

VIRTUAL WORKSHOP ON THE MIST-LINING SYSTEM – EXPERIENCE AND APPLICATION

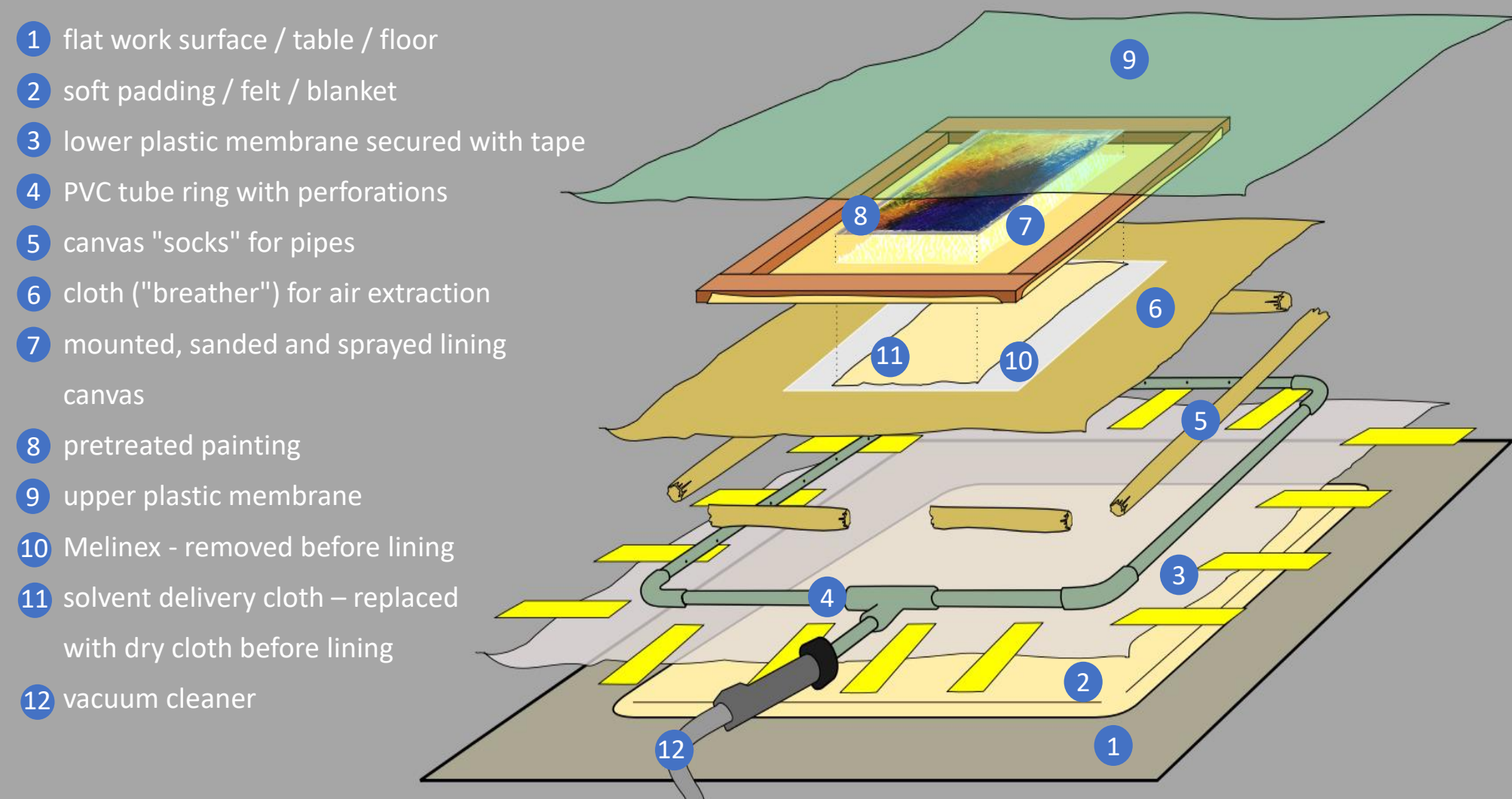
THE MIST-LINING SYSTEM

The mist-lining system provides a highly adaptable approach to structural issues of both traditional and contemporary paintings. It offers gentle support to fragile canvas paintings.

This variation of cold-lining is based on spraying a minimum amount of acrylic dispersion-based adhesive in the form of a mist on a new canvas, reactivating the adhesive using only solvent vapors, and lining the painting in a low-pressure envelope without elevated temperature. This multi-step process has been perfected for years at the Stichting Restauratie Atelier Limburg (SRAL) in Maastricht.

The mist-lining system demonstrates many advantages to traditional linings, being a very flexible procedure, with many adaptable variables – it uses no heat or water, it's highly reversible, the amount of solvent is minimal, and there is no adhesive penetration into the original structure, which allows both canvases to keep up with changes in the environment. The materials required for the lining are easily available and affordable, so it is very obtainable for conservators, and allows for easy *in situ* treatment unlike traditional linings on a heat-suction table.

Picture 1 Diagram of the low-pressure envelope



Picture 2 Instructors Kate Seymour and Joanna Strombek with the workshop participants and guest speakers

ABOUT THE WORKSHOP

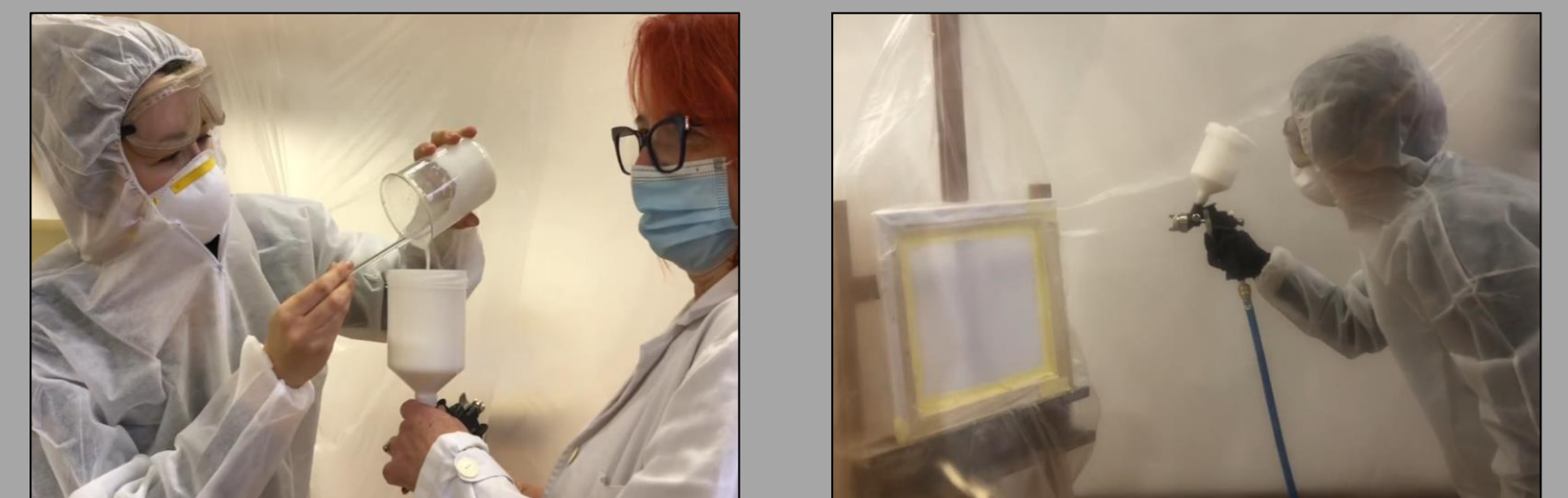
The pilot-virtual workshop *Structural Treatments of Paintings: Reinforcement with the Mist-lining System* was organized by the SRAL with the support of the Getty Foundation and its *Conserving Canvas* initiative. Sixteen conservators-restorers from around the world were given the opportunity to participate and carry out this method in their own institutions with the help of materials provided by the organizers in practical kits. From September 29th to December 15th, 2021, the participants met every week in online sessions with workshop instructors Kate Seymour and Joanna Strombek, heard lectures by guest speakers, and held discussions on numerous topics concerning the mist-lining system.

Through practical assignments participants prepared a mock-up painting for mist-lining, and carried out the procedure step-by-step, conducting tests with provided materials. Weekly reports were submitted through a designated platform, and the progress was recorded with videos and photographs.

RESULTS

The workshop's high level of organization and preparation by excellent instructors and guest speakers ensured the successful execution of mist-linings in the participants' home institutions during the workshop, and after. Likewise, they are a testament to the feasibility of this format of education and training.

At the Department of Conservation and Restoration of Works of Art in Zagreb the method had been applied on several mock-ups, as part of the curriculum in *Conservation of Easel Paintings* course, to introduce students to the process. The exercises with mock-ups allowed for more precision, and experimentation with materials available in Croatia, such as using gauze as the solvent delivery cloth, before applying the treatment to a real painting.



Picture 3 and 4 Preparation of adhesive mixture and spraying the lining canvas



Picture 5 The mock-up inside the low-pressure envelope during lining

GENERAL INFORMATION

The painting *Madonna with Child, st. Elizabeth and John the Baptist* (unknown author, 18th century, oil on canvas, dimensions 36.0 cm x 35.5 cm, private collection) is a cut-out fragment of a larger composition, that arrived without a stretcher. The painting was very rigid, partially overpainted, and saturated with a wax-resin mixture, probably from a previous lining, but without a preserved secondary canvas. The most extensive damage was in the canvas layer, especially the bottom edge where the canvas was very weak and frayed. Per owner's wishes, the painting was to undergo a complete restoration.

The treatment had started in 2019 and was carried out within the *Conservation of Easel Paintings* course by student Ella Ban, under mentorship by Tamara Ukrainčik and Barbara Horvat Kavazović. After removal of the darkened varnish and overpaint, successful wax extraction, structural treatment of the support layer and filling in 2020, it was put on hold due to questions concerning lining and presentation. It was selected for the mist-lining method because of the painting's fragility and need for additional support, the method's reversibility, and no permeation of adhesive into the original structure.

The selected lining canvas was an open weave Belgian linen canvas, mounted on an auxiliary stretcher and prepared for spraying – it was sanded, and loose fibers were removed carefully, not to disturb the raised fibers of the canvas. The recommended adhesive mixture of Plextol® D512 and Dispersion K 360 in 1:1 ratio was prepared with a frother and sprayed on using an ANI paint spray gun. Approximately 100 ml of the adhesive mixture was used.

The low-pressure envelope and solvent delivery cloth were then prepared. The gauze-cloth was folded, wrapped in cling-foil and injected with Shellsol A, then left under pressure. After a few hours, the cloth was unwrapped and hastily placed into the envelope on a piece of Melinex foil, underneath the mounted canvas, the painting, and top foil. It was left for about 15 min to reactivate the dry adhesive, then removed and replaced by a dry cloth. The lining commenced with air extraction using a vacuum cleaner and continued for 1.5 hours. The painting was left to sit under a blanket overnight. The painting will be mounted onto a lightweight custom-made stretcher.

CONCLUSION

After experimental linings on mock-ups and testing available materials, the painting *Madonna with Child, st. Elizabeth and John the Baptist* was the first painting to be lined using the mist-lining method at the Department. The versatility of the mist-lining system presents many advantages to the ingrained, run-of-the-mill lining treatments in Croatia. Most significantly, as a more minimal, reversible and individualised alternative, the system demonstrates that lining is still a viable option for paintings in need of structural reinforcement.



Picture 6 *Madonna with Child, st. Elizabeth and John the Baptist*, before treatment



Picture 7 *Madonna with Child, st. Elizabeth and John the Baptist*, before treatment



Picture 8 *Madonna with Child, st. Elizabeth and John the Baptist*, support after cleaning



Picture 9 Sanding the lining canvas



Picture 10 Adhesives Plextol® D 512 and Dispersion K 360 for lining



Picture 11 Spraying the lining canvas with the adhesive mixture using a spray gun.



Picture 12 Sprayed lining canvas after drying



Picture 13 *Madonna with Child, st. Elizabeth and John the Baptist*, during lining



Picture 14 *Madonna with Child, st. Elizabeth and John the Baptist*, after lining