

# Let's try roof tile rubbing !

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## Rubbing is:

- A traditional recording technique handed down from ancient times;
- Copying using no photos; and,
- Useful for representing the convex/concave surface of a material to be copied in a clearly understandable way.

## Types

- ① Dry rubbing (Copying onto *Mino-gami* paper using wax-type ink, fine art charcoal, etc.)
- ② Wet rubbing (Using paper, *sumi* ink, brush, cotton, pad, and water)

## Wet rubbing tools

- Paper: Shuen paper (rice paper)
- Stick paper tightly to the material (by using towel, cotton, gauze, etc.)
- Apply *sumi* ink. Prepare three sizes of pads (large, medium, and small) made of cotton wrapped in two silk cloths in the shape of a paper doll. Then apply *sumi* ink to the rubbing pads.



**Do not apply *sumi* ink directly to the target surface !**

## Making rubbing (Wet rubbing)

- ★ Carefully observe the patterns of the items to be recorded before making a rubbed copy.
- ★ Try to illustrate or take notes about the surface before covering it with paper.

- 1 Clean the surface to be rubbed (Remove dirt and dust).
- 2 Fix the item to be rubbed onto the top of a desk.
- 3 Dab the surface with a sheet of paper cut a size larger than the target surface.  
Mist water onto paper with atomizer, and moisten the paper evenly. (①)  
Place the paper tightly to the material, and push out air bubbles under the paper with a towel and gauze (In case surface is rough or very uneven, take care not to break the paper). (②)
- 4 Dry until the surface of the paper becomes slightly whitish grey. (Please note that if the paper becomes too dry, it tends to separate from the surface, and that if the paper is too wet, the *sumi* ink tends to bleed.) (③)
- 5 Prepare two pads. Apply *sumi* ink to a pad, and rub the ink on the pad against the other pad. (④)  
You must apply *Sumi* ink to the paper in order from larger areas to smaller areas of the surface. Accordingly, you use the pads in order from the larger one to the smaller one. Dab the paper using perpendicular and light movements to apply the *Sumi* ink (Do not apply it diagonally over the paper, or in such a manner as to press the pad down on the paper, and smear it.) (⑤)
- 6 Before the paper dries, eliminate ink irregularity in light and shade to finish the rubbing. (Do not deepen *Sumi* ink more than necessary.) (⑥)



- ① Place a sheet of paper on the surface. Mist water onto paper with atomizer, and moisten the paper evenly



- ② Stick the paper tightly to the material by pushing out air bubbles under the paper outward from the centre of the material.



- ③ Depth irregularity in light and shade is eliminated on the whole. The surface of the paper becomes slightly whitish grey. At this step, it becomes possible to apply *Sumi* ink to the paper.



- ④ Rub together two pads to adjust the depth of *Sumi* ink when applying it to the paper.



- ⑤ Apply *Sumi* ink to the paper in order from larger to smaller areas of the surface. Accordingly, you should use the pads in order from larger to smaller. To apply *Sumi* ink, dab in a perpendicular and light motion on the paper. Otherwise, it could become too deep.



- ⑥ Finish the rubbing before the paper is fully dry by eliminating the depth irregularity of the *Sumi* ink.

## What is rubbing?

Rubbing is a traditional technique for copying shapes or patterns of vessels and inscriptions on stone monuments, by rubbing the surface of uneven vessels including relief patterns and inscriptions on stone monuments, and applying *sumi* ink to the paper.

The shape, characters, or patterns of salient portions of a vessel appear in *Sumi* ink colour on the paper covering the vessels. Meanwhile, grooved portions to which no ink adheres remain white on the paper. As a result, this traditional copying technique creates clear images of characters and patterns in shades of black and white. These rubbed copies are also referred to as “*ishizuri*”, “*uchihon*”, or “*touhon*” in Japanese.

In China, Korea, and Japan, rubbed copies of tombstones/stone monuments have been used as calligraphic copybooks and works of admiration. The rubbing technique has, together with epigraphy, developed in line with improvements in the quality of paper, *sumi* ink, and the cloths of pads.

There are two types of rubbing techniques; wet rubbing and dry rubbing. Wet rubbing enables reproduction of almost full-scale images of delicate incised lines as well as worn characters and patterns. In addition, with the mechanism of light and shade (i.e. black and white) depending on the adhesion quantity of *sumi* ink, wet rubbing can clearly and observably reproduce subtle variations of the convex/concave surface in an object which is rather difficult to reproduce through photography. Thus, it can be said that wet rubbing is a recording technique useful and indispensable to documentation of archaeological artefacts.

Wet rubbing is frequently used for documentation of earthenware, tiles, patterns of bronze ware, stone monuments, Buddhist temple bells, coins, inscriptions of swords, stone Buddhas, etc. In many cases, patterns or characters illegible to the naked eye are reproduced legibly through the rubbed copies thus made.

Special care should be taken to “Never apply *sumi* ink directly to a target material like fish rubbing”. Even if *sumi* ink is indirectly applied to a paper, attention should be paid that *sumi* ink could bleed onto the material through damp paper. Basically, it is an ironclad rule that rubbing of materials which could be stained/damaged should be strictly prohibited.

## Dry rubbing

This is a technique to copy vessels by fitting a firm and flexible paper such as *Mino-gami* paper to the surface of a target material, and rubbing the paper with wax-type ink (sold as an over-the-counter ink with the brand name “Bell Contour Ink”) , fine art charcoal, etc. A simpler version of this method sometimes uses carbon paper for rubbing. However, this method is not only unsuited for detailed representations, but is liable to damage vessels. In many cases, this method is inevitably not adopted for archaeological materials, except in cases of stone monuments that have a flat surface.

## Wet rubbing

### ● Tools

**Papers:** Shuen paper (rice paper) is used. This Chinese paper is far more expandable than Japanese traditional papers. The papers for use should be selected depending on the target surface (thick papers should be used for items that have a rough surface like stone monuments; and, thin papers should be used for detailed patterns).

**Rubbing *sumi* ink:** Although well ground Indian ink cake is mainly used in China, in Japan, oil ink (a creamy ink produced by boiling pine ink in olive oil) is generally used. This oil ink is available on the market as a rubbing *sumi* ink immersed into moxa (Japanese mugwort), and packed in a container.

**Pads:** A tool to which ink adheres. Press the pads down to the paper. A pad is composed of a raw cotton (absorbent cotton is not suitable) wrapped in a close-woven and highly water-absorbing cloth like red silk. Large and small pads should be selected for use depending on fineness of patterns.

### ● Making a rubbed copy

1. **Stretching watercolour paper:** Cut a sheet of Shuen paper (rice paper) a size larger than the target. Then, place the paper on the surface of the material. Moisten the paper with the atomizer, and adhere the paper tightly to the material by using a brush, towel, gauze, etc. (As the paper is expandable while it remains wet, push the dry towel or gauze into the concave portions of the surface to ensure contact between the paper and the surface.). Push air bubbles that have formed between the paper and the surface outward from the centre (Specifically, smooth out the paper by scraping the wrinkles at the periphery of the material as much as possible). **The operations made up to this stage make or break the quality of a rubbed copy.**

Incidentally, for materials with a flat surface like stone monuments, move a rolled towel over the surface of the Chinese drawing paper like a lint roller. By so doing, the paper tends to adhere to the surface. In China, to make a rubbed copy of a stone monument, *sumi* ink is applied onto the surface of the paper using a brush; but this method is quite difficult, because it frequently makes the paper surface fluffy and rough. If the paper is broken, it is patched up with another piece of paper.

2. **Applying *sumi* ink:** Apply ink to the paper with a pad immediately before the paper is fully dried. **Please note that paper that is too wet could cause ink bleed and consequent stains on the surface, and paper that is too dry could cause its position to change and consequently result in deviated imprints of the surface.** Selectively use two pads. Rub a pad, to which ink is applied, against the other pad, in order to equalize the depth of the ink. Quickly and lightly dab the paper

with the pad. Apply a light coat of *Sumi* ink at the beginning, while equalizing the ink depth without light and shade or spots. **Note that light colour can be deepened; but once deepened, it cannot be lightened again.**

- 3. Lining:** After completing the application of the ink, slowly remove the Chinese drawing paper from the surface, being careful that it does not tear. Then wrap the drawing paper in highly water-absorbent paper such as newspaper, in order to smooth out and dry the Shuen paper (rice paper). For storage, dry the Shuen paper for several days (if the rubbing is not cured long enough after completing the rubbed copy, ink bleed could occur). After that, prepare a glass plate, and apply water onto it. Place the rubbed copy face-down on a glass plate, and smooth out the copy. Brush extremely thin glue to the surface of the copy, and adhere a piece of lining paper (any of the Japanese traditional papers including Shuen paper (rice paper), *shoji*-screen paper, or coloured construction paper will do). Sweep the lining paper surface with a dry brush, in order to remove air bubbles from under the lining paper, and to ensure it adheres to the copy. After drying the lined copy, remove it from the glass plate.



**Rubbing tools**