



## GUMOIL: first experiences Luc Tourwé

### **Introduction** (J. Kevers)

Gumoil – although related to ink techniques since it resorts to manual application of more or less pasty pigments (oil paints in this case), but also to gum dichromate since it uses this medium to receive the pigments – is not as old a technique as these, since it was developed by Karl P. Koenig from 1991 onwards. However, it remains very much in their spirit, considering the required craftsmanship, the interpretation possibilities it leaves to the artist endowed with sufficient manual dexterity, and the uniqueness of the works.

Karl Koenig, who got a Ph.D. degree in clinical psychology and was a professor at the Universities of Stanford and New Mexico, became interested in the old photographic techniques in 1989 ; he developed the technique which he named gumoil in 1991. He passed away in 2012.

Gumoil is a contact printing technique where a positive transparency is exposed on paper coated with a layer of dichromate-sensitized, unpigmented gum. Exposure is done in the sun or under a UV exposure unit. The result is a fairly weak negative image of a yellow-olive colour that will be developed in running water. In the light areas, corresponding to the shadows of the original, the unhardened gum is removed, allowing the oil paint to stick there on the paper. The entire surface is first coated with oil paint, which is then removed from the gum to which it does not adhere by wiping it off with household paper. After this initial pigmentation, additional layers of hardened gum can be removed successively in appropriate baths, and so successive layers of paints be applied with different tones or colours to make polychrome images.

It often takes several weeks to achieve the final image, which gives the printer time to think about future interventions (masking, bleaching, application of colour with a brush...) to obtain the final image.

While the photographic origin usually remains recognizable, the combination of gum arabic, pigments, bleaching baths and the texture of the watercolour paper used as a support make it an image that is deeply transformed at the discretion of the printer.

### **First experiences** (L. Tourwé)

Gumoil is not to be confused with gum dichromate , although it uses the same materials. The advantage of gumoil is that when multi-coating, one does not have to take paper shrinking into account.

The method I follow is based on Karl P. Koenig's one, but adapted. It is rather well described by Terri Cappichi and also used by Anna Ostanina (but less well described).

### For this method the following is needed:

- An arabic gum solution, to be made by yourself or ready-made.  
I use the ready-made solution 100% GOM 14 (Baumé).
- A dichromate solution.  
I use a 13% potassium dichromate solution (saturated solution).
- Watercolor paper of min. 300 gr, such as Fabriano Artistico, Arches Platine, ....  
Results on Arches Platine are slightly better than on Fabriano, on Hahnemüle Platinum Rag the results are not good for the time being. No extra sizing on paper.
- Transparency  
I work with a digital negative (well a positive here, actually) with a curve.  
The latter is not fully satisfactory yet.
- Oil paint  
I'm currently using Maimeri Ivory black, and Maimeri Van Dijck brown.

### Procedure:

The sensitive layer is made by mixing arabic gum with the potassium dichromate solution. One part of dichromate for 2.5 or 3 parts of gum. But this ratio seems to depend on the paper used and can vary between 1.5 and 3.5.

This mixture is coated under subdued or red inactinic light on watercolor paper, including a border all around that is 2 to 4 cm larger than the transparent positive. Spread the layer as evenly as possible with a brush.

Leave to dry in the dark; once the layer is dry it becomes sensitive to light, so keep it in the dark until exposed.

Positive + sensitive paper are contact printed under UV light.

After exposure develop in water for 15 to 30 minutes, or until all the dichromate is rinsed away. This leaves a very faint image on the paper. It is a delicate step as the gum swells and becomes sensitive to scratches, so don't squeegee or dab the paper before drying, as this could damage the layer.

Dry paper thoroughly.

Then the entire image is coated with oil paint, which is left to dry for 5 to 10 minutes, before being washed off with water and a sponge. The image will then appear. In areas where lots of light came through (light values), the gum will prevent ink from settling; where little light came through (black shadows), the gum is gone and the paint can stick to the paper. In the grey areas, the gum layer is thinner; the paint adheres a little less.

Until now I only used the single layer method.

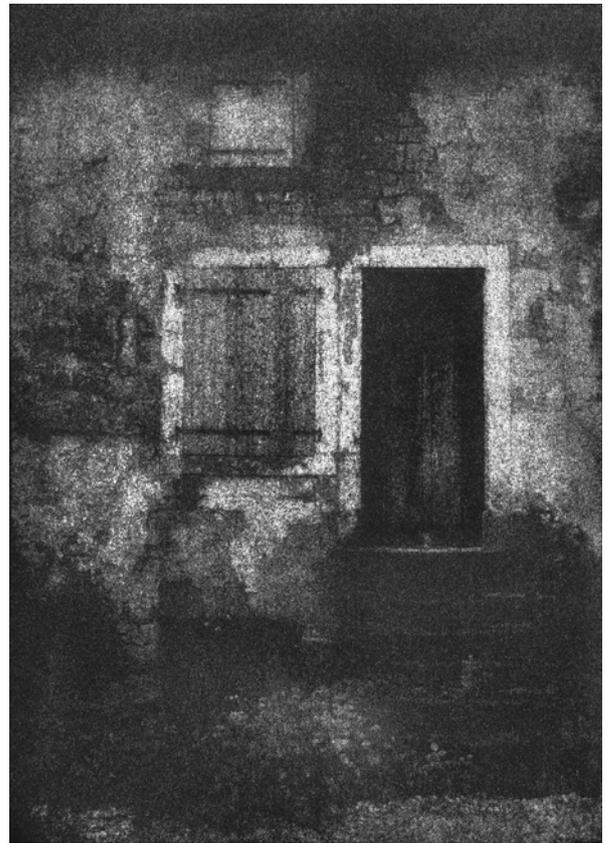
Work can be continued by soaking the image in water and then for about 20 seconds in a chlorine solution, 1 part household chlorine with 4 to 8 parts water (differs from author to author). Additional parts of the gum will dissolve, the image will be etched further, and areas made receptive to paint of the same or a different color. There is no need for additional exposure, nor shrinkage to worry about.

I haven't worked this out myself yet. Continuing to work on this will be my Covid-19 activity...

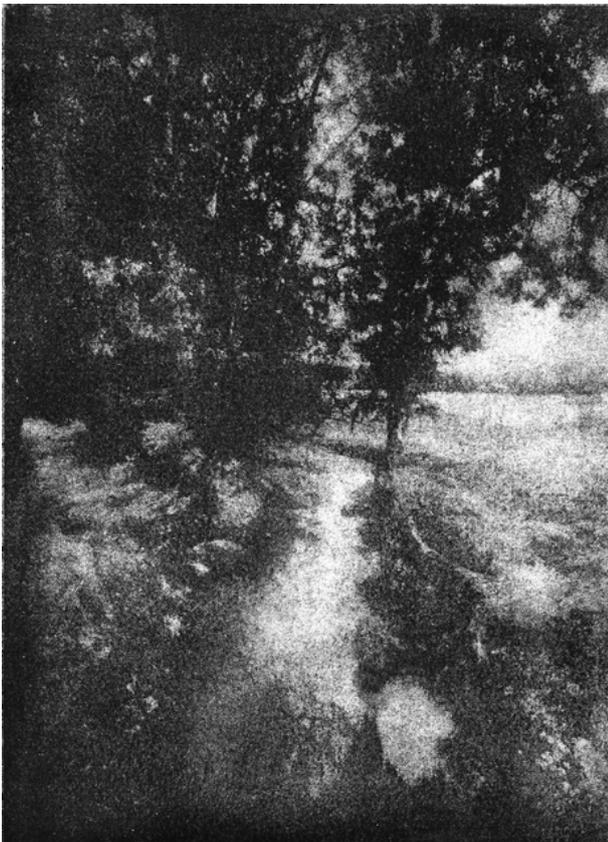
Below, my first results.



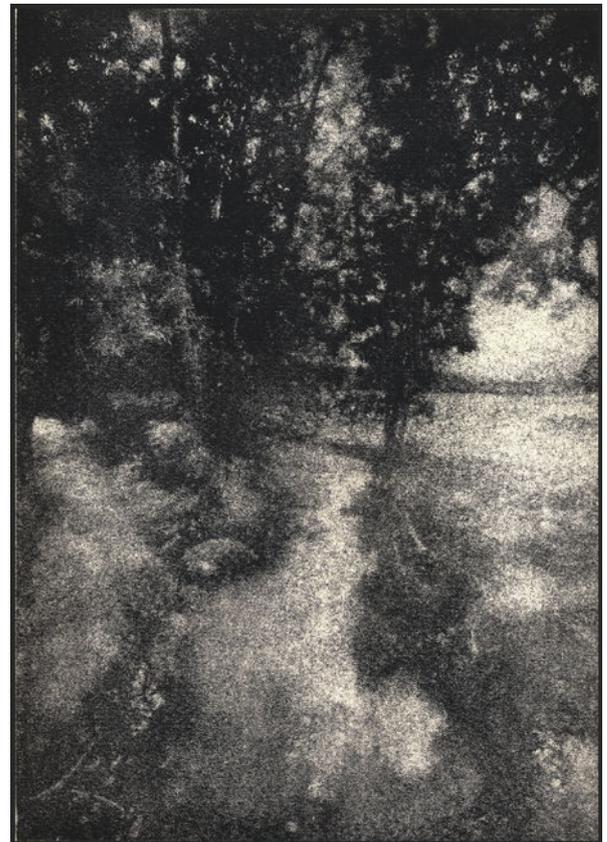
Deur - Maimeri Van Dijck bruin



Deur 2 - Maimeri Ivory black



Vogezen - Maimeri Ivory black



Vogezen 2 - Maimeri Van Dijck bruin

**Luc Tourwé – June 4th, 2020**  
(translation J. Kevers)