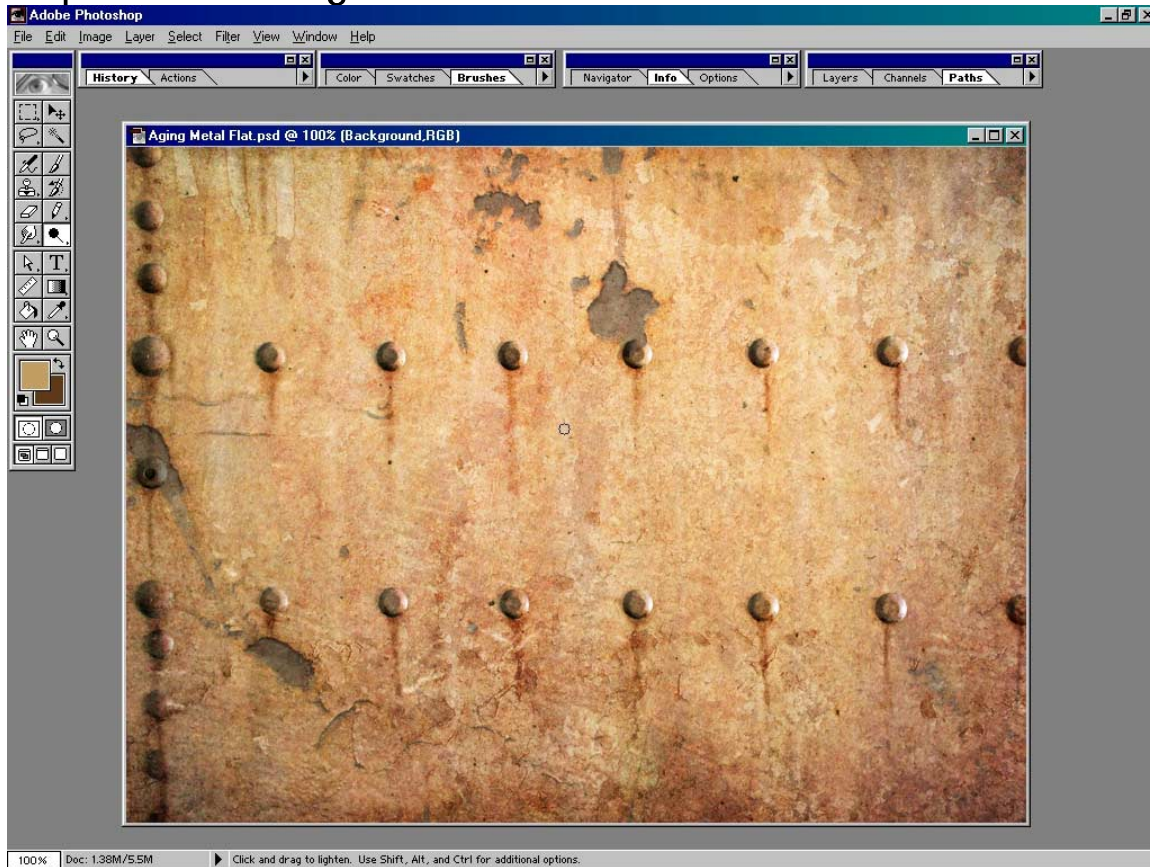
Finally we apply a Gaussian Blur with a Radius of .4, which softens the dust speckles.

Step 13: Blending the dust



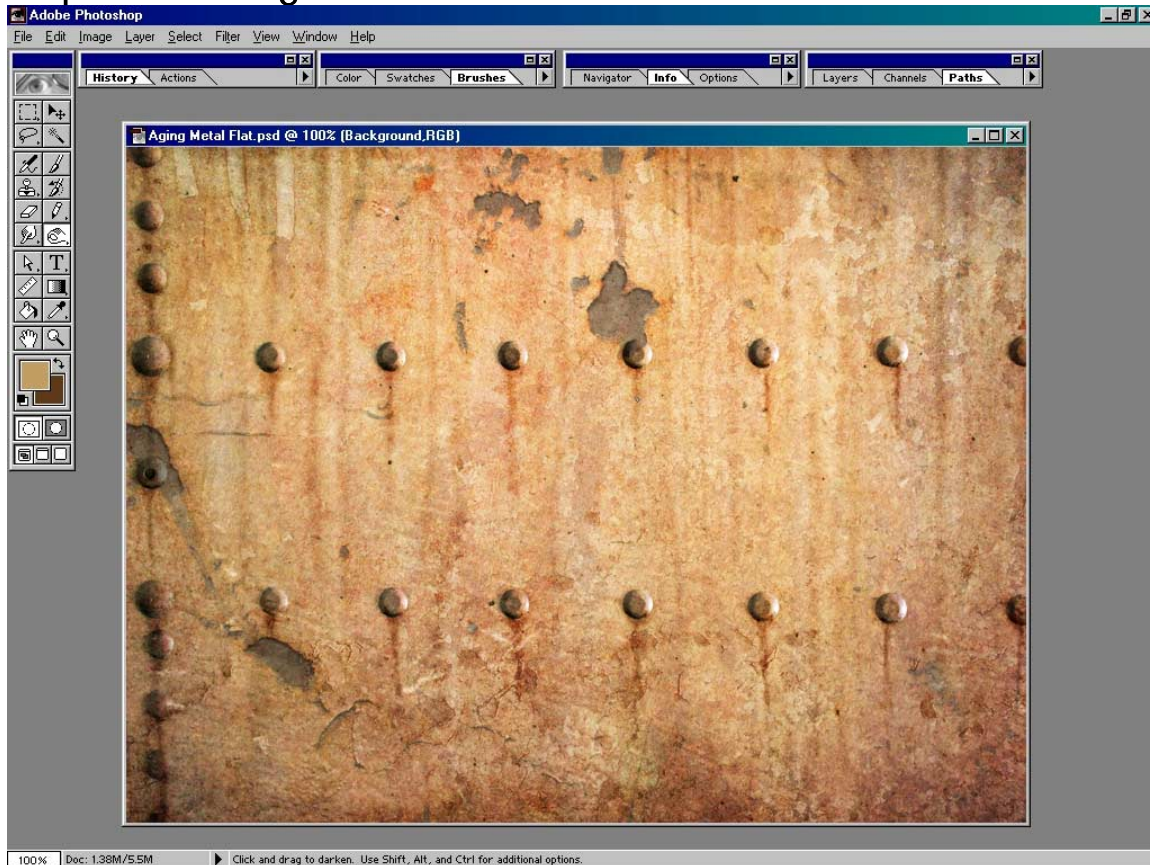
Next we set the layer blend to Screen and the Opacity to 30% to blend the dust with the metal below. We now have a subtle dust layer covering the metal, though it covers it too completely. In reality the spots under the rivets will have less dust so we need to remove the dust in this area.

Step 14: Removing dust under the rivets



We start by selecting the Eraser tool with a Brush Size of 13 pixels and a Pressure of 100%. Then we paint strokes directly under the rivets to remove the dust. It's a subtle effect but after all we are striving for photo-realism. Speaking of which we have one last critical detail to add, which is the oxidation streaks that would run vertically down the texture.

Step 15: Adding oxidation streaks



To add the oxidation streaks we select the Dodge tool with a Brush Size of 13 pixels and a Pressure of 85%. Then we paint vertical strokes down from the top of the image, stopping at random points before we reach the bottom of the image. This creates some very natural light spots where the oxidation has occurred.

After seeing our final image it looks like we could add some rust and grease streaks coming down from the top of the image. To create them we simply select the Burn tool with the current settings and paint vertical strokes down from the top of the image, stopping at random points before we reach the bottom of the image.

That does it for our aged metal texture. All that is left now is to save the file, then Save a Copy as "AgedMetalC.jpg." To create the bump map we simply convert the image to Grayscale and Save a Copy as "AgedMetalB.jpg." In this case the color texture is the perfect foundation for the bump texture.

Wrap Up






Well, that's quite a change in the texture. We've gone from a relatively clean metal to one that has suffered the ravages of time and most of it accomplished without painting much at all. The key to successful texture creation is to find as many logical and efficient shortcuts as you can. When faced with the task of texturing an entire environment you don't want to spend a great deal of time on any one element, yet you want them all to be a masterpiece. A little experimentation goes a long way.







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The high-resolution, seamlessly tileable multi-layer textures (which contain all relevant shader maps for the material properties like color, depth of texture, reflection, surface structure etc.) give surfaces a very realistic appearance. The textures "are a must" for every serious 3D-designer and can be used in the areas of 3D-animation, architectural visualization, product design, video and TV-graphics, as well as medical visualization.

The multi-layer textures can readily be used in most 3D-animation and CAD applications: 3D Studio MAX, LightWave3D, Cinema4D, Maya, Softimage, solidThinking, SolidWorks, AutoCAD, Caligari Truespace, AW Studio Tools, Strata3D, FormZ, Electric Image, Pixels:3D, Animation-Master and many more.

Prod. Code	Product
 DT-AE	<p>Dosch Textures: Animal & Creature Eyes M T</p> <p>contains more than 100 high-resolution multi-layer eye-textures of animals and creatures. Create eyes for bears, cats, cougars, crocodiles, fishes, frogs, gorillas, dinosaurs, aliens, dead-eyes, demons, monsters and many more.</p>
 DT-AW	<p>New Dosch Textures: Animated Water A D P T</p> <p>25 animated and loopable water textures. The product contains textures for varied water appearances like ocean, swimming-pool, rivers, water-falls, plus calm and stormy, as well as deep and shallow waters.</p>
 DT-BD	<p>Dosch Textures: Broadcast-Design V2.0 T</p> <p>High-resolution textures (most textures have a resolution of 2048x2048 pixel, some even up to 4096x4096 pixel) which have been specifically created for use on TV, in video titles, for logo-animation, movie-trailers and -last but not least- business TV. The 250 multi-layer textures can be an immense time-saver, and surely make for a spectacular look of your animations.</p>
 DT-CM	<p>Dosch Textures: Construction Materials A P T</p> <p>contains more than 200 very highly detailed surfaces of construction-materials, which can be used in architectural visualization as well as technical illustrations, industrial design and interior design.</p>
 DT-HE	<p>Dosch Textures: Human Eyes M T</p> <p>contains more than 70 high-resolution textures for human eyes. Light-effects, reflections and coloration are represented extremely realistically. The high-resolution multi-layer textures are great for close-ups and detailed illustrations as well as impressive reflection-effects in animations.</p>

Prod. Code	Product
 <p data-bbox="326 430 391 457">DT-ID</p>	<p data-bbox="448 254 964 281">Dosch Textures: <i>Industrial-Design</i> V2.0 A P T</p> <p data-bbox="448 285 1299 386">offers a wide variety of very highly detailed and realistically looking textures for industrial design and product-visualization. The materials in this library include: wood, fabric, leather, varnished surfaces, plastic, rubber, chrome, glass, china, paper, brushed metal and more. More than 200 high-quality multi-layer textures.</p>
 <p data-bbox="326 665 391 693">DT-MV</p>	<p data-bbox="448 489 1149 516">Dosch Textures: <i>Medical Visualization</i> V2.0 M</p> <p data-bbox="448 520 1243 621">Contains textures for the depiction of organs, ligaments, bones – everything that needs to be visualized for internal medicine applications. Use this product for medical animations, educational material, presentations of research results, and for the creation of informative illustrations.</p>
 <p data-bbox="326 900 391 928">DT-PN</p>	<p data-bbox="448 724 1224 751">Dosch Textures: <i>Plants & Nature</i> A M T</p> <p data-bbox="448 756 1205 810">offers a wide variety of very highly detailed and realistically looking surfaces. Create photo-realistic visualizations of plants, trees, flowers and many more natural surfaces.</p>
 <p data-bbox="326 1136 391 1163">DT-RE</p>	<p data-bbox="448 959 883 987">Dosch Textures: <i>Reflection-Maps</i> A P T</p> <p data-bbox="448 991 1325 1071">contains over 150 high-resolution reflection-maps. The product features maps for skies, underwater scenes, forests, interiors, night-skies and many atmospheric maps to create spectacular effects on your surface. Use them to increase reflection-effects in your artwork.</p>
 <p data-bbox="326 1371 391 1398">DT-RM</p>	<p data-bbox="448 1194 1188 1222">Dosch Textures: <i>Rust & Metal</i> V2.0 A T</p> <p data-bbox="448 1226 1299 1306">More than 200 high-quality multi-layer textures covering all aspects of rust and metal in your graphics. Included are all kinds of metal (silver, gold, aluminum, copper and many more), aged metals, rust, brushed metals and painted as well as extremely damaged metals.</p>
 <p data-bbox="326 1606 391 1633">DT-SN</p>	<p data-bbox="448 1430 792 1457">Dosch Textures: <i>Skin</i> V2.0 M T</p> <p data-bbox="448 1461 1299 1516">More than 200 high-quality textures for character-design. Included are skin textures for humans, fantasy- and science-fiction creatures, reptiles, animals and more.</p>

Prod. Code	Product
 DT-SE	Dosch Textures: <i>Special-Effects</i> V2.0 T allows you to create breathtaking animations, impressive movie-sequences or spectacular Science-Fiction-scenes. It contains more than 200 textures for fantastic transparent materials, plasma-, fire- and explosion-effects as well as glowing and shining materials. Loopable, seamless tileable animated textures are also included.
 DT-SC	Dosch Textures: <i>Stone & Concrete</i> V2.0 A T contains more than 200 textures of stone and concrete. Included are bricks, concrete, plaster, floor-surfaces, natural stones, mossy surfaces, aged stone-surfaces, washed stone and more.

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