Samayojan'20

Enameling Workshop Details

Instructors	Myriam Villiers and Dominique Villiers France
Coordinator	Pratisthit Lal Shrestha, Assist. Prof. Design Lab, Department of Mechanical Engineering, School of Engineering Kathmandu University, Dhulikhel
In Charge	In Charge Kirti Man Shakya, Faculty Design Studio Department of Art and Design, School of Arts, Kathmandu University, Hattiban
Participants	Dr. Ranjit Shrestha (School of Engineering) Dr. Suren Sujakhu (School of Engineering) Er. Sirapa Shrestha (School of Engineering) Er. Roshan Raj Mainali (School of Engineering) Er. Shashi Adhikari (School of Engineering) Mr. (School of Arts) Mr. (School of Arts) Ms. Aishwarya (School of Arts) Ms. Kriti (School of Arts) Ms. Ayesha (School of Arts)
Venue	School of Arts and Education, Kathmandu University, Hattiban
Duration	February 23, 2020 – March 1, 2020

Schedule

Date	Program	Place	Time
February 23, 2020	Inauguration	KUDoME, Dhulikhel	09:30 –
February 24, 2020	Practical Session	KUDAD, Hattiban	11:00 – 14:00
February 25, 2020	Day Off		
February 26, 2020			
February 27, 2020	Practical Session	KUDAD, Hattiban	11:00 – 14:00
February 28, 2020	Practical Session	KUDAD, Hattiban	11:00 – 14:00
February 29, 2020	Weekend		
March 1, 2020	Practical Session	KUDAD, Hattiban	09:00 – 16:00

Introduction

First enameled specimen was created in 1230 BC.

There are two types of enamels which are explained below:

1. **Jewellery Enamel**

This type of enamel, as suggested by its name, is used for things with ornamental value. It is shiny, transparent and also, expensive. Proportion of enamel ingredients and heating temperature can be altered to get an enamel of different property.

2. **Industrial Enamel**

This type of enamel is comparable to jewellery enamel except for the fact that it requires an additional ingredient – Aluminium. The use of this type of enamel began in Germany in 1840s during industrial revolution. Gold, silver, stones, etc. are some of the materials that can be enameled. Brass, on the other hand, cannot be enameled. This is due to the fact that Zinc content of brass vaporizes when heated to 800^0C – process required for enameling.

Procedure

Step 1. Preparation of the Metal Sheet to be Enameled

Clean the metal sheet with sand paper, sulphuric acid, nitric acid, white vinegar mixed with salt or detergent. If acid is used for cleaning purpose the ratio of water and acid should be 6:1. Also, the acid should be neutralized with the help of soda ash. The cleaned sheet should not be greased with hands because this might affect the application of enamel of the piece.

Step 2. Application of Flux and/or Enamel

The next step is to apply flux and/or enamel depending upon the requirement.