

# Investigation and Production of Furniture for Villa Tugendhat 2009–2012

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**V**illa Tugendhat is an expression of “*gesamtkunstwerk*”, where every detail is subordinated to the whole. Mies van der Rohe devoted the same amount of attention to the furnishings of the house as to its design. The furniture designed and placed according to his conception is such an important aspect of the house that without it the Villa is only half complete. The system governing the organization of all parts of the building—ratios, proportions, whole areas and details—is visible also in the precise placement of the house contents, which only allowed the owner limited variability in the use of space.

The Villa became world famous not long after its completion, but Fritz and Grete Tugendhat were not destined to spend many happy years there. Even before the Munich Pact had been signed, signifying the de facto end of democratic Czechoslovakia, they left Brno forever.

At the end of the summer of 1938 two removal vans came to take part of the furnishings to St. Gallen in Switzerland. Today the main body of the original equipment is, except for several pieces, still in the possession of the family.

The Villa was, after two years of general reconstruction, reopened to the public in February this year. For the first time since 1938 it was equipped with all the furnishings Mies van der Rohe had designed for it. The most significant event was the return after seventy years of the original curved wall of the dining area to its original location. This famous Makassar wall had been considered lost for many decades.

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By Miroslav Ambroz

**T**he course of the reconstruction of the Villa is an interesting chapter in itself within the already rather convoluted history of the house, and one which will hopefully one day be given an objective treatment. The controversial tender announced in 2003 to select a designer and the legal repercussions that followed certainly weren't a particularly respectful preface to the reconstruction of such an internationally significant modern architectural monument. The court verdict in December 2006 was clear: the winning team of architects should not have even taken part in the tender as they failed to fulfill its basic requirement, and that was valid authorization. The city had however spent nearly 10 million crowns on the design project and so decided to use it anyway. Fortunately, the city decided to create a committee made up of primarily foreign experts in modern architecture, the Tugendhat House International Committee (THICOM), which was able to influence the course of the whole reconstruction to a significant degree. Prof. Dr. Ivo Hammer, an expert in the conservation of mural painting and architectural surfaces, was chosen as chairman of the committee.

The project specifications did not include the use of items from the original furnishings of the house. The interior was to be equipped with replicas of the original furniture; these would be supplemented by a 'representative exposition' featuring several period (though unauthentic) items in order to create a believable atmosphere: a vintage car in the garage; an old washing machine in the

laundry room; photographic equipment in the darkroom. It was planned that all seating furniture would be supplied in the form of standard off-the-shelf models from the current product range offered by Knoll International.

At the end of 2009, thanks to my discovery of the lost Makassar wall, the tender for the provision of interior elements and the restoration of the wood surfaces was won by the firm AMOSDESIGN. I had carried out research for that company and participated in the preparation of documentation for the production of authentic replica furniture. It immediately became clear during the first introduction to the project<sup>1</sup> that it would be necessary to reassess the approach to the whole issue of the restoration of the original interior and take it to a totally different level. This aspect had evidently been totally undervalued both during previous research into the building's history<sup>2</sup> and at the level of the project documentation.

During the reconstruction of the interior our attention was concentrated primarily on the creation of the most faithful replicas of the original furnishings as possible, including seating furniture. For this reason it was necessary to carry out exhaustive primary research, which not only involved pictorial documentation—i.e. original drawings and photo documentation—but also the study and exact measurement of surviving original pieces. During this work I was fortunately able to draw on my previous archival studies and an archive built up over the years.

During 2010 I studied the project documentation for





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Villa Tugendhat in the archive of the Museum of Modern Art (MoMA) in New York. The Mies van der Rohe archive owns around 430 drawings connected with the building and surprisingly none of the originals of these drawings or other documents stored there had been seen before my visit by any of the designers involved in the project. The designs for the interior housed at the MoMA archive consist of 40 drawings, though some of them are only unused variants or studies. While at the MoMA depository I also documented several pieces of furniture of which the most valuable are without a doubt two original Tugendhat armchairs from the Brno Villa. For reference purposes I also viewed later drawings of furniture stored at the Avery Library (Columbia University, New York). I gained further fundamental knowledge during a series of study trips in Europe: in Krefeld (Haus Lange and Haus Esters), and through the viewing of furniture in the property of the Tugendhat family, the heirs of Mies van der Rohe, private collectors and other museum collections.

I consulted various experts in the relevant fields to solve problematic questions regarding e.g. attachments, the materials used or the completion of parts. This mainly involved the solving of questions that could not be answered even by reference to the original drawings, as they did not contain as much detailed information as is typical today. In the course of this work I therefore made contact with the team of Prof. Tegethoff, leader of the research project "*Kommentierten Werkverzeichnis der Möbel und Moebelentwürfe Ludwig Mies van der Rohes*". I gained a great deal of valuable knowledge regarding metal furniture production technology from Prof. Dr. Ing Friederik Deuerler and Dr. Johannes Deuerler, who are members of the research team. I informed the foreign experts from THICOM about the results of my research and its progress on June 29, 2011 and also revealed the fate of the Makassar wall.

### Seating furniture

Metal furniture—chairs and tables manufactured from steel tubing and flat steel bars—form a relatively special chapter in the context of the whole reconstruction of the Villa. The early models of furniture products designed by Mies were on the level of prototypes, differing from one another in details stemming from the technical production capabilities available at the time. The furniture for the

Villa was manufactured at the *Berliner Metallgewerbe Josef Müller* workshop—from 1931 it was known under the name *Adolf Bamberg Metallwerkstätten Berlin-Neuköln*, before closing down shortly after. The furniture made from flat steel bars was manufactured to order as it was extremely expensive.

For the design of metal furniture it was necessary to focus on the surviving authentic pieces demonstrably originating from the Villa, or at least such pieces as are identical to the originals in their production date and design. At the depository of the Museum of the City of Brno I was successful in ascertaining that two Barcelona chairs kept there were originals from Villa Tugendhat. A most valuable thing about those chairs is that the original straps and stuffing have survived with them. The chairs have been damaged heavily; one of them has been painted brown. However, they played an invaluable role in the production of authentic replicas. In cooperation with Prof. Dr. Ing Friederik Deuerler and Dr. Johannes Deuerler I even obtained x-ray images of joints in order that the design documentation could be prepared exactly according to those originals.

In the case of the tubular Brno chair, a tubular chair with parchment upholstery from an apartment belonging to the architect Philip Johnson was used as the model, as it was manufactured at the same time as the chair for the Brno Villa. The only flat-bar chrome-plated Brno chair from Grete Tugendhat's room exists in a private collection in the USA and was, together with the Barcelona ottoman, measured and drawn at a scale of 1:1.

Most of the discovered drawings for the seating furniture come from the year 1931, which fits the time when the contract was signed with the firm Thonet Mundus. In the 1950s in Mies' studio in Chicago new drawings were created in preparation for the mass production of Barcelona, Brno and Tugendhat chairs, now conforming to American dimensions, standard profiles and Modern production/material-working techniques. These drawings became the basis for the product range offered by Knoll and many other manufacturers.

Knoll performed various changes, adaptations and other excursions from the original in stages over the years, increasing the difference between today's product and the original still further. The comparison of drawings of the original furniture and current versions of the individual models reveals differences that are often surprisingly dramatic. They primarily involve the general dimensions, the shapes of the curved bars, the steel used, the construction and profiles of the elements used (originally 35x11mm, today 30x14mm), attachment details, joining elements (crosshead screws), and also differing production techniques (welding instead of connecting the frames from

Figure 1, 3, 5. The main living space

Figure 2. Chaise-longue

Figure 4. Brno chair in the dining area with restored Makassar wall

Figure 6. Two Barcelona chairs

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several pieces after they have been chrome-plated—necessitated at the time by the dimensions of the baths used for chrome or nickel plating). The final finishing work is a chapter in itself: upholstery, colors and materials—here the differences are even more marked (surface finish of leather, straps, stuffing, hand sewing instead of the zips used today, etc.). It is thus logical that today's products and the items from 1930 have more aspects that are different than they have in common.

One of the most problematic parts of the reconstruction of the Villa's interior is naturally the issue of textiles, upholstery and covering material. At her Brno lecture of January 17, 1969 Grete Tugendhat described a great many details with regard to the materials and colors used. She supplemented this orally during a visit to the house accompanied by Arch. Kalivoda and Arch. Czernay on April 26, 1970. This information has been extremely important for us.

I consulted many specialists<sup>3</sup> on issues concerning covering materials and their appearance in collections, and also the possible alternatives to the original upholstery. All research into furniture took place in close cooperation with the design section of the firm AMOSDESIGN headed by Ing. Arch. Vladimír Ambroz, who devoted exceptional effort and a great deal of time to the successful resolution of all details. The result of the premanufacturing phase was 192 detailed technical drawings for wooden furniture parts and 42 drawings of metal furniture at a scale of 1:1.

Before the realization of the decision to create totally faithful replicas of seating furniture there was a period when it seemed that the drawings would, in the end, remain unused.

The investor was concerned about the possibility of a court case over perceived copyright violation. This state of uncertainty was eventually resolved when the descendants of the architect Mies van der Rohe gave their agreement to the once-off non-commercial production of his furniture for the purposes of museum exhibition. Thus, in October 2011 the production of metal furniture could finally begin. 17 sub-contractors from five countries were involved in this extremely technically demanding project, with the final assembly of the individual parts being carried out in Brno at AMOSDESIGN. The last delivery of frames for the most complex part—the Barcelona and Tugendhat chairs—arrived in Brno only 14 days before the grand opening of the Villa. On February 29, 2012 the house, including its reconstructed Makassar wall and furniture, could be ceremonially reopened.

## Notes

1. Sdružení pro Vilu Tugendhat (Association for Villa Tugendhat) headed by OMNIA projekt, s.r.o.
2. Ksandr, Karel et al., *Vila Grete a Fritze Tugendhatových* (The Villa of Grete and Fritz Tugendhat), Stavebně Historický průzkum (Building History Research), Prague; Státní ústav památkové péče (State Institute for Monument Preservation), 2001.
3. From the many specialists involved I would like to name: Ivo Hammer, Arthur Rüegg, Wessel De Jonge, Wolf Tegethoff, Otakar Mácel, Prof. Thomas Meyer zur Capellen (Hamburg); Andreas Nutz, Angela Völker, Bernd Polster, Axel Bruchhäuser, Linda Carlson (Avenir Museum of Design and Merchandising, Colorado State University); Karen J. Herbaugh (American Textile History Museum, Lowell); Caroline Pinon (Musée des Arts Décoratifs, Paris); Charlotte Ann Jirousek (Cornell University); Virginia Gardner Troy (Berry College); Eva Uchalová (UPM Prague); Prof. Dr. Magdalena Droste; Daniel Milford-Cottam (Victoria & Albert Museum).

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Figure 7. The frame of the replica of the Barcelona chair was assembled from 14 parts.

Figure 8. The frame of the original Barcelona chair from the Villa Tugendhat made in the winter of 1930.

Figures 9, 10. The replica of the Barcelona chair in the upholstery workshop. February of 2012.

Figure 11. Serving cart, MR armchairs and round table on the terrace.

Figure 12. Bedroom of the Governess, replicas of the wooden furniture.

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