

## A b s t r a c t s

**WESSELÉNYI-GARAY, Andor: BETWEEN VIEWPOINTS***Citation: Metszet, Vol 9, No 6 (2018), pp 10–17***NEW MARKET HALL AND CULTURAL CENTRE, ÚJPEST, HUNGARY  
ARCHITECT - ZOLTÁN BUN PhD**

Suburban identity might be defined by placement of multifunctional developments, market hall, cultural centre and general activity areas. The architectural language of such a building possibly refers to previous stylistic movements and games with geometry but the question remains: who is this building for? The general public covers everyone resident and visitor alike hence this grandiose statement. A cathedral to shopping and culture?

**CSANÁDY, Pál: MOTTAINAI: TOWARDS A WASTE LESS SOCIETY***Citation: Metszet, Vol 9, No 6 (2018), pp 18–21***KAMIKATZ BREWERY AND RECYCLING COMMUNITY HOUSE, KAMIKACU, JAPAN****ARCHITECTS - HIROSHI NAKAMURA and NAP**

Although designed to be constructed from other people's waste this building has not adopted the dystopian aesthetic which might be found in a Mad Max film. Possibly setting an example for how to responsibly upcycle construction materials. Although the primary function is a brewery this building also serves as a "public house" very much in the original sense of meaning as a place for the general public to meet. This pub also functions as a place to sell other goods, possibly refurbished furniture, with the end goal being to produce zero waste.

**WARE-NAGY, Orsolya: AT THE END OF JAVORNICE VILLAGE***Citation: Metszet, Vol 9, No 6 (2018), pp 22–25***BRANDY DISTILLERY AND GUEST HOUSE, JAVORNICE, CZECH REPUBLIC  
ARCHITECTS - PETR KOLÁR and ALES LAPKA**

Faced with falling populations in rural locations, common now in Central Europe, it was found necessary to save a distillery by upgrading its function to suit the tourist industry. This is not only an example of how traditional rural architecture can be preserved, it also serves a business example. The final result being faithful to Czech tradition, without being sentimental, also provides overnight accommodation, educational regarding the distilling process and also a home to an entertainment space. This form of restoration can function year round providing employment and cultural interest.

**SÁGI, Gergely: OCTOBERFEST IN A LAB***Citation: Metszet, Vol 9, No 6 (2018), pp 26–29***VICTORIA BEER FACTORY, MALAGA, SPAIN****ARCHITECTS: GANA Architectura, ANTONIO JOSÉ GALISTEO ESPARTEROM, ÁLVARO FERNÁNDEZ NAVARRO and FRANCISCO JESÚS CAMACHO GÓMEZ**

Looking back over the past decades it has been easy to see wine producers making a spectacle of the wine making process by means of architectural statements, whilst on the other hand brewers have kept relatively quiet on this front. Here a brewer has opted to make the process highly visible by placing a beer hall at the front of the plant taking on the very German idea of having a beer festival, although not just in October, but all year round. Brewing, storage, marketing and the tour experience rolled into one by means of a very clear open space.

**PATONAI, Dénes: ONE FOR THE ROAD***Citation: Metszet, Vol 9, No 6 (2018), pp 30–33***T2B PIER BUDAPEST LISZT FERENC AIRPORT, BUDAPEST, HUNGARY  
ARCHITECT - ZOLTÁN TIMA**

Impressions of a nation are often based upon what a visitor encounters on first

arrival, the airport terminal in this case. If a visitor arrives and the process of leaving the aircraft involves stepping from the plane, riding on a bus, then climbing stairs to enter the customs hall then a bad impression is formed. Therefore a pier like building that directly links visitors to the destination country via ramps and a comfortable intermediate space will be more successful. Naturally the same applies to those leaving a country. Until now Budapest had a great airport building, the Sky Court, but not the necessary link which completes the transit experience.

**SEIDL, Tibor: BLESSEDLY BOUND***Citation: Metszet, Vol 9, No 6 (2018), pp 34–37***PORTER'S BUILDING FOR THE RICHTER GEDEON PLANT, BUDAPEST, HUNGARY****ARCHITECTS - LÁSZLÓ OROSZVÁRY and TÍMEA TÓTH**

Located on both sides of the main axis to this major pharmaceutical plant, below a pedestrian and industrial services bridge, this small development offers a big solution to the question of welcoming staff and visitors to this location. The playful use of architectural concrete suggests the packaging used for medicinal products without being whimsical. A high end answer to the usual question of placing a guard and a gate at such a location: this building serves the purpose of welcoming invited guests and representing the company ideal.

**DOBSZAY, Gergely - BAKONYI, Dániel - KAPOVITS, Géza: ONE STEP TOWARDS COMPUTER AIDED BUILDING CONSTRUCTION DESIGN***Citation: Metszet, Vol 9, No 6 (2018), pp 40–49*

Today the objective algorithmization of building construction design is laden with difficulty, but this is exactly what is needed for computer aided design of building constructions to one day become as prevalent as in other engineering fields. It is urgently required to take account of, and to organize the specific knowledge, raw data, methods and various other circumstances that determine for building construction design. Our article does not intend to solve this difficult problem or to create any objective algorithm. Its aim is to list the various tasks to be completed for future research efforts. Through this we also get a glimpse into the process of building construction design.

**SZIKRA, Csaba - TAKÁCS, Lajos - VERESNÉ RAUSCHER, Judit: RESULTS FOR THE COMBINED USE OF FIRE AND EVACUATION MODELS***Citation: Metszet, Vol 9, No 6 (2018), pp 50–55*

Determination of the Available Safe Egress Time is one of the most important fields of application regarding CFD fire modelling. At the most widespread FDS simulations, the Available Safe Egress Time (ASET) is checked mostly with the visual evaluation of the smoke spread and with test slices at 2 m height above floor level. Following the results of the fire and the evacuation modelling provides a more precise determination of the ASET.

**DOBSZAY, Gergely - KAPOVITS, Géza: SZÉLL KÁLMÁN SQUARE RECONSTRUCTION POINTS OF SPECIAL INTEREST***Citation: Metszet, Vol 9, No 6 (2018), pp 56–63***ARCHITECT - TAMÁS FIALOVSKY, RICHÁRD HÓNICH, BENEDEK SÓLYOM, GERGELY KENÉZ**

During the project design process the buildings and open spaces alike followed a very contemporary, unique and strict concept. Although the architecture utilised applied well known and widespread solutions (e.g. architectural concrete, curtain walls, fibre cement, green roofs and facades) the ensemble nevertheless contains some noteworthy structural details that differ from what is encountered in the standard practice. In our article, by example of a few of these details, we try to present the steps of the design process that led to the final solution. Our intention is to pro-

vide the reader with a glimpse into the complex and ever-changing world of building construction design and to illustrate the challenges inherent in the process.

#### **HORVÁTH, Sándor: THE PERFORMANCE OF ROOF MEMBRANES WITHOUT CROSS SLOPES**

Citation: *Metszet, Vol 9, No 6 (2018), pp 64–67*

In the '70s and '80s the disadvantages of flat roofs without slopes were widely recognised. Ever since national and international norms and guidelines clearly prescribe that flat roofs must be sloped. The required slope on a general surface is 2%, but this could be different depending on the underlying construction methods. In case of gutters the specified slope is at least 1%.

Nowadays the general slope is usually properly executed, but the cross slope is quite often omitted due to budgetary and time constraints. The frozen snow that accumulates in gutters without slope is in practice a perfect vapour barrier, therefore the roofing membrane can no longer be defined as "breathable". Consequently condensation can occur below the roofing membrane which will degrade the thermal resistance and the compressive strength of the insulation material.

Water can form ponds on roofs constructed without slopes where dust and sediment can settle and accumulate.

According to the conclusions of several expert investigations presented in this paper, the above described factors can cause a deterioration of the roof's performance in general, and its most critically layer, the roofing membrane in particular, thereby also reducing the life expectancy of the building fabric as a whole. Correct implementation of the required slope is an important precondition for the reliable and long-term operation of roofing membranes.

#### **DÉVÉNYI, Tamás: AS LONG AS I LIVE**

Citation: *Metszet, Vol 9, No 6 (2018), pp 68–73*

DVTK FOOTBALL STADIUM, MISKOLC, HUNGARY  
ARCHITECT - PÉTER POTTYONDY

A football stadium might be compared to a factory: It can only succeed if the process is designed to be highly efficient from inception to completion. This applies to the players, the fans and staff alike resulting in a good stadium being rational in terms of structure, appearance and long-term sustainability. This stadium has succeeded in providing everything needed to make a match a great spectacle, even bearing in mind the hardcore needs of the "Ultra" supporters from home and away teams. The building dynamically employs use of structural concrete and decorative aluminium elements to create a truly urban scale experience.

#### **PATAKY, Rita: BUILDING CONSTRUCTION CHALLENGES IN THE SHAPING OF DVTK STADIUM**

Citation: *Metszet, Vol 9, No 6 (2018), pp 74–79*

ARCHITECT - PÉTER POTTYONDY

The new 14,680 capacity football stadium of Diósgyőr stands out from other Hungarian stadiums due to its form. The unique shape is created by the use of pre-fabricated reinforced concrete stands covered with a metal sheet cladding system which rises from the ground towards the dynamically overhanging roof structure. While the service buildings were built independently and unattached from the stands, the main building and the structure of the stands are joined together. The slanted facade surfaces of the heated buildings also emphasize the design.

The architectural alignment and the structural concept resulted in the need for special building construction methods. It is these methods that have led me to present a brief description of the butterfly roof and facade detailing within the limited content of this article.

#### **KAKASY, László: BASEMENTS OF INFILL BUILDINGS WITH HIGH EXPECTATIONS REGARDING DRYNESS AND HEATED SPACES**

Citation: *Metszet, Vol 9, No 6 (2018), pp 80–83*

Multilevel basement structures are usually built surrounded by water resistant slurry walls that lock directly into the bedrock complemented by a drainage system with a bilge pump as a secondary protection against groundwater that penetrates cracks in the concrete structure. Designers however face a new challenge when the rooms in the basement become heated and need to be kept completely dry. Is then the afore-

mentioned system adequate anymore? What aspects should be taken into consideration when choosing the waterproofing system? Where should the thermal insulation be placed? These are the questions this article aims to explore through the example of real life design projects.

#### **BIHARI, Ádám - MEDGYASSZAY, Péter - MEDVEY, Boldizsár: REGULATION OF NATURAL BUILDING MATERIALS, WITH A SPECIAL FOCUS ON EARTH BASED MATERIALS AND TECHNOLOGIES**

Citation: *Metszet, Vol 9, No 6 (2018), pp 84–91*

Regulation of the use of natural building materials in Hungary has improved considerably over the past few years, but there are still some loose ends. The present article gives an overview of the current regulations as well as a brief account of its national and international history. It identifies the most important shortcomings of current regulation concerning earth based construction materials and technologies, and proposes changes based upon international examples.

#### **ÁTS, Árpád - PATAKY, Rita - ÁTS-LESKÓ, Zsuzsanna: WHAT MAKES SKYLIGHTS WATERPROOF? RAINWATER PREVENTION FOUND BELOW ROOF COVERINGS**

Citation: *Metszet, Vol 9, No 6 (2018), pp 92–97*

The question has been raised many times about how can skylights be installed in a way that the sealing is ensured long-term? Examining this subject, first of all the lack of theoretical sources and the contradictions between the information at hand can be observed. The consistencies and/or contradictions have to be filtered out in the interest of making it possible to create a method that can be used as a template, therefore the in-depth examination of both the written and drawn; in a favourable scenario the study of already built examples of these construction methods is necessary.

The aim of this publication is to theoretically systematise this approach in a professional method whilst seriously examining this challenging area of research. The executed studies helped to identifying the components affecting the installation of skylights. It can be made possible to compose a standardised evaluation and design method which can be applied as a standard for good practice too, with the analysis of the different installation techniques.

#### **HEINCZ, Dániel - KAPOVITS, Géza: SIMILARITIES AND DIFFERENCES, TWO SCHOOL EXTENSIONS WITH NEW SPORTS HALLS**

Citation: *Metszet, Vol 9, No 6 (2018), pp 98–105*

In the past few years the increase of physical education got a significant emphasis so the expansions of existing schools with gyms became a national program. Our article introduces two examples where both the design program and the terrain has similar properties. However, it seems firstly that the differences are exiguous yet the architectural ideas have generated special design tasks and individual building constructions solutions. Comparing the similarities and diversities we can show how small differences of boundary conditions are able to change the optimal decisions of building constructions. It is because the architectural and building construction design have strong connection and that is the beauty and difficulty of the structural detail design.

#### **FEHÉR, Máttyás - KAPOVITS, Géza: AN UNREALISED PLAN: ATTEMPT TO RESTORE THE KONOPI PALACE**

Citation: *Metszet, Vol 9, No 6 (2018), pp 106–111*

ARCHITECT - ALBERT GESZTESI and ZSOLT FÉLIX

Although protected as a national monument this building was partially demolished prior to project inception, where it could have been used as a case study for the ever expanding field restoration projects. Our aim is to present how a building may be renovated taking into consideration how the reconstruction of its facade might be initiated allowing for slight alterations to the original concept without need to amend the original architectural principles.

In our article, we selected some more interesting design tasks, which made the construction process decisive regarding distinctive appearance of the facade. At the same time, we draw attention to the circumstances, aspects that clearly defined the final design of certain elevation details.