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B.V. Ingenieursbureau M.U.C. (Meeuwsen-Udink-Consult) has been established in 1981 and is as a complete independent advisory engineering company active in design and execution works for all infrastructural works: tunnels, ports, high speed and cargo railways, motorways, bridges, fly-overs, noise reducing structures, housing, warehouses, high rise buildings, car park sub-ground facilities, jetties, quay walls, industrial plants (oil, food, petrochemical), etc. Specialism for all fields mentioned often is foundation techniques.

The office staff finds her background in the Dutch Civil Engineering and in the Geotechnical as well as environmental consultancy practice.

M.U.C. works as a design and engineering company for amongst others building contractors, architects, the government, other engineering offices, private companies. The operations are executed for about 500 different clients, companies and institutes at home and abroad.

The current organisation of M.U.C. comprises 22 employees (a.o. 5 MSc and 4 BSc).



Software: Scia Engineer

Work of Art Moerenburg Country House - Tilburg, The Netherlands

In the 13th century there was a huge country house in the middle of a nature reserve in the city of Tilburg, named Huize Moerenburg.

Today, the country house is completely destroyed, including the surrounding area. Only an old painting reminds us of the old times.

But with a new project the past will revive, a construction will occupy its ancient position. The government of Tilburg gave the order to rebuild Huize Moerenburg and the area of the formal construction will be an important portal and will form the background for different activities.

One part of this project is the construction of the ancient building. For this, the contours of the country house will be made visible by, on the one side, shaping the contours of the house by a steel construction, on the other side, by creating the original moat around the country house.

Re-creating Huize Moerenburg was only possible with the help of an old painting, as there were no building plans available.

This resulted in an open suggestive steel structure, which has to give the impression of re-living the old times. To give more the impression of re-living the ancient days, also the perspective of the house, that also was visible in the painting, will be taken over into the design of the structure.

The steel structure will be executed in weather proofed steel; the scrap iron refers to the past.

Initially the structure is created as a work of art, standing independently.

But there are no exclusions that the house will be a place for temporary expositions, e.g. by using the frame itself as an exposition space, by using the frame as a structure for hanging a projection screen, and of course, it is an attractive construction to use as a climbing frame.

The structure refers as much as possible to the old construction: the windows, doors, the roof are taken over from the painting that is the only reference. Also the perspective is taken over in the construction.

The surface of the structure is 16.0 x 40.0 m and has a height of 8.0 m.

The main structure is made of rectangular profiles, for the windows and other impressions, steel plates are welded to the construction which gives the impression of the frames; horizontally positioned profiles create the window-sills.

With the choice of weather proofed steel extra attention to the construction of the structure has to be paid: e.g. preventing water infiltration.

Therefore the construction will be welded all around.

Extra attention has to be paid to the influence of the temperature load, especially at the base of the construction.

Where the construction has no limitations to move freely, the horizontal bracing at the bottom will not have the space to set, and is developed as a free moving bracing, with also here, extra attention for the prohibition of water infiltration into the profile.

The project is calculated in Scia Engineer according to the NEN-code and made in a 3D environment. Steel grade S235j2w is used. All cross-sections are hollow steel sections, except for the ridge, which is made of a rectangular cross-section.

Work of Art Moerenburg Country House

Tilburg, The Netherlands

Project information

Owner Government of Tilburg, The Netherlands
Architect MTD Landschapsarchitecten
Engineering Office B.V. Ingenieursbureau M.U.C.
Construction Period 2011
Location Tilburg, The Netherlands



Short project description

This project regards the re-design of a country house, which will have the function of a work of art. The object is to create a new public space in the city of Tilburg, which is located at the ruins of an ancient building, with the objective of having the possibility to organize different activities. The inspiration of the architect was to create a new construction, referring to the past, but with a multifunctional objective. The steel structure will be executed in weather proofed steel; the scrap iron refers to the past.

