Notes for the making process of backingboard constructions

Only for oil paintings on textile with a maximum size of 1,5 m²

This document describes the method of installing the backing board construction presented in [1].

- **Attaching the painting to the decorative frame**
  - Typically, the decorative frames are not thick enough to accommodate the painting with its stretcher and a backing board construction. Therefore, an extension or an increase of the decorative frame is made with wooden strips, as shown in Fig. 1 and 2.

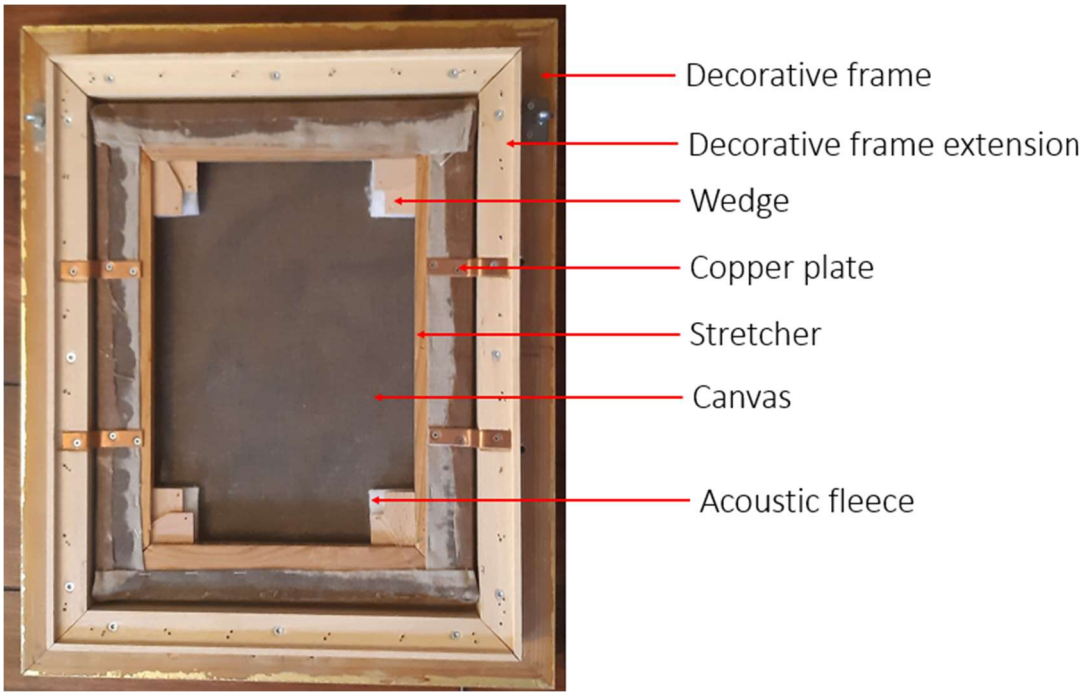

Fig. 1: Lined oil painting with decorative frame, frontal view

Fig. 2: Lined oil painting with decorative frame, inclined view

- Before screwing the stretcher to the decorative frame or its extension, place the painting in the decorative frame and press it against the frame at each corner. If any wobble is noticed, stuff felt between the decorative frame and the stretcher as a buffer.
- The stretcher frame is screwed to the decorative frame with sturdy connecting plates. The connecting plates can be made of galvanized or copper-plated steel. They should be at least 3 mm thick. Curved connecting plates are stiffer (more stable) than straight plates.
- The number of connecting plates depends on the size of the paintings. In Fig. 3 (left) the configuration of connecting plates for paintings of a maximum size of 70 cm x 90 cm is presented. The distance between two connecting plates should be max. 45 cm. The placement of the connecting plates is equidistant.
- The wedges and any cross and longitudinal bars are lined with acoustic fleece. It is to be ensured that the layer of fleece is placed between the canvas and the wedges or bars, just enough to prevent the canvas from bulging.

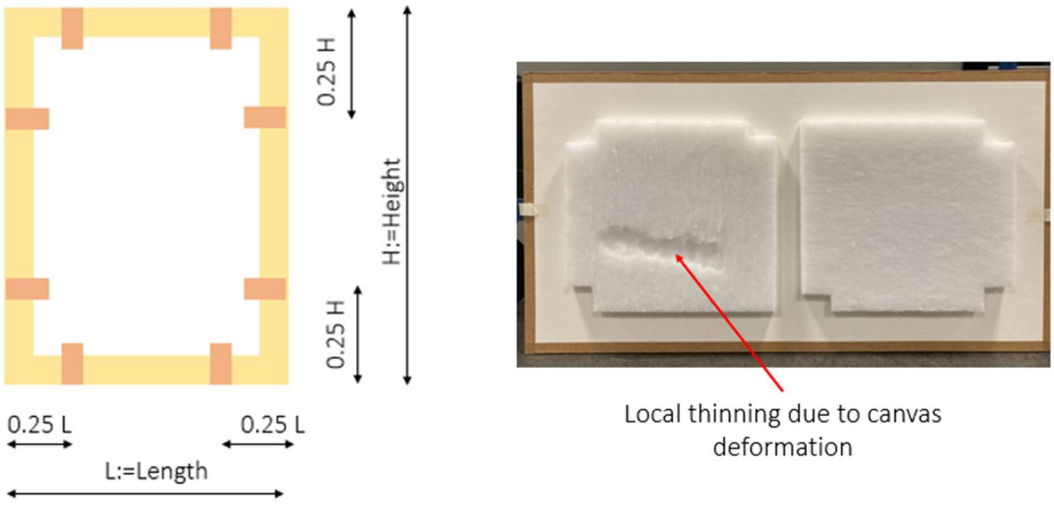

Fig. 3: Base connection plate configuration (left), Fleece placement and local thinning (right)

- Adjusting the fibrefill
  1. Each compartment receives a specially tailored fleece (Fig. 3, right).
  2. The fleece can be ordered in different thicknesses. Ideally the thickness of the fleece is $\geq 30\ \mathrm{mm}$.
  3. The fleece needs to be cut to the correct size (width and height).
  4. The area of the fleece that rests on the wedges is thinned out so that the fleece lies flat.
  5. The fleece is inserted into the compartment. Where the canvas is deformed, either hollow spaces appear, or the fleece stands up.
  6. The fleece must be thinned out locally (Fig. 3, right) so that there are no more cavities and it lies flat in the plane of the decorative frame or its elevation.
  7. Maximum vibration reduction is achieved when the entire surface of the canvas is in contact with the fleece.

- Backing board panel
  - The size of the backing panel depends on whether it can be screwed to the stretcher or must be screwed to the decorative frame. If the stretcher is for instance original and may not be modified, the backing plate must be screwed to the decorative frame or its extension.
  - The backing panel is ideally attached to the stretcher with book screws. The book screws are spaced 30 mm apart. (Fig. 4)

Fleece with panel | Book screws | Backing board construction screwed to the decorative frame extension

Fig. 4: Details of backing board construction

- Fixation of the fibre fill at the backing board panel
  - It is recommended to attach the fleece to the backing panel. Two methods have proven effective: 1. Sewing the fleece to the backing panel [2], 2. Attaching the fleece with Velcro [1]. (Fig. 5)

Panel screwed to the stretcher, fleece sewed at the panel | Panel with self adhesive Velcro (hook tape)

Fig. 5: Examples of panel and fleece fixations

- Glazing
  - The gap between the painted canvas (front) and the glass should be at least 5 mm. This gap can be created using a thin wooden strip and felt.

References

[1] Kracht, K., Bisschoff, M., Leeuwestein: Optimization of the Protection of the Kröller-Müller Museum's wax-resin lined Van Gogh paintings from Shocks and Vibration. Preprints of ICOM-CC Triennial Conference, Valencia, 2023.

[2] Kracht, K., Hedinger, D.: Einfluss vernähter Risse auf das Schwingungsverhalten von Gemälden auf textilem Bildträger. Zeitschrift für Kunsttechnologie und Konservierung, Wernersche Verlagsgesellschaft, 2022.