Papermaking: The History and the Technique

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1. Introduction

Our oral presentation is about papermaking in traditional and modern way, the way we do it in our workshop and what does it serve for in restoration on paper. Restoration of paper is very complex and there are so many different types of objects that enter our workshop so we can never predict what is next problem that we are dealing with. The source of the video is original video filmed in Fabriano, where the students of our University were on outdoor education.

2. History

The first papermaking process was documented in China during the Eastern Han period (25–220 C.E.), traditionally attributed to the court official Ts'ai Lun. During the 8th century, Chinese papermaking spread to the Islamic world, where pulp mills and paper mills were used for money making. By the 11th century, papermaking was brought to medieval Europe, where it was refined with the earliest known paper mills utilizing waterwheels.

Fabriano, in Italy, itself was one of the earliest places in Europe to make high-quality paper on an industrial scale, starting in the 13th century, and the town even today has a reputation for fine watermarked paper. The reason for this location, which made Fabriano the most important paper production centre of Europe, is very
probably linked to the vicinity of Ancona, a port that was particularly open to trade with the Arab world.

3. Technique

In papermaking industry, there are two types of production: industrial and manual. Almost all paper is manufactured using industrial machinery, while handmade paper survives as a specialized craft and a medium for artistic expression. In our workshop at University, we make handmade paper with the purpose of restoring paper objects that are too damaged to make standard integrations, and also for making reconstructions in some cases. Today, we will explain the way we make paper pulp and the process of papermaking, in case we don't use commercial, expensive paper pulp.

Paper can have watermark. A watermark is an identifying image or pattern in paper that appears as various shades of lightness/darkness when viewed by transmitted light, caused by thickness or density variations in the paper. Watermarks were first introduced in Fabriano, Italy, in 1282. The earliest European watermarks may have had some religious significance, but the marks quickly assumed other purposes. Some were the personal marks of the paper maker, serving to identify their individual work. Watermarks were later used to identify sheet sizes, mill locations and paper furnish. Today they serve mostly to authenticate important documents such as banknotes and passports.

4. Papermaking

First, we put absorbing paper in water for 20 minutes to make it softer. Then, we add more water to make compact mixture of paper pulp. It can be coloured with any natural pigment. After colouring, we put it in blender to make smaller particles of paper pulp. With pressure, we eliminate the excess water. At the end, we put it on wire to dry. After drying it is ready to use. Official measure of paper weight is g / m². Now we will show you the way we make paper in our workshop.
We brought paper pulp in water which is ready to use and already mixed. First, we spread it in plastic container and put sieve made of wooden frame and wire into it. After immersing it, what is left on wire is our paper. Then, we put acid-free non-wove 100% polyester on it and press it with fingers to eliminate the excess of water. The paper that we made is not suitable for writing. It should be added layer of metil celulosa to gain writing characteristics and then pressed under weight to make it flat.

A little bit about using papermaking machine in restoration of paper... Several times we had an opportunity to reconstruct part of an object using papermaking machine, in cases where an object was too damaged and huge part was missing. Few examples...

5. Conclusion

Handmade paper is a stunning example of recycling at work. Paper can be decorated with flower petals, jute, wool, grass, straw etc. Fibres are visible. There are no chemicals used in the manufacture of our handmade paper. The paper is air dried, so no energy wastage.

Bibliography