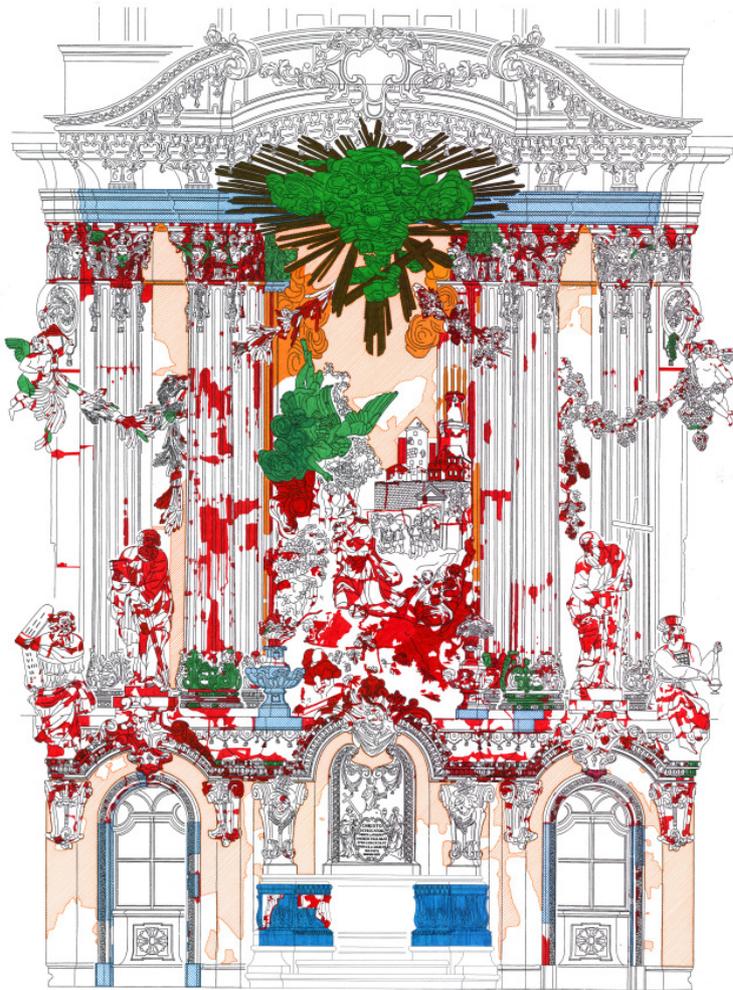




The restoration company Christoph Hein Ltd., founded in 1992, does restoration work on architectural objects and sculptures made of natural stone, plaster and stucco. The company is member of the *Verband der Restauratoren* (VdR - Restorers Association).

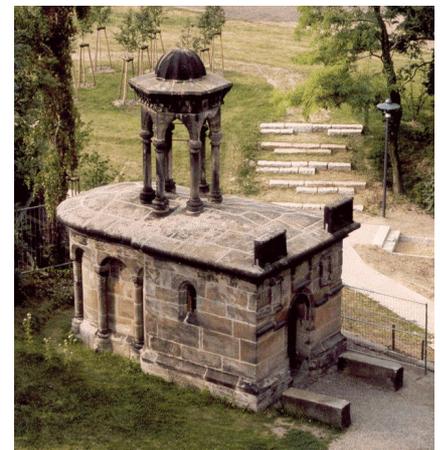
The company offers a full spectrum of services, including everything from practical restoration work such as cleaning, desalting, preservation, completion and retouching, to working out restoration plans, cataloging of historical monument collections as well as documentation.



The most important reference object is the altar of the Frauenkirche ("The Church of Our Lady") in Dresden; this altar was created by J. C. Feige in 1739 and was almost completely destroyed during the Second World War. From 1995 until 2003, extensive restoration was done to archeologically reconstruct this baroque work of art. Of the more than two thousand fragments of the altar which were salvaged from the rubble, 1,642 fragments could be matched up and then reworked into the restored altar.

The preservation phase of restoration work made it possible to use the fragments to piece together all figures (aside from a few details) along with several other things. After completion of this phase, the altar's complete iconographic display is once again whole. Now that preservation and securing of the fragments has been completed, approximately 85% of the original altar is now back where it initially was.

Another significant object which had stone restoration work performed on it between 1998 and 2002 is the Heiliges Grab ("the Holy Grave") in Görlitz. This is the world's oldest existing copy (from around 1500) of the no longer extant original in Jerusalem. Sealing the surface of the roof made of large sandstone panels without installing tin covering and still keeping the stone visible was especially challenging. This task was successfully completed using a multi-layered joint construction and a combination of different materials. On top of that, a special mix was created and then used to recreate the historic mortar used in the façades which typically had a reddish color with black aggregates in it.



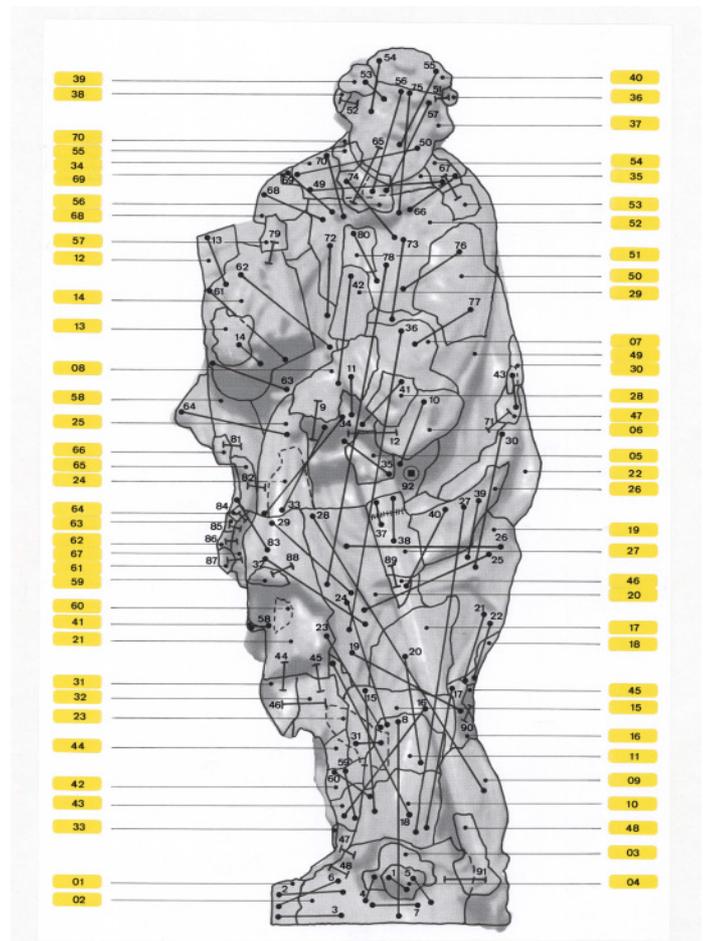
In addition to their natural stone façades, the interiors of the Adamskapelle (“Adam’s Chapel”) and the Kreuzkapelle (“Cross Chapel”) - both part of the Heiligens Grab site - were also restored.



Valuable individual sculptures made of natural stone were restored for both chapels. Securing the structure of the ceiling vaults in the Kreuzkapelle was especially complicated. The sandstone constructions had partly separated from the foundation and some parts were cracking; as a result, the whole construction was unstable. The ceiling vault constructions were able to be secured without altering the building’s historic form by using injections for the cracks and other cavities as well as by adding stainless steel anchors.

In addition to these larger projects which required complex restoration work, more than 100 individual works of art have been restored, including sculptures, reliefs, coats of arms and epitaphs. In this, all types of restoration techniques required for cleaning, desalting, preservation, securing structures, filling in missing spots, retouching, etc. have been put to use.

Extensive experience has been gathered especially in restoring broken, cracked and fire-damaged works of art made of sandstone. For instance, the company reconstructed the figure “Paulus” by piecing together 70 fragments and then filling in whatever was still missing (see the illustration to the right). Familiarity with special techniques used in restoring marble sculptures rounds off their know-how. In particular, recarbonation of weathered surfaces has been used in several projects in Dresden (the Centaur Group in the Grosser Garten, the Schiller Memorial, the Kügelgen Grave, the sculpture “Leda with the Swan”).





The largest stucco restoration reference project is the ceiling of the audience chamber at Orten Castle in Bautzen; this ceiling was created by Giovanni Bartolomeo Cometa in 1662. The historical circle of images contains 9 very sculptured reliefs which tell the history of Lusatia (see the photo below).



From 2000 until 2002, extensive restoration was performed to secure the structure and complete the detail work. Polypropylene fibers were woven into the backside and secured by application and injection of dispersed lime hydrate in order to non-positively bond the vault to the ceiling construction. In especially problematic areas, the vault was additionally stitched in using fiberglass stitches.

Christoph Hein Restoration Company Ltd. has worked on several research projects sponsored by the *Deutsche Bundesstiftung Umwelt* (German Federal Foundation for the Environment):

- Development and application of the material “Antihygro”, used to reduce the hygric swelling of sculptures made of Cottaer sandstone (two sphinx sculptures from Pillnitz castle)
- Development and application of elastified silicic acid ethyl ester for the preservation as well as the production of application compound for Cottaer sandstone (fifteen epitaphs in the Loschwitz churchyard)
- Application of modified silicium dioxide nano salt for Saxonian sandstone (Pheasant House Moritzburg)