

GINTS AJAUSKS, Bc. hist.,
Latvian War Museum
Riga, Latvia
gints.ajausks@karamuzejs.lv

In 2023, the process of relocating the Latvian War Museum's (LWM) art collection began, requiring the entire art collection to be moved from its current location to temporary LWM storage facilities. This also applied to the stained glass pieces in the LWM collection. The relocation, packaging, and safe transportation of the stained glass works was one of the most challenging tasks.

PREPARATION PROCESS – MATERIALS

To ensure that the stained glass pieces (see Photo 1) could be safely packaged and transported, more than a rigid base was required. Initially, expanded polystyrene (EPS) and polyurethane thermosetting foam (PUR) [1] were considered as the cushioning buffer layers. However, neither of these materials had the necessary physical properties. A more suitable solution was found in Plastazote – a cross-linked polyethylene (PE) – which was selected as the buffer layer. This material has excellent shock-absorbing properties and is chemically neutral, making it suitable not only for short-term transportation but also for long-term storage of the objects. For support and as an external protective layer shielding the entire structure from mechanical damage, two options were used: 6.5 mm thick corrugated cardboard or a wooden frame structure measuring 6–8 cm in width, combined with a 10 mm thick medium-density fibreboard (MDF). Adhesive packing tape was used as a fastening element for the cardboard bases, while wood screws were used for the wooden frame structures with MDF.

PACKAGING PROCESS – METHODOLOGY

The stained glass pieces were grouped by size, and work began with the smallest ones (45 x 187 cm) in order to test the entire technological process in practice. It is worth noting that the idea of using a box with a cushioning layer for packaging was inspired by various online resources on stained glass transportation [2]. However, the practical implementation and the selection of suitable and available materials were entirely our own. At the start of the practical work, Plastazote was cut to be 3–5 cm larger than the actual dimensions of each stained glass panel to create a secure buffer zone along the edges. In total, each piece was fitted with two to six covering panels to protect both the front and back surfaces. For lighter stained glass pieces with outer frames made of lead, corrugated cardboard sheets and packing tape were used for packaging. For stained glass pieces with outer frames made of black metal, as well as for larger works, a frame structure with MDF protection was prepared (see Photo 2–5). For these larger stained glass pieces and those with outer black metal frames, grooves were cut into the Plastazote along the perimeter to better secure the glass and improve stability (see Photo 6). For pieces with wider side frames, a 2–3 cm wide spacer was inserted between the two Plastazote layers to prevent movement during transportation. The Plastazote was either wrapped in a cardboard layer and secured with packing tape (see Photos 7 and 8), or enclosed within a wooden frame with MDF covering both the front and back. During the construction of the wooden frame with MDF, it became

apparent that additional reinforcement was required in the central area of the panels. Consequently, depending on the size of each frame, two to three reinforcing slats were added to each side (see Photo 9). These reinforcements also facilitated handling and transportation.

TRANSPORTATION AND TEMPORARY STORAGE – CONCLUSIONS

Before the transportation, shelves with higher load-bearing capacity were installed in the new temporary storage facilities to accommodate large stained glass pieces, for which wooden frame constructions were made (see Photo 10). If previously the stained glass panels were stored – at best – covered with fabric that provided protection only from dust, they are now kept in a relatively secure state and are also protected from external mechanical damage. It is important to note that each stained glass piece now has a “personalized” frame, allowing for relatively easy and safe transportation without compromising the fragile structure. In addition, appropriate materials have been selected to ensure the long-term preservation of the stained glass collection.

LIST OF REFERENCES:

- [1] Properties of Plastics: A Guide for Conservators. Thea B. van Oosten, Los Angeles, Getty Publications, 2022, 320 pp.
[2] <https://www.youtube.com/watch?v=P4u2fCLDmT8> (17.05.2024.)



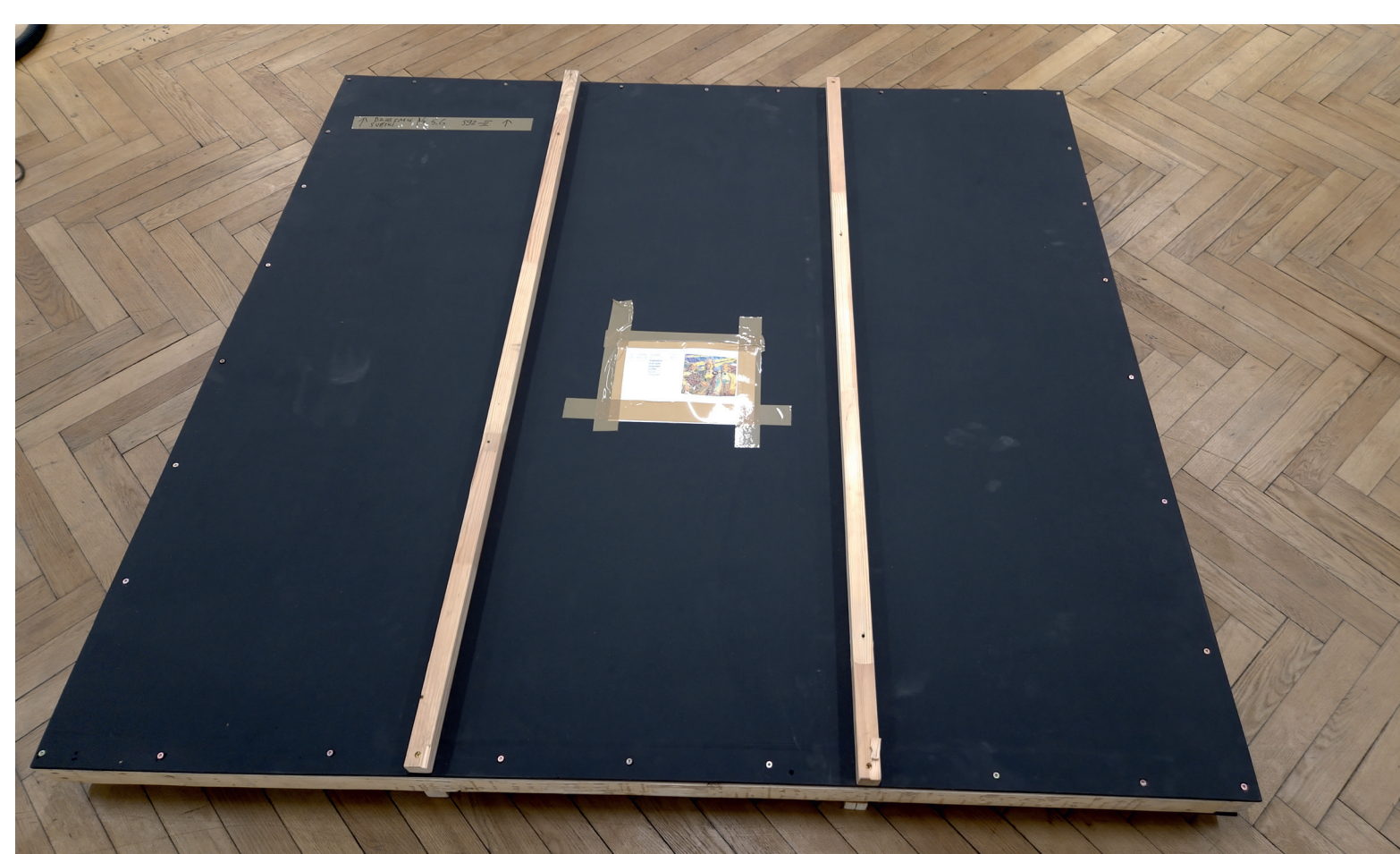
1. Fragment of Egons Cēsnieks' stained glass "Song Festival of Soviet Latvia"
(Photo by V. Lācis)



2., 3., 4. Packaging process of a fragment from Egons Cēsnieks' stained glass "Song Festival of Soviet Latvia" using a wooden frame and MDF construction
(Photo by G. Ajausks)



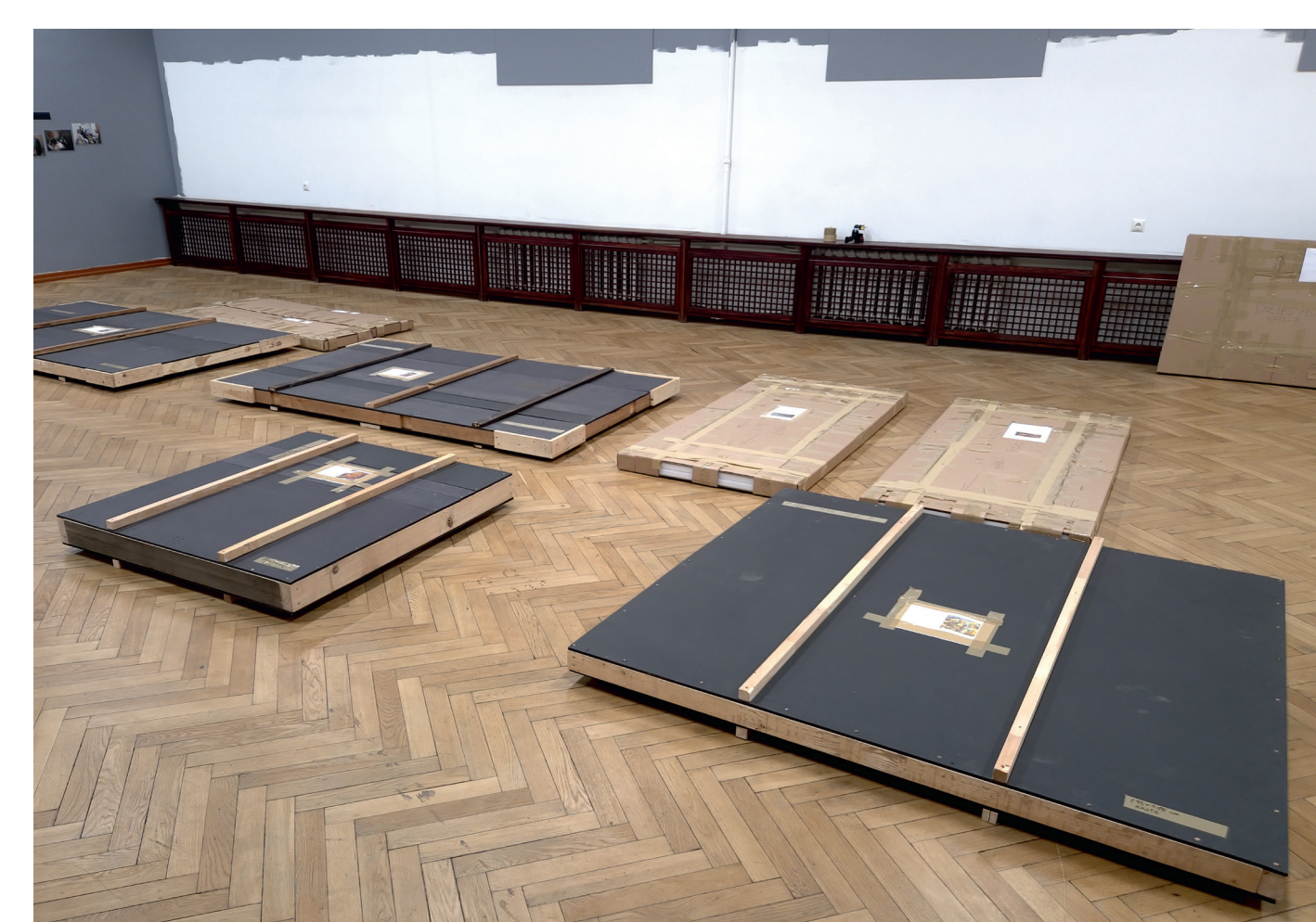
7., 8. Packaging process of a stained glass using a corrugated cardboard construction
(Photo by G. Ajausks)



5. Packaged fragment of Egons Cēsnieks' stained glass "Song Festival of Soviet Latvia" in a wooden frame with MDF construction
(Photo by G. Ajausks)



6. Grooves cut into the Plastazote sheet
(Photo by G. Ajausks)



9. Packed stained glass collection before transportation
(Photo by G. Ajausks)



10. Packed stained glass collection in the shelves in the new temporary storage facility
(Photo by G. Ajausks)