European Council of Civil Engineers

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2020 The Year of the 3S Approach "Safe – Sound – Sustainable"

The European Council of Civil Engineers declares the Year 2020 as the Year of the 3S Approach Safe – Sound – Sustainable.

It is a basic and inalienable human right for everyone to live in a Safe, Sound and Sustainable home. For this reason, it is necessary to have first and foremost structural security in buildings and then structural sustainability.

Europe's engineers, and ordinary citizens alike, are wondering why significant amounts of money are invested in improving the shell of buildings, ignoring the static adequacy of the bearing structure of these buildings, especially in countries located in earthquake-prone areas.

The suggestion is that a uniform policy should be drawn up for the static or seismic upgrading of the structural wealth of European States, along with the wider sustainable environmental upgrading, approaching the problem in a holistic way.

The new trend nowadays is…smart financing for smart buildings. But a building can only be called smart... once it fulfills the 3S approach "safe, sound and sustainable".

ECCE is preparing a Position Paper titled "The need for integrating Structural / Seismic Upgrade of Existing Buildings, with Energy Efficiency Improvements" which will be published soon.

Read ECCE's Manifesto

ECCE statement on the Covid-19 crisis

ECCE call upon the entire construction industry, trade unions, public and private clients to actively support the EU in getting the important part starting again and finding its way to normality. A clear interpretation of set up regulations by the industry should help the government. All involved parties and planners need legal certainty!

From the point of view of the professional association, this kind of solidarity is a suitable means to contribute to the handling of the COVID 19 crisis. On the one hand, the danger of infection in the construction site area is further reduced. On the other hand, any economic disadvantages will not be senselessly exaggerated. By such solidarity, a cooperation of all parties involved after the end of the COVID 19 crisis is guaranteed.

ECCE supports the operation of construction sites, but demands clear regulations for the employees, for engineers, for construction industry and clients.

Basis might be an agreement on a catalogue of measures for work on sites between the trade unions, construction industry and the Central Labour Inspectorate, regulating under which circumstances construction sites can continue to be operated.

As a political representative of the interests of European Civil Engineers - an important professional group for the construction industry - we expressly support efforts to keep the economic consequences of the Corona crisis as low as possible. This also includes continuing work on construction sites where this can be done safely. However, agreed general measures are not suitable for creating clear and legally secure conditions on each single site – they need to be adapted to every single site.

These measures can only be implemented with an acceptable level of risk if there is extremely good preparation, planning, training and checks.

On the basis of the present regulations concerning the corona virus, there is great uncertainty among the members of the entire construction industry regarding the handling of open projects (local building supervision, surveying, etc.)

At the same time, however, it is not possible for the ECCE to recommend a general halt of construction, where no measures to reduce risk of spreading COVID 19 are taken, to their members, as the liability risk for individual offices is too great in this unclear situation.

Due to the above-mentioned conflicts in practice, ECCE suggests to bring about a close alliance between all public and private clients and contractors, including all interest groups.

ECCE therefore recommends that the existing legal basis and existing or worked out guidelines be concretized together on an European level.

In the sense of a cooperative handling of the current contracts during the COVID-19 crisis, the following objectives should be pursued with this solidarity:

- to show possibilities to maintain construction and planning processes
- No penalty claims on the part of the client in the event of Corona-related failure/delay etc.
- Fair settlement of additional cost claims
- Execution of tasks that do not have to be carried out on site (construction site)
- Setting generous deadlines for new calls for tender to be published
- Extensions of deadlines for ongoing projects, even if they are dependent on temporary funding

But keep in mind:

- It is wrong to assume that the additional services required for this, concerning construction management and construction coordination, are covered by the existing contracts.
- It is also incorrect to assume that the complex additional services resulting from the COVID-19 Act would be included in the construction schedule in terms of costs and deadlines. Deadlines and penalties are therefore usually to be renegotiated or the additional expenditure incurred is to be remunerated separately by the client.

It seems to us to be appropriate and necessary to accompany and bundle the know-how of the stakeholders during the ramp-up of the construction industry within the framework of a task force. A successful outcome is of utmost importance for all parties involved and the European health care system!

ECCE calls on the EC to set up quickly these rules and legal basis for handling these issues not on National level but on a European level, as COVID is not a national but a global challenge.

Covid-19: declaration of the European Construction sector

Dear Colleagues,

The European Council of Civil Engineers together with the undersigned European associations, representing the construction sector, in light of these difficult times the world is fighting facing the Covid-19 outbreak, wish to reiterate our commitment to supporting public authorities as well as our dedication to our most fundamental asset, our workers' wellbeing.

Jointly, we call upon the European Commission to support the sector to:

- Ensure health of its workers
- Maintain economic activity
- Accelerate the recovery

We ask the European Commission to open a dialogue as soon as the circumstances allow it, in order to jointly identify and implement appropriate measures to limit the downturn and facilitate a rapid recovery of all construction activities.

The joint statement presented below was sent to the European institutions (President, VP of the EU Commission, EU Council and EP).

Covid-19 crisis

The European construction sector calls for urgent measures to protect workers' health, support economic activity and accelerate the recovery

March 2020

Facing the Covid-19 outbreak, the world is fighting a pandemic of unprecedented proportions in modern times, currently causing a full-blown health emergency.

We, the undersigned European associations, represent the construction sector, an industry worth 9% of the EU GDP and employing more than 16 million Europeans. In light of these difficult times, we wish to reiterate our commitment to supporting public authorities as well as our dedication to our most fundamental asset, our workers 'wellbeing.

From an economic and industrial point of view, the situation is unprecedented and could have extremely damaging and long-term effects. It has the potential of exhausting companies' cash flow and cripple the construction value-chain for years to come, crushing the millions of SMEs, the large businesses and industrial entities alike.

Member States are putting in place different measures to slow down and end the spread of Covid-19. In some countries, such measures allow the continuation of construction activities and ensure the health and safety of workers, whilst others are limiting economic activities to those considered as "essential".

A performing construction supply chain is crucial for maintaining the activity, with proper health and safety conditions. It is therefore essential to guarantee the circulation of construction products; equipment and provision of services in full respect of the instructions delivered by public health authorities.

In this context, we call upon public authorities to take into account the scale of the disruptions to our sector and to prevent the foreseen economic downturn from becoming a meltdown of historic proportions with far-reaching social consequences.

Indeed, before thinking about medium- and long-term measures, short-term provisions are urgently required to protect Europe's most labour-intensive value-chains, thereby allowing for a rebound to happen as soon as the health crisis will be over.

We therefore urge the European institutions and the European Member States to act in full coordination to:

- Put in place required and tailor-made health and safety measures, protocols and guidelines with the active involvement of relevant stakeholders, allowing employers to guarantee the required level of workers' protection;
- Support the construction supply chain by putting in place measures allowing the efficient functioning of the EU internal market. In this respect, we welcome the Communication of the European Commission on the implementation of the Green Lanes under the Guidelines for border management measures;
- Carry out massive support and stimulus programmes. These actions must not be limited to a few iconic sectors of strategic or political importance that may need full bailouts, but crucially to those job providers such as construction that must also receive the full attention of the authorities;
- Ease the administrative burden and the conditions for employers to implement temporary unemployment measures.

Finally, we ask the European Commission to open a dialogue as soon as the circumstances allow it, in order to jointly identify and implement appropriate measures to limit the downturn and facilitate a rapid recovery of all construction activities.

Construction 2050 Alliance

On 19th February, over 40 construction-related EU association came together to discuss the launch of a EU Construction 2050 alliance. Most agreed that so many construction stakeholders have rarely come together. The initiative comes from FIEC, EBC, CECE and Construction Products Europe that make up the steering committee. ECCE was invited to participate in this meeting and joint he Construction 2050 Alliance. ECCE Vice President/ President Elect Andreas Brandner participated in this first meeting that was held on 19th February 2020, in Brussels where the idea and details about the Construction 2050 Alliance were discussed. Following this meeting the ECCE Executive Board decided that ECCE should be an active member of this Alliance as the Construction Sector Industry is of outmost importance for ECCE and we believe that both ECCE and the Construction 2050 Alliance would benefit from this cooperation.

Construction 2050 Alliance meeting on 19th February 2020

On 17th June 2020 the European Commission hosted the 8th annual meeting of the High-Level Tripartite Strategic Forum of Construction 2020, a 2012 Strategy by the EC to boost the competitiveness of the European construction sector. The meeting gathered online 100 persons from different departments of the EC, national competent ministries and construction sector's stakeholders. ECCE President Aris Chatzidakis represented ECCE in this virtual meeting.

During the opening session of the HLF meeting, CECE's Riccardo Viaggi presented the Construction 2050 Alliance, a newly established group of 46 European organisations working together to advance the needs and priorities of the wider construction and built-environment sector at EU level.

As indicated in its concept note, the Construction 2050 Alliance has been established because the sustainable Europe of tomorrow cannot be achieved without all the actors involved in the construction process. For this to happen at the EU level in Brussels, the Construction 2050 Alliance aims at coordinating common political messages of the construction value chain and raise the political importance of the sector at the European level.

During his presentation, Riccardo Viaggi reminded that this level of cooperation is unprecedented in the construction value-chain and thanked all members for signing up to the approach proposed by CECE, CPE, EBC and FIEC, who were the initiators of the Alliance. Referring to a common vision for the Alliance, he indicated the Construction 2050 paper published in June 2019 and now endorsed by the whole Alliance.

By optimising the way construction works, the Construction 2050 Alliance aims to improve the life of European citizens, provide higher value with fewer natural resources, and achieve higher quality assets for owners and users. Construction is the solution industry: addressing the challenges that the construction sector is facing means addressing the challenges of European citizens. To ensure this, the Construction 2050 Alliance will develop activities in four different areas:

- A specific targeted approach to construction in policy-making, because the sector is at the crossroads of different value chains. Its unique nature requires a unique approach.
- An adaptable policy framework to address the evolving construction ecosystem and the transformation of the industry.
- A holistic approach towards policy making in order to implement coherent and balanced policies and legislation.
- A strong partnership between the European institutions, the Member States and construction stakeholders to steer the transformation of the sector with the most adequate policies and tools.

As unveiled during the meeting, the work-programme of the Alliance for its first two years features 6 priority areas:

1. Construction: the solution to Europe's recovery after COVID-19
2. The contribution of the built environment to the EU Green Deal
3. The human factor in construction: safety, skills and sector's image
4. Relaunching the Construction 2020 Strategy
5. EU Data Strategy: a construction approach
6. Developing a communication strategy for the Alliance

More information on the Construction 2050 Alliance and its activities will be shared in due time.

ECCE participates in the 8th meeting of the High Level Tripartite Forum (17th June 2020, virtual meeting)

ECCE President Aris Chatzidakis represented the European Council of Civil Engineers in the 8th meeting of the High Level Tripartite Forum that was held on 17th June 2020 virtually. In the opening of the meeting took place the inauguration of the Construction 2050 Alliance whose member is ECCE.

The Agenda of the 8th HLF can be found here and the presentations that were delivered during the meeting here. The main messages of the meeting are quoted below.

High Level Tripartite Strategic Forum, 8th meeting

17th June 2020 - Key messages

The High Level Forum of Construction 2020 gathered for the eighth time on 17th June 2020. Due to the COVID-19 crisis the meeting was held only online for the first time. Over 100 participants came together, representing various parts of the European construction sector ecosystem: businesses, skilled workers, the European Commission and a good number of Member State governments.

The COVID-19 health crisis impacted not only the way we met, but also the construction sector itself. Construction has always been cyclical – but it is now facing a unprecedented crisis with a drop of activity of 50% in Q2, 25% estimated in Q3 and 12% expected in Q4. Participants confirmed that the consequences are financial distress and liquidity concerns, particularly for SMEs. Experiences shared by sector stakeholders highlighted the difficulties encountered in their supply chains and in coping with extra sanitary measures. However, the impact and expected recovery are uneven between Member States – with some much more affected than others.

Nevertheless, participants agreed that recovery and investing in the future of Europe's built environment can be turned into a win-win opportunity and support the long-term ambitions of a green, digital and resilient Europe. The Green Deal and the Renovation Wave, the Industrial strategy and Circular Economy Action Plan, and the Next Generation EU Recovery Plan will together provide public investments and strategic direction towards these goals.

Such a recovery will require an integrated and holistic approach that brings together the whole construction sector ecosystem. Already during the meeting, stakeholders pointed out various aspects, such as the need for the proper skills to implement the Renovation Wave, paying attention to localised value chains and having a circular economy approach, the importance of ensuring that SMEs can access funding and assessing the needs of building users and their ability to pay rents. A representative from the German Federal Government confirmed that construction will be one of the main focus areas of the German Presidency of the Council in the second semester of 2020. Germany intends to support the promotion of sustainability and circularity in buildings, construction products and the built environment.

Many more issues were discussed and there is a clear need to continue working towards a continued dialogue that can strengthen resilience and support recovery – engaging the European Commission, Member States and stakeholders. Such dialogue could also help speed up the delivery of the actions needed and include ongoing initiatives (such as the funding opportunities for the built environment and the assessment of national recovery plans in this respect, construction products regulation, sustainable public procurement, etc). Right now, the European Commission is preparing the future Renovation Wave initiative and is inviting feedback and ideas from stakeholders via a public consultation (https://ec.europa.eu/info/news/preparing-future-renovation-wave-initiative-have-your-say-2020-jun-12_en).

The presentations and speeches during the meeting gave a sense of the challenges we face and there is no doubt that we must come together for a chance to overcome them and build the environment Europeans need.

Preparing the future Renovation Wave initiative – Have your say

The European Commission has opened a public consultation on boosting the renovation of buildings across the EU. The Renovation Wave initiative is a priority under the European Green Deal and the recovery plan for the EU, aimed at increasing the rate and quality of renovation of existing buildings and thereby help decarbonise the building stock. Given the relatively labour-intensive nature of renovation work and the way in which this matches the "green, digital and resilient" ambition of the Commission recovery package, the Next Generation EU Communication talks of regulatory and financial support to "at least doubling the annual renovation rate of existing building stock".

The consultation, will be open for four weeks with the aim of gathering views and input from a broad range of stakeholders, including national, regional and local authorities, businesses, unions, civil society organisations, education organisations, consumer groups, research and innovation organisations, as well as individual citizens. This will then feed into the Commission deliberations on this initiative. The Commission has confirmed the intention to publish in the autumn a strategic communication and an action plan with concrete measures to deploy faster and deeper renovation.

The Commission published a roadmap for the Renovation Wave with a 4-week period for public feedback, which closed on 8 June.

In addition to cutting emissions, renovation will lead to reduced energy consumption (and lower household bills), safer and healthier buildings, as well as addressing energy poverty and improving people's quality of life. In employment terms, renovation will also stimulate numerous local, skilled jobs (especially for SMEs), and thereby also deliver clear benefits to the local economy. The Renovation Wave initiative puts the focus on existing buildings, and renovation with a lower level of inconvenience for people living in the buildings being renovated.

Background

The EU building sector is the largest single energy consumer in Europe responsible for approximately 40% of EU energy consumption and for 36% of the EU greenhouse gas emissions. At the same time, some 75% of existing buildings is energy inefficient (and were constructed before legislation on building performance was in place). Boosting energy performance of buildings to roll out energy efficiency and renewables at a much higher pace is a priority, especially given that 80% of today's buildings will still be in use by 2050 and that only 1% (on average) of buildings currently undergo renovations each year. This rate will need at least to double to reach the EU's energy efficiency, renewables and climate objectives.

The public consultation can be found here

Deadline: 9 July 2020 (midnight, Brussels time)

More information on Renovation Wave

Energy Efficient Buildings

Recovery package: Europe's moment: Repair and prepare for the next generation

The European Council of Civil Engineers is going to respond to this Public Consultation and would like to encourage all ECCE Members to proceed likewise.

ECCE President Aris Chatzidakis' first reaction to the Renovation Wave Initiative can be consulted below:

ECCE welcomes the new initiative of the European Commission to launch a 'Renovation Wave' for public and private buildings to address the twin challenge of energy efficiency and affordability.

As the communication on the Renovation Wave Initiative states "An integrated approach to building renovation means boosting energy performance of buildings by applying the 'energy efficiency first' principle, deploying renewables, preparing for climate impacts, deploying urban green and blue infrastructure and incorporating circular economy, waste treatment and pollution prevention principles."

Although we agree with a wider and integrated approach of renovation we have to remark that it is still far from a holistic view of the problem of maintaining and upgrading the performance of existing buildings and infrastructure.

We state that this renovation and retrofitting needs to be done in parallel with other necessary interventions so that the essential requirements established in the construction products Directive are also respected.

We would like to remind that according to our Directives our structures shall fulfill the following essential

requirements:

- ***Mechanical resistance and stability***
- ***Safety in case of fire***
- ***Hygiene, health and the environment***
- ***Safety and accessibility in use***
- ***Protection against noise***
- ***Energy economy and heat retention***
- ***Sustainable use of natural resources.***

So, we would like to state that this renovation wave shall promote and fund interventions according to the holistic approach of upgrading the existing buildings and infrastructure and of course structural safety shall be the first target of renovation.

ECCE participates in the Public Consultation for the EU climate ambition for 2030 and for the design of certain climate and energy policies of the European Green Deal

Global warming is happening and affecting citizens while threatening our long-term sustainability on this planet. The average temperature of our planet has already increased by 1°C and the world is currently not on track to achieve the Paris Agreement objective of limiting temperature change below 2°C, let alone 1.5°C. The 2018 special report of the Intergovernmental Panel on Climate Change on 1.5°C indicated that already at 2°C the world would see dramatic and potentially irreversible impacts due to climate change. Science is also clear on the close link and interdependence of climate change and biodiversity loss.

The EU has taken global leadership in tackling climate change and actively pursues policies to cut its greenhouse gas emissions and to decouple these from economic growth. This allows the EU to modernise its economy and energy system, making them sustainable in the long term and to improve energy security and the health of its citizens by reduced air pollution.

The EU has already adopted climate and energy legislation to reduce greenhouse gas emissions by at least 40% by 2030 compared to 1990 levels. Furthermore, it adopted ambitious energy efficiency and renewable energy legislation, whose full implementation is estimated to reduce greenhouse gas emissions beyond the existing target - by around 45% by 2030. As part of this legislation, Member States develop National Energy and Climate Plans to ensure that common EU objectives will be met. Unless complemented by further policies, the agreed legislation is expected to lead to around 60% greenhouse gas emissions reductions by 2050. In 2018, the Commission proposed for the EU to become climate neutral by 2050 (https://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0773) compensating any remaining GHG emissions by absorptions. The European Parliament and the European Council endorsed this objective in 2019. The Commission has proposed to enshrine this objective in the European Climate Law (https://ec.europa.eu/clima/policies/eu-climate-action/law_en).

According to the latest Eurobarometer survey, 93% of EU citizens see climate change as a serious problem and a significant majority of the EU population wants to see increased action on climate change. As a reflection of this and due to the urgency of the climate and linked ecological challenges, the European Commission has proposed in December 2019 a European Green Deal (https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:52019DC0640) as one of its priorities including a list of forthcoming proposals to deliver it. The Green Deal aims among others, to align all EU policies with the 2050 climate neutrality objective, sending an early and predictable signal to all sectors and actors to plan for the transformation.

As part of the Green Deal, the Commission intends to propose to increase the EU's 2030 target for greenhouse gas emission reductions to at least -50% and towards -55% compared to 1990 levels, in a responsible way. The Commission will thoroughly assess the feasibility and the social, economic and environmental impacts of increasing the

2030 target. This assessment will look into how to increase ambition in a way that enhances EU competitiveness, ensures social fairness and access to secure, affordable and sustainable energy and other material resources, benefits citizens and reverses biodiversity loss and environmental degradation. The Commission intends to present a comprehensive plan to increase the EU 2030 climate target in the third quarter of 2020.

Building on the existing 2030 legislation and the upcoming comprehensive plan, the Commission will review and propose to revise, where necessary, the key relevant energy and climate legislation by June 2021. This will include a coherent set of changes to the existing 2030 climate, energy and transport framework, notably related to the EU Emissions Trading System Directive, the Effort Sharing Regulation and the Land Use, Land Use Change and Forestry Regulation, CO Emissions Performance Standards for Cars and Vans and, as appropriate, the Renewable Energy Directive and the Energy Efficiency Directive.

The European Commission opened a public consultation which invited citizens and organisations to contribute to the assessment of how to increase the EU 2030 emission reduction ambition in a responsible way. The consultation aims to collect opinions on the desired ambition level of climate and energy policies, necessary actions in different sectors and specific policy design to increase climate ambition by 2030. It also aims to gather further information, including roadmaps, policy briefs and studies relevant for deeper greenhouse gas emission reductions.

The European Council of Civil Engineers participated in this Public Consultation which was closed on 23 June 2020. ECCE's response to the Consultation can be found here. The ECCE Executive Board identified the importance of associating the EU Climate ambition for 2030 strategy with the 3S Approach "Safe, Sound & Sustainable" for buildings. The ECCE Manifesto on the 3S Approach was annexed to the Consultation together with an intervention focusing on the building sector as a main producer of greenhouse gas emissions, not only energy consumption but also building materials. The text of the intervention can be found here.

ECCE participates in the VIII National Civil Engineering Congress of Spain (17th – 18th February 2020, Madrid)

The VIII National Civil Engineering Congress of Spain was held on 17-18 February, 2020, in Madrid, Spain hosted by the Colegio de Ingenieros de Camines, Canales y Puertos (CICCP). The VIII National Civil Engineering Congress brought together leading figures from the engineering and construction sector, as well as other sectors related to this area of activity and that are increasingly present in the modernization of our environment.

The main objective of this Congress was to reflect, among other topics, on mobility of the 21st century, the electric vehicle and the urban agenda, digital transformation, climate change, energy storage, circular economy and management, financing and Innovation of public works.

The Congress program was based on two large pillars: the first day was dedicated to mobility and the second to climate change. The II Sagasta Trial Prize and the IX Segovia Aqueduct Award were presented.

The inauguration of the Congress was made by **José Luis Ábalos**, Minister of Transport, Mobility and Urban Agenda. During his speech, he valued the role of Road Engineers in the transformation of Spain. He emphasized the need to think about sustainable mobility solutions, placing the citizen at the center of our interests and working mobility as a right.

Opening Session - From left to right: Juan Santamera (CICCP President), Aris Chatzidakis (ECCE President), José Luis Ábalos (Minister of Transport, Mobility and Urban Agenda of Spain), José Polimón (CICCP Vice President), Carlos Mineiro Aires (OEP Bastonario and WCCE President)

Juan A. Santamera, CICCP President during his speech also focused on the leadership of Road Engineers, as the motto of the Congress says, "a leadership that is exercised in numerous sectors of the economic and business world, and that occurs at a complex juncture, both in the international as national sphere". "Our leadership role forces us to have a global vision on the problems, with a view to the overall progress of our country in a globalized framework, in line with the United Nations Sustainable Development Goals," he said.

On the first day the following panels were held:

- PANEL I: Mobility, transportation and electrical / autonomous vehicles
- PANEL II: Infrastructure management and adaptation to climate change
- PANEL III: Cultural heritage conservation
- PANEL IV: Urban Agenda
- PANEL V: Digitalization in Engineering: Infrastructure and services

On the second day of the Congress the following panels were held:

- PANEL VI: Water and climate change
- PANEL: VII: Energy, storage and climate change
- PANEL VIII: Engineering / Circular economy and sustainability
- PANEL IX: The role of engineering in waste management and circular economy
- PANEL X: Future of the profession. Training, accreditation and internationalization

ECCE President Aris Chatzidakis was invited by the CICCP President Juan A. Santamera to be member of the Honorary Committee of the Congress. Aris Chatzidakis had a presentation during the first day of the Congress within the Panel for the Cultural Heritage conservation. His presentation was titled “Challenges for the structural engineer dealing with heritage structures”.

ECCE President had the opportunity to meet over a business lunch with CICCP President Juan Santamera, CICCP Vice President José Polimón and CICCP Secretary General José Javier Díez Roncero. During this meeting they discussed about ECCE’s initiative to proclaim 2020 as the Year of the 3S Approach “Safe, Sound, Sustainable”. CICCP leadership shares ECCE’s views on the topic and will support our initiative.

The Agenda of the VIII National Civil Engineering Congress can be found here.

Aris Chatzidakis (ECCE President)

Panel III Cultural Heritage Conservation

Panel III Cultural Heritage Conservation speakers

Joint IABSE – ECCE webinar: Characteristic Seismic Failures (3rd July 2020)

Webinar: Characteristic Seismic Failures.

Joint Webinar organised by IABSE and ECCE

When: Jul 3, 2020 02:00-03.00 PM Amsterdam, Berlin, Rome, Stockholm, Vienna

Register: **https://buff.ly/3h86YjI** (First come first serve, 100 seats available).

Description: This will be a 1hr Webinar on the topic 'Characteristic Seismic Failures', with an approximate 45 minutes of lecture/discussion and 15 minutes of Q&A .This webinar is being jointly hosted by IABSE and ECCE. ECCE has declared the Year 2020 as the Year of the 3S Approach Safe – Sound – Sustainable. This webinar's speakers are: Stephanos Dritsos, Andreas Lampropoulos, Eftychia Apostolidi and Christos Giarlelis. IABSE shall launch a series of webinars on the topic: Seismic Resilience of Structures. The first webinar entitled "Characteristic Seismic Failures" aims to present in a concise and practical way the state of the art of current understanding of building failures due to earthquakes. Failures of Different types of seismic failure of reinforced concrete and masonry buildings together with geotechnical aspects are classified and the reasons for each failure are explained along with good practices to avoid such failures. Furthermore, seismic retrofitting / upgrading procedures for pre-earthquake strengthening and post-earthquake repair and/or strengthening techniques for all the examined cases are proposed. IABSE Task Group 1.1 and 5.5 are focused on seismic strengthening and retrofitting strategies aimed towards earthquake resilient structures.

4th European Engineers Day – POSTPONED!

Due to concerns around the coronavirus (COVID-19), and in accordance with health guidance from the World Health Organization, the European authorities and national governments, the three organizers of the 4th European Engineers Day ECCE, ECEC and FEANI, have decided to postpone the event that was originally planned to take place in Brussels, on 24th June 2020, to June 2021.

We regret to have to postpone this event but our top priority is the health and wellbeing of all parties involved and amid this unprecedented situation it is our duty to comply with the national guidelines to contribute to the containment of the Covid-19 and its impact to the society and economy.

More in information will be announced in due time. Stay tuned with the ECCE website.

Declaration for the Protection of Engineers Chambers

TO THE EUROPEAN PARLIAMENT

Dear All, / To Whom It May Concern,

The European Council of Civil Engineers (ECCE) is concerned about the fact that, over the last years, political bodies of some EU member states and candidate countries are undervaluing the importance, function and purpose of the Engineers Chambers. Without intending to bring out individual cases, where this is evident, we are concerned about the disrespect, shown by the leading political bodies, towards the professional chambers opinions and their exclusion from the dialogue concerning the adoption of any key regulations.

As a result of this exclusion, laws are adopted, which are not the result of the professional consideration of facts. The importance of the Chambers, which are the professional bodies whose primary function is to protect public interest and the interests of professionals, in the fields of engineering activities, is marginalized and undermined, and eventually, making it impossible for them to operate and exist. Engineering professional organizations, are among the most important European Institutions, incorporating and transmitting the best professional practices, built through the years of their experience.

Specifically, as a result of the adoption of such laws that do not have the support of the profession, the application of various Directives of the European Parliament and of the Council is diminished. For example, Directive 2006/123/EC, dated December 12th 2006, concerning the prescribing of professional liability insurance. Also, Directive 2013/55/EC, dated November 20th 2013, requiring the recognition of professional qualifications of those whose services present a direct and particular danger to the health or safety of users or third parties.

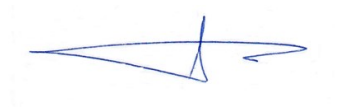
The intention and desire of ECCE is that the European Parliament may adopt a resolution on the necessity to enhance the collaboration of Engineers Chambers with the European Parliament, by working together for the best possible outcome and strengthening the role of professional engineering bodies in the EU member states and candidate countries. Also, respecting their views and positions in topics relevant to spatial planning, construction and provision of services, and enhancing their participation in any stakeholder discussion, in order to prevent potentially enormous and already visible risks, due to misplanned land management and limited sustainable resources, that

must be managed in a high-quality and multidisciplinary manner.

In this view, we would like to refer to the **B5 0247/2001 "European Parliament resolution on scale fees and compulsory tariffs for certain liberal professions, in particular lawyers, and on the particular role and position of the liberal professions in modern society"** which clearly recognizes the importance of the liberal professions and identifies that they are one of the pillars of pluralism and independence in society, and, fulfil roles in the public interest.

Should you require any clarifications or have any questions, ECCE is at your disposal for further cooperation on this and other topics.

Sincerely,



Aris Chatzidakis

President of ECCE

Be an ECCE Member (EUCivEng)
ECCE Individual Membership

The European Civil Engineer

The profession of the Civil Engineering is mostly performed where the construction is being made, in Europe or in any part of the world.

Today, within the European Union, construction companies have activities in many countries, so civil engineers have to move to foreign countries and to work all over Europe.

To allow this professional movement EU published a Directive on Professional Mobility, to facilitate the recognition of Civil Engineers across Europe.

The European Civil Engineer

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Nevertheless the Directive considers under this title, professionals with quite different academic or professional backgrounds, what can lead to unclear situations for society.

The EU Directive on Mobility proposes the creation of a European Database of Civil Engineers, interconnected through national organizations.

ECCE appeared in1985 to promote the quality of Civil Engineering with a professional recognition where academic/ professional quality is guaranteed by the national organizations.

ECCE as representative of those organizations, and to promote quality in professional recognition, is opening its membership to individual members, allowing for their image recognition as European Civil Engineers.

Join ECCE, be a EUCivEng!

ECCE goals:

- To present in Brussels the views of the European civil engineers.
  (ECCE participates in the High Level Tripartite Forum for Construction in EU)
- To establish international contacts with other associations.
  (ASCE, JSCE, KSCE, ECCREDI, Mediterranean countries, etc.)
- To promote the relevant professional information across Europe
  (Publication of e-journal, books, reports, etc.)
- To organize Conferences across Europe about Civil Engineering

What do I get as an ECCE Individual Member?

- **If you just want to be an ECCE member**, you will receive:

  The e-journal and all relevant information from EU Commission

- **If you want to come to our meetings**, you will get:

  Participation in 2 International conferences per year;

  Participation in 2 General assemblies per year;

  Participation in Brussels Engineers Day each 3 years;

  To be in contact with civil engineers across Europe (EU and nonEU).

- **But if you want to be really active,**

  You are welcome to participate in the discussion forums or to propose position papers to be submitted to Brussels.

May I become an Individual ECCE Member?

Yes, although ECCE is an association of national organizations, individual civil engineers may also be Individual Associate Members,with access to all the information and discussion forums, but they may not vote in ECCE General Assemblies.

Being an ECCE individual member you will have the reference EuCivEng.

And you get also the ECCE membership card !

- The ECCE card identifies you, through your national organization, as a Professional of Civil Engineering in your country and a **EUCivEng** in ECCE.
- It is expected that in the future the card will allow an automatic civil engineering identification across Europe, according to the EU Mobility Directive, when national organizations implement their database of Civil Engineers.

How can I become an ECCE Individual Member?

Please send to ECCE headquarters (ecce_sps@otenet.gr):

1. Registration Form
2. Document from your ECCE National Organization as a proof that you are member of it
3. Excel sheet with your information
4. Photograph
5. Excel sheet with your name and address

After receiving the notification of acceptance of your application from the ECCE General Secretary, you will be asked to proceed to the **Payment of the Subscription Fee** according to the **Payment Details** that follow.

What are the Payment Details?

- To be an ECCE individual member there is an **anual fee of 20 euros**.
- If you are **older than 65 you pay only once 30 euros** and you become member with unlimited validity.
- You can pay in packages of 3 years (60 euros) or 5 years (100 euros),
  plus 8 euros, **with each package, for mail and printing of a new card.**

The payment should be sent by bank transfer to:

National Westminster Bank plc, Charing Cross Branch

BIC	NWBK GB 2L
IBAN	GB28 NWBK 6072 1408 5260 60
Bank Address:	National Westminster Bank plc, PO Box 113, Cavell House, 2A Charing Cross Road, LONDONWC2H 0PD
Account Name:	European Council of Civil Engineers
Account Number:	550/00/08526060
Sort Code:	60-40-05

Please ensure that your payment includes your name as a reference.

After payment send a copy of the bank transfer to ecce_sps@otenet.gr and you will become ECCE member and you will receive the membership card.

News from ECCE Members

Cyprus

Actions for Reducing the Spread of COVID-19 virus

Cyprus Association of Civil Engineers (CYACE) , one of the parties that constitute the Cyprus Council of Civil Engineers (CCCE), following the Cyprus Republic's guidelines for reducing the spread of Covid-19 virus, has cancelled all its scheduled Educational Programs and Events.

However, the Board decided to organize some **Webinars**, of particular interest to the Association's members. The Webinars were held through 'Zoom' platform, participation was free and the topics included:

- **27th April 2020**: Introduction and Basic Provisions of the Law on Streets and Building Regulations for the Engineer, Speaker: *Mr. Andreas Theodotou*
- **28th April 2020 (repetition)**: Introduction and Basic Provisions of the Law on Streets and Building Regulations for the Engineer, Speaker: *Mr. Andreas Theodotou*
- **9th May 2020**: Presentation of the Pandemic Management Guide COVID-19, regarding safety and health on construction sites, Speaker: *Ms. Evangelitsa Tsoulofta*
- **20th May 2020**: Introduction to Construction and Technical Works Contracts, Speaker: *Mr. Varnavas Lambrou*
- **28th May 2020**: Obligation and Duties of Designers and Supervisors, Code of Ethics – Cyprus Scientific and Technical Chamber's Disciplinary Procedure, Speaker: *Mr. Platonas Stylianou*

All webinars were fully booked and the Association is considering the fact to continue providing online seminars for its members and not only.

New Cyprus Archeological Museum

Architecture Study:
Theoni Xanthi, XZA Architects
With Thodoris Androulakis, Spyros Yiotakis, Margarita Zakynthinou - Xanthi

Partner Architects – Stage B:
Giorgos Andreadis – YAP,
Fereos + Associates Architects

The construction of the new Archaeological Museum marks an important gesture which aims to highlight and present internationally, the historical and cultural richness of Cyprus. Its preparation was long-term and was held through public debate. The award was presented after an international two-stage competition of 129 entries.

The building, with an area of about 35,000 sq.m will be implemented in two stages. The preliminary cost of stage A is estimated at €83.000.000. In addition to the permanent Exhibitions, it includes spaces of periodic Exhibitions, Educational Laboratories, Maintenance Laboratories, Archaeological Material Warehouses, the facilities of the Department of Antiquities, Library, 300-seat amphitheater, 380 parking spaces and a large outdoor space covering the current Building of the Cyprus House of Representatives (there are plans for Construction of a new Building of

the House of Representatives), extending to Pediaios River.

The centrality of the selected **location**, which is situated on the plot where the General Hospital was housed, an area between the green areas of the city and the important public buildings, was the starting point of inspiration, not only for an open building that communicates with the city, but also for a wide urban and environmental design, which will upgrade the city of Nicosia.

The new Stratigraphy of the area, resulted in the creation of a new environment that is composed of three horizontal zones:

- The upper zone with the floating body of the museum, the permanent exhibition
- The intermediate zone (accepts the city)
- The riverbed of the river (receives daily operations)


The **construction** of the museum combines technological precision and parameterization of the shell with the earthy texture and the image of the plastic craft, which ultimately determines the uniqueness of its formal and aesthetic presence.



The **structural solution** frees the ground floor from pillars, allowing its free configuration to be rendered in the city and at the same time frees the exhibition spaces from pillars allowing the comfortable and flexible layout of the exhibition content.

The **bioclimatic - energy design** of the building ensured its energy efficiency and utilized the climatic data with emphasis on natural cooling and the creation of shaded and cool spaces in the immediate vicinity of the museum, meeting places, rest and comfortable areas.

An archeological museum is a building that is called to protect the memory and interpret the past. In this sense, for Cypriots it is a building of identity and self-knowledge. At the same time, as these spaces are by definition dealing with the past, there is a danger of becoming static events, cut off from the current urban life. Thus, a fundamental question that was posed from the beginning, was how architectural writing would coexist without subjugating or even disappearing, the building's identity.

The aim of the proposal is an establishment which will create a new environment and rejuvenate the urban fabric, creating a new pole for social activities out of the city walls and a new field of culture promoting the Cypriot Archeology.

CYACE'S 27th Annual General Assembly, 14th December 2019


The 27th General Assembly of the Cyprus Association of Civil Engineers (CYACE) was held on 14th December 2019, in Filoxenia Conference Centre, Nicosia, Cyprus. The assembly was held under the auspices of the Ministry of Transport, Communications and Works.
The Assembly consisted of particularly interesting lectures. Specifically Mr. Aris Chatzidakis, ECCE President and Honorary member of CYACE, gave a lecture of "The past and future of Civil Engineering".
During the Assembly, CYACE member, Mr Nicos Stylianou, was awarded for his long term involvement and contribution in ECCE (on behalf of CYACE).



Moreover, Mr. Chatzidakis declared the Opening of "2020 – The Year of the 3S Approach – Safe, Sound, Sustainable" (ECCE's Moto for 2020).

During the Assembly, elections were held for the selection of new Central Board of Directors of the CYACE.

The new Central Board of Directors consists of the following:

- Andreas Theodotou President
- Evangelitsa Tsoulofta Vice President A'
- Nicholas Kyriakides Vice President B'
- Varnavas Lambrou General Secretary
- Andreas Constantinides General Treasurer
- Elena Sophocleous Member
- Yiannos Poumbouris Member

Two-Day Seminar: "Evaluation of Existing Buildings", 11th & 12th October 2019

The Educational and Research Centre of CYACE, organized with great success and full participation the two-day seminar "Evaluation of Existing Buildings" with distinguished trainers Dr. Demetris Vamvatsikos and Dr. Nicholas Kyriakides.
The course was authorized by Human Resource Development Authority of Cyprus.
The aim of the program was for the participants to acquire the necessary knowledge for the independent treatment of valuation and upgrade of existing constructions, with emphasis on reinforced concrete buildings, using the latest developments and also understand the seismic behavior of such constructions, based on engineering principles and the provisions of the applied regulations and in particular, of the Eurocode 8.

Two-Day Seminar: "Eurocode 8, Part 1: Provision and Application", 13th & 14th February 2020

The Educational and Research Centre of CYACE, organized with great success the two-day seminar "Eurocode 8, Part 1: Provision and Application" with distinguished trainer, Dr. Christis Chrysostomou.

During the Educational Program, attendees had the opportunity to learn about Eurocodes, the Standard Series that cover the Design and Construction of Buildings in Europe, understand the mechanisms of earthquake occurrence and their effects on construction, the basic principles of anti-seismic engineering and the possibility of applying the provisions of Eurocode 8, for reinforced concrete structures.

FIDIC Module 1 Advanced: Practical Use of FIDIC Contracts - Advanced Topics, Including the new FIDIC Golden Principles and Highlights of the 2017, 21st & 22nd November 2019

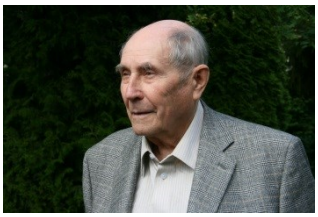
CYACE in cooperation with FIDIC (International Federation of Consulting Engineers), proudly organized the seminar FIDIC Module 1 Advanced: Practical Use of FIDIC Contracts - Advanced Topics, Including the new FIDIC Golden Principles and Highlights of the 2017 Editions, with great success.
The tutors of this course were Mr. Robert Werth, FIDIC accredited international Trainer and Adjudicator and Mr. Husni Madi, an affiliated member and accredited trainer of FIDIC and chair of FIDIC Task Group 15 "FIDIC´s Gold-

en Principles". Both gentlemen have had extensive experience and worldwide involvement with management of projects and related dispute resolution and D.A.B.

Estonia

About unique buildings in Estonia (Part two)

On the Construction of the Song Festival Tribune in Tartu



Author: ***Professor emeritus Karl Õiger.***

In 1985 a competition to find a solution for the acoustic screen for the song festival tribune in Tartu was announced. Prof. Valdek Kulbach suggested the construction to be a hanging roof with a freely deforming elliptical contour, which he had previously studied, and which had also been the topic of his doctoral thesis. This solution was chosen and realized (see fig. 1), which also means the results of the research carried out in the framework of the doctoral thesis were realized.

Figure 1. Overview of the song festival tribune's construction

The tribune was designed for 3,000 singers. Constructional design by the Tartu department of the State Design Bureau Eesti Projekt (architect Roman Smuškin, constructor Ahto Soomer).

The orthogonal network of prestressed carrying and stiffening-stretching cables of the Tallinn song festival tribune is supported by the contour planar arches, which forces are transformed to the counterforts on the sides (fig. 2). Upon loading the roof, the stretching cables shorten, and as a result their prestressed force and pressure on the carrying cables decreases. At the same time, the decrease of this pressure also reduces the increase of the carrying cables' internal (tension) forces originating from external loads.

Figure 2. Renovation of the Tallinn song festival tribune

The hyperbolic paraboloid shaped acoustic screen (($z = f_x(x^2/a^2) - f_y(y^2/b^2)$, where f_x ja f_y sags of the central cables, a ja b are the half axes of the elliptical contour) for the Tartu song festival tribune has a freely deforming elliptic contour, but it rests on hinged columns (fig. 1 and 8). With a system as such, if the load on roof increases, the internal force of the rigidifying cables increases due to the deformation (expansion) towards the contour and its guys. Therefore, the greater the load, the greater the tension force of the stretching cables and the more rigid the whole cable network. The contour must manage with the cable network forces itself. The prestressed cable network is connected to the three-layer cross-nailed timber shell (fig. 3, Karl Õiger's suggestion), which is fastened to the cable network with

steel clamps on the crossing points of cables and to the contour (fig. 4). Load is transferred from the roof to the contour via both the cables and the timber shell (a composite structure). The shell also increases the system's shear rigidity and acts as the roof's substructure. So far no one has dared to use such a solution.

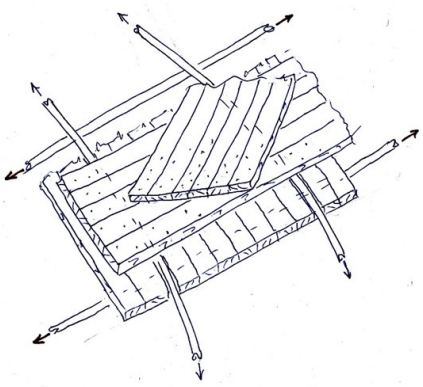


Figure 3. The roof's composite structure

Figure 4. The acoustic screen as viewed from below

There is one significant advantage the Tartu song festival tribune has when compared to the Tallinn song festival tribune – the surface of the screen has a smooth curvature at each point. The curvature of the screen for the Tallinn song festival tribune is huge in the areas near the side supports, if compared to the rest of the surface. This makes it difficult to build the roofing structure, and the ridge curvatures of the beams are very small; therefore, the rigidifying cables in such areas are almost straight, which in turn minimizes the prestressing effect.

The roof structure's conceptional solution was compiled in Tallinn University of Technology in 1986-88 (Prof. Valdek Kulbach's suggestion, later also Prof. Karl Õiger joined). The opening of the acoustic screen/roof is 55 m and its transversal width is 42.55 m (fig. 5 and 6).

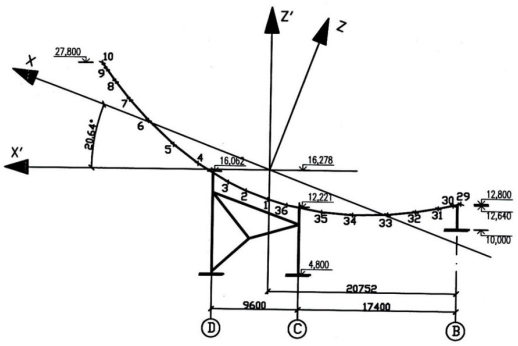


Figure 5. The x-axis level scheme as shown in the project

The cables are ø 30 mm steel pins (Soviet steel 10Г2С) with a solid cross-section, distance between them is 1.5 m. The boards in each layer are 30 mm thick. The external diameter of the contour beam is 1220 mm, and the wall is t=16 mm thick (09Г2С). The pillars are made of tube profile (ø 630 mm, wall thickness t = 10 mm) and the diagonals between the pillars of square cross section tubes with the cross section of 140 mm and wall thickness of t = 10 mm (fig. 8a), two supports on the back (fig. 8b). To achieve the necessary bending load-bearing capacity and rigidity of the contour beam, it was filled with reinforced concrete in the sections there were supports, and in the ridge (also to partly compensate for the tension force of the carrying cables) (fig. 7, 8 and 9).

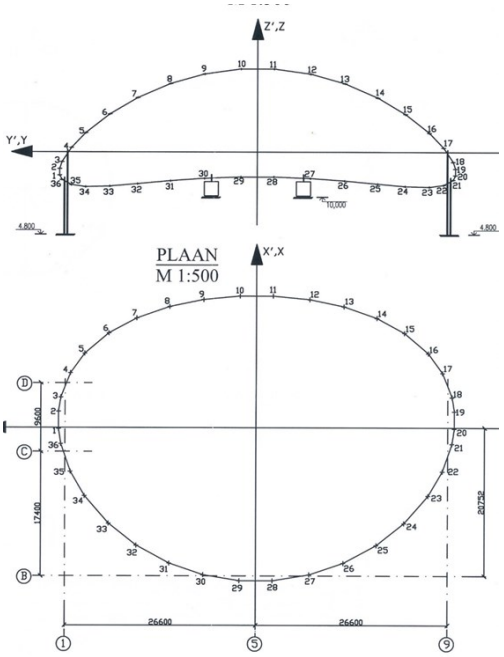


Figure 6. The structure scheme with the dimensions as shown in the project

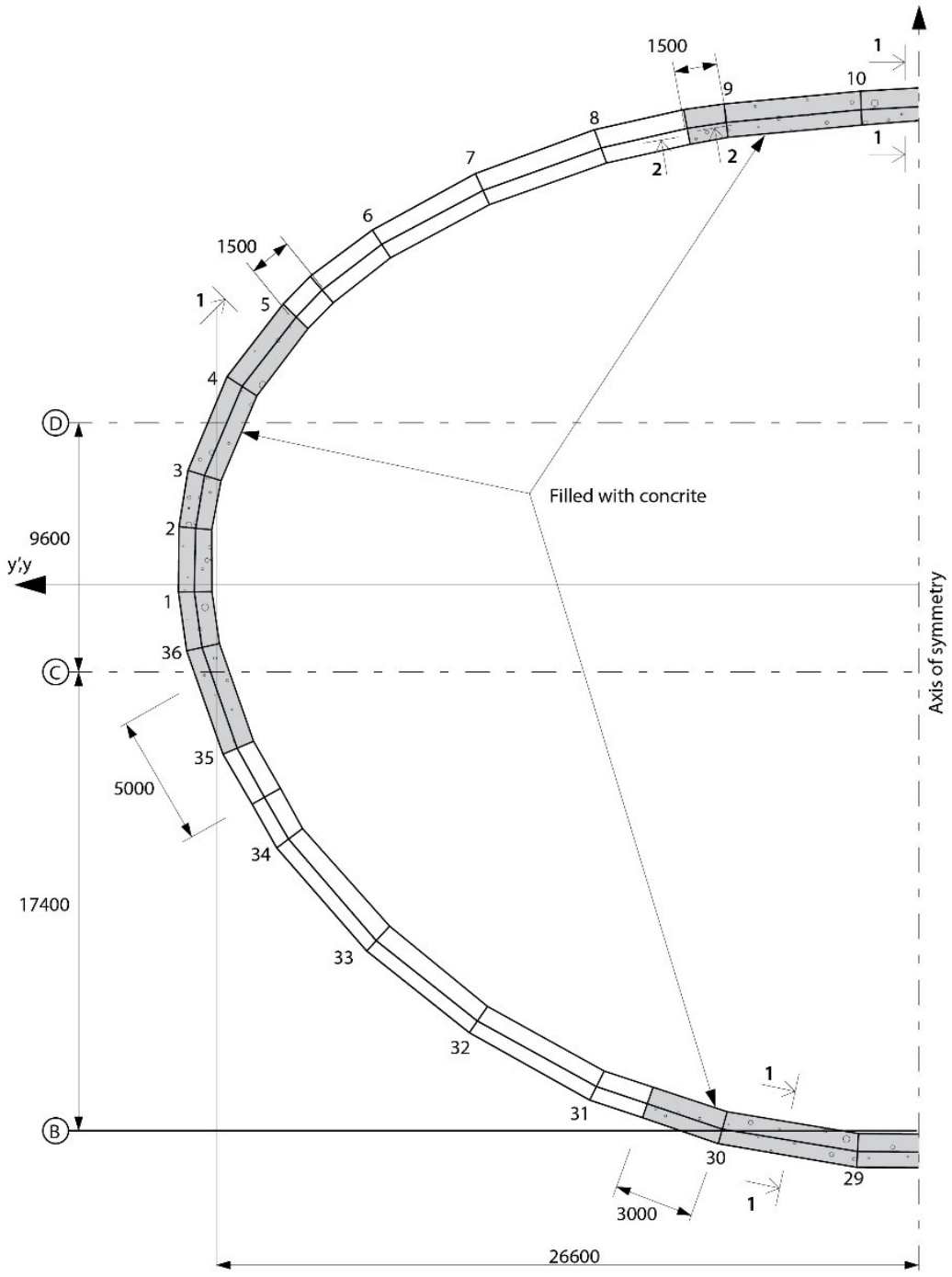


Figure 7. Sections the contour tube is filled with concrete

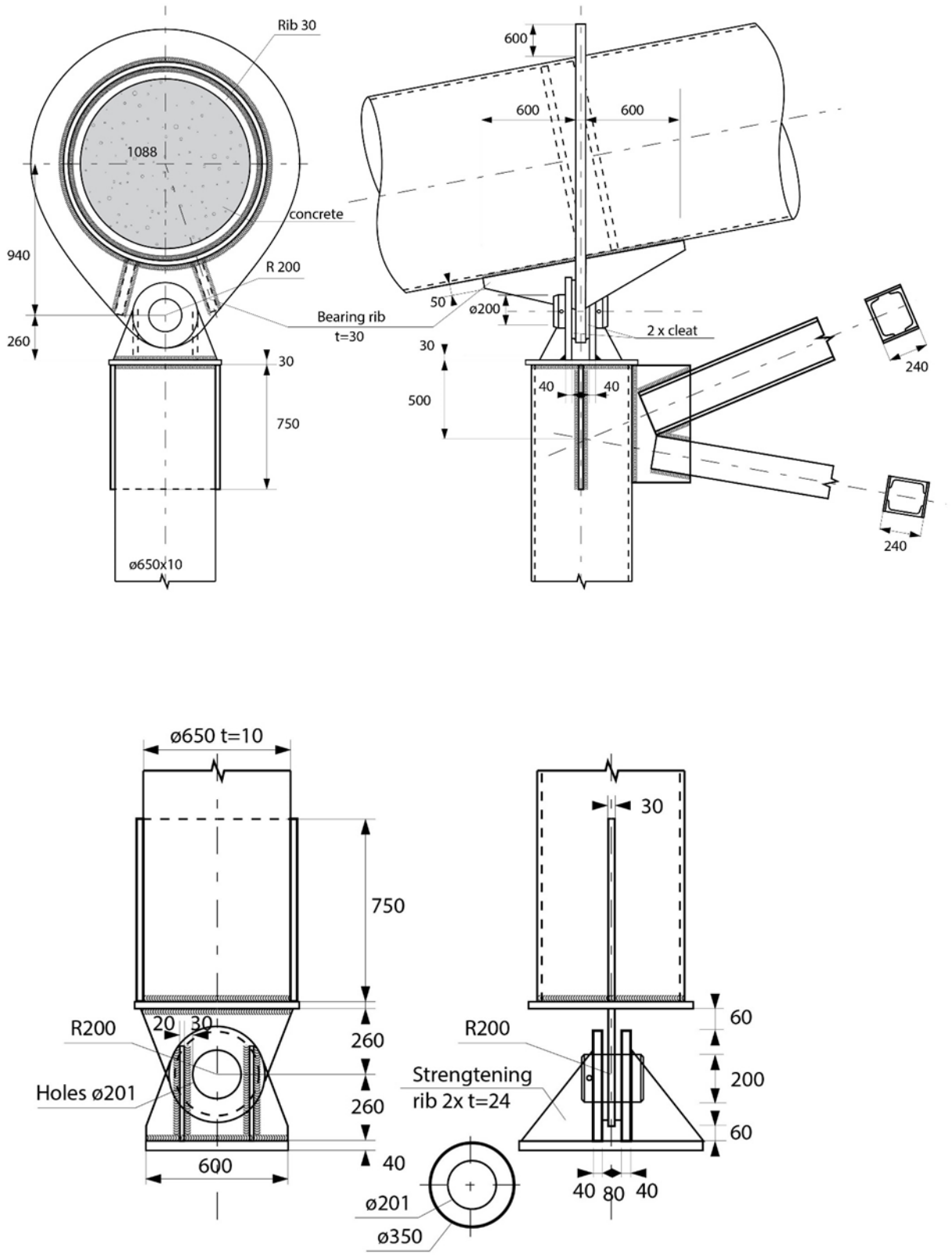


Figure 8. a) the contour's hinged support on the side columns

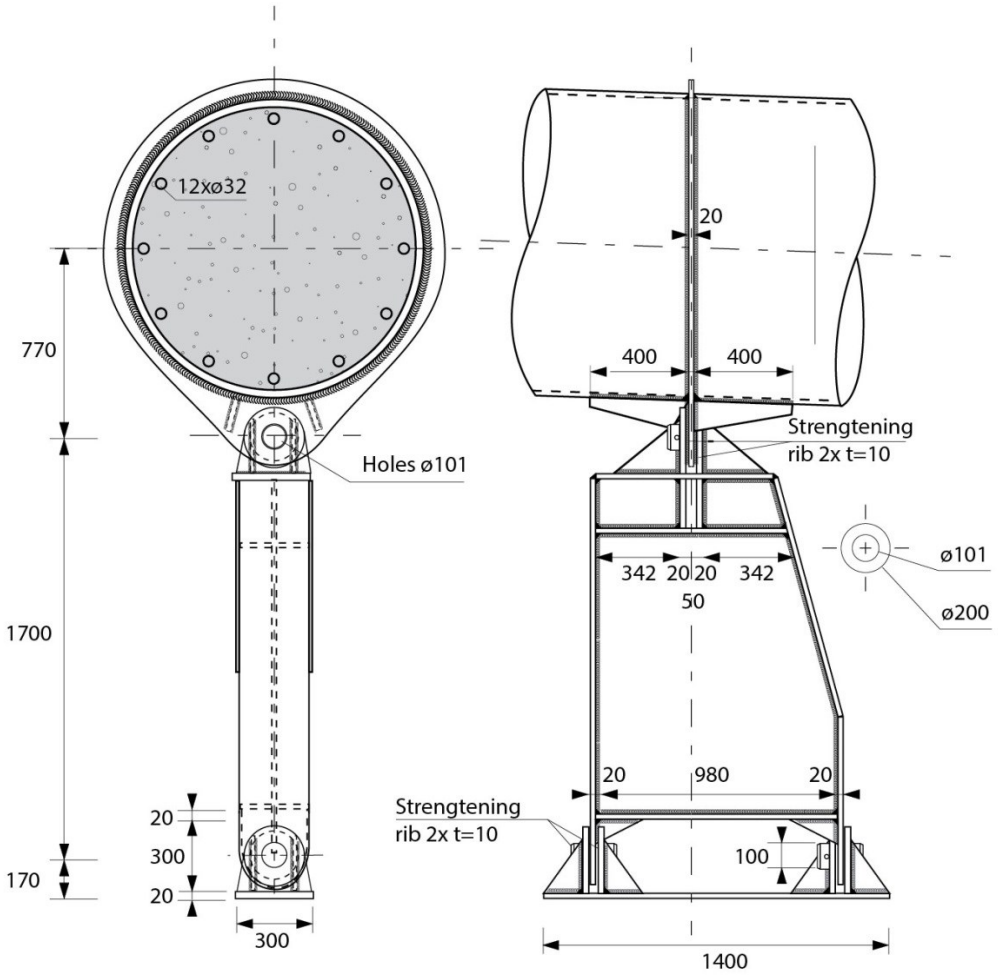


Figure 8. b) resting on the supports on the back

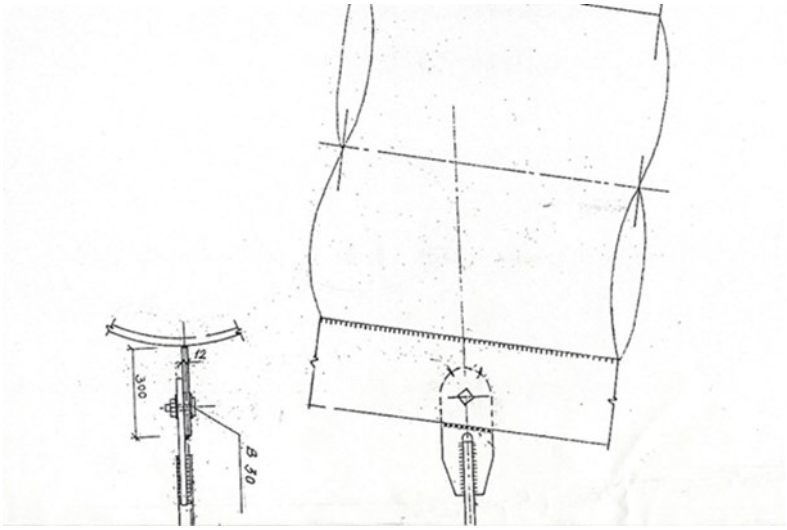


Figure 8. c) cables fastenings to the contour tube

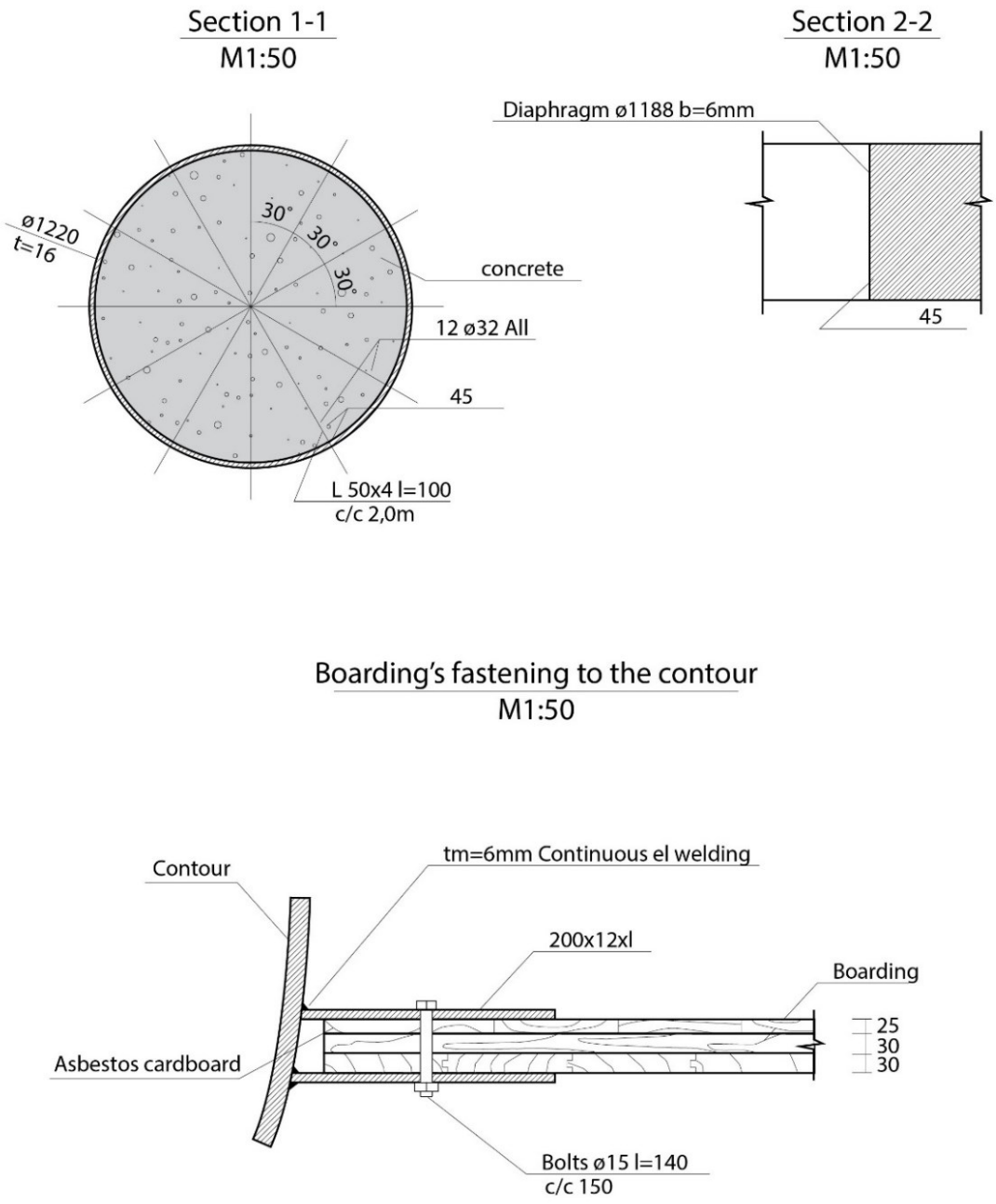


Figure 9. Reinforcement of the contour tube in the sections it is filled with concrete and the fastening of the timber shell to the contour tube.

During the design phase (1988-89), a model construction 1:10 (fig. 10) was used to study the behaviour of the system under different loads (Valdek Kulbach, Karl Õiger, Ivar Talvik, Peeter Paane, Evald Kalda). The best helix angle for the acoustics of the acoustic screen was defined by Prof. Helmut Oruvee. Ivar Talvik, candidate of technology, used a model to study the division of wind load in a wind tunnel (fig. 11).

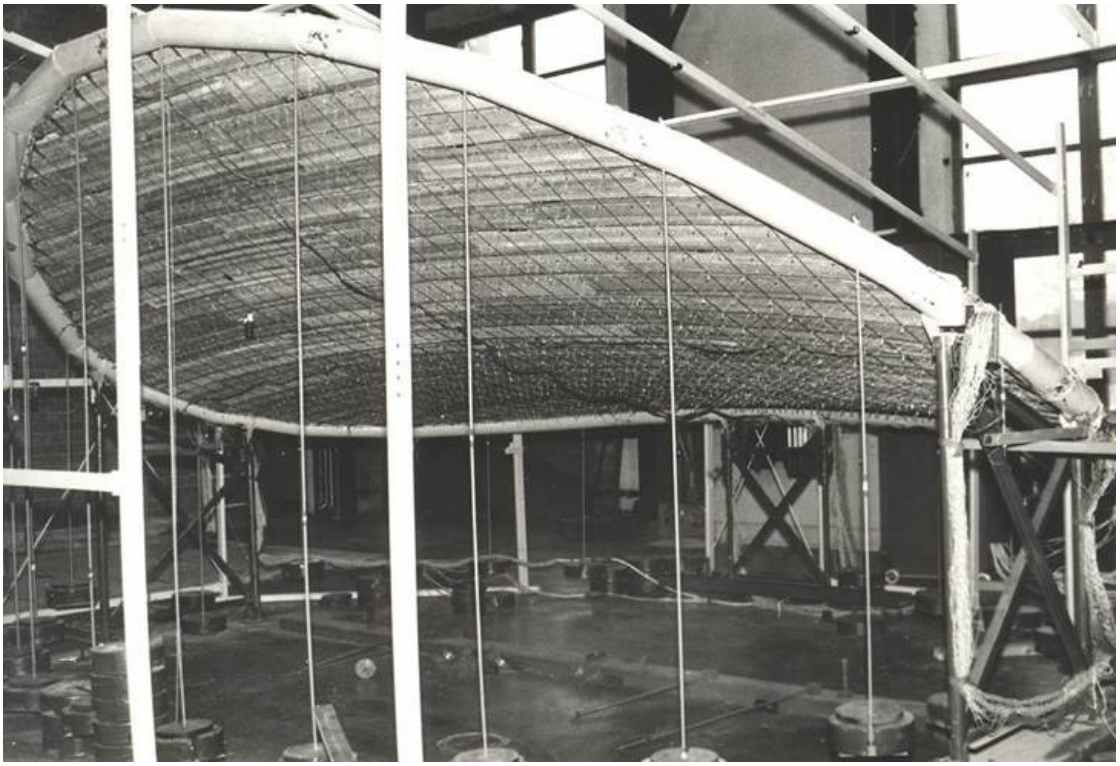


Figure 10. 1:10 test model of the construction

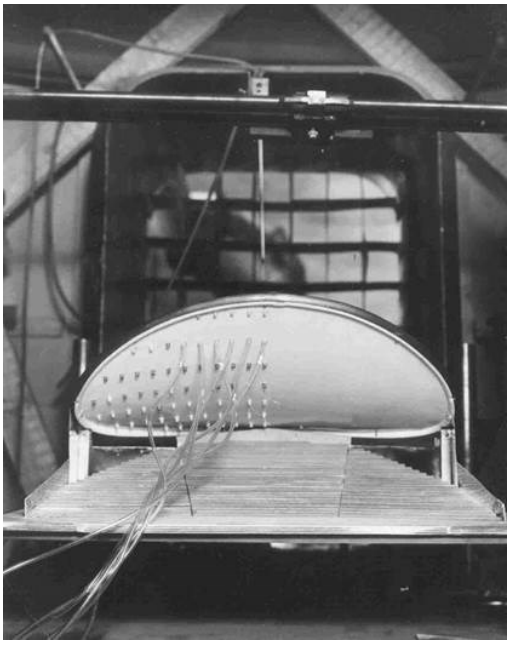


Figure 11. Defining of the division of wind load and the aerodynamics factor in a wind tunnel

Constructional calculations were made using the formulae of Valdek Kulbach's theory [1 and 4] and the calculation program TPS 10. In 2019, 25 years after the beginning of the exploitation period, also with the RFEM program (fig. 12, 13 and 14).

What is peculiar with this system, is the work of the stiffeners between the columns. Since under vertical load the contour contracts in the direction of carrying cables and expands in the direction of rigidifying cables (see fig. 12, 13, 14), ¾ of the front section of the roof moves backwards (held back by the stiffeners between the side columns). The back arch strengthens and the distance between the back columns (see fig. 6) increases and creates load in the stiffeners between the columns (x-direction). According to calculations, the loads in the described

stiffeners have mainly been caused by vertical load (e.g. snow ≈ 150 kN). Additional wind load on these stiffeners is smaller (≈ 90 kN). The maximal bending moments of the contour tube appear if a large quantity of snow is piled up in the extent of half the roof in the direction of rigidifying cables.

The constructing of the song festival tribune began in 1990 and its exploitation started in 1994. Between those years, during the early years of Estonia's re-independence, the construction works were stopped for several reasons. Since in the case of this system, the stressing of the stretching (stabilizing) cables increases if loaded, it was not necessary to pre-stress them with great forces during construction as it had been done in the case of the Tallinn song festival tribune. According to the calculations, during the construction, the carrying cable's pre-stressing force was H_{0x} = 20 kN/m or 30 kN per one carrying cable. According to the surface geometry, the prestress force of the stretching cables is 48.3 kN/m or 72.5 kN per each cable. Therefore, the prestress forces are relatively small (the carrying cables of the Tallinn song festival tribune have the prestress force of 100 kN/m, cables with the interval of 3 m 300 kN). Here upon loading, the elliptic contour deforms and expands towards the greater diagonal. The extension shall be held back by the stretching cables that are engaged as tie-rods, their internal forces increase, yet their pressure on the carrying cables increases and therefore the whole cable network rigidifies. In the construction type used in Tallinn, it is vice versa – if loaded, the rigidness of the network decreases.

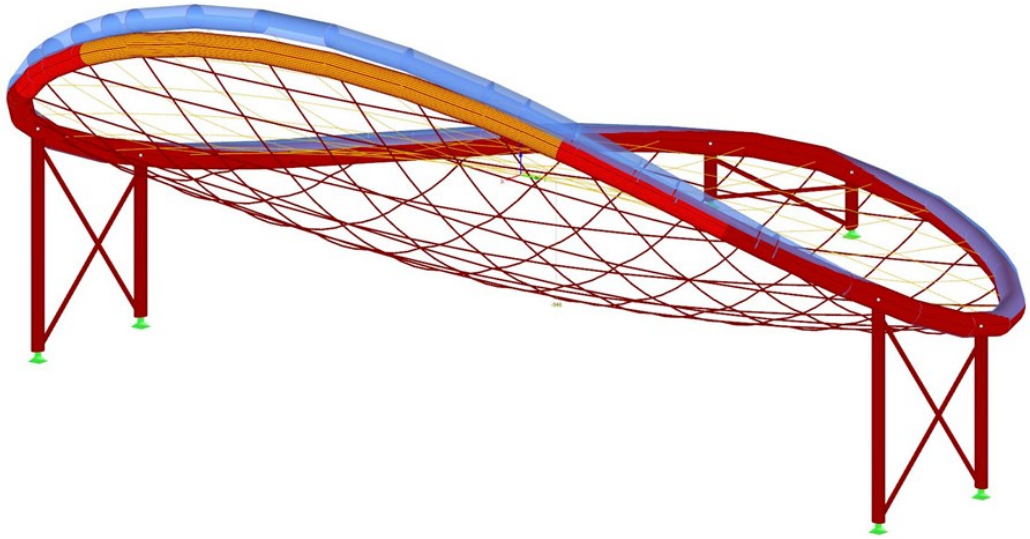


Figure 12. Roof's deformations upon loading. The blue colour indicates the contour's initial position as shown in the project

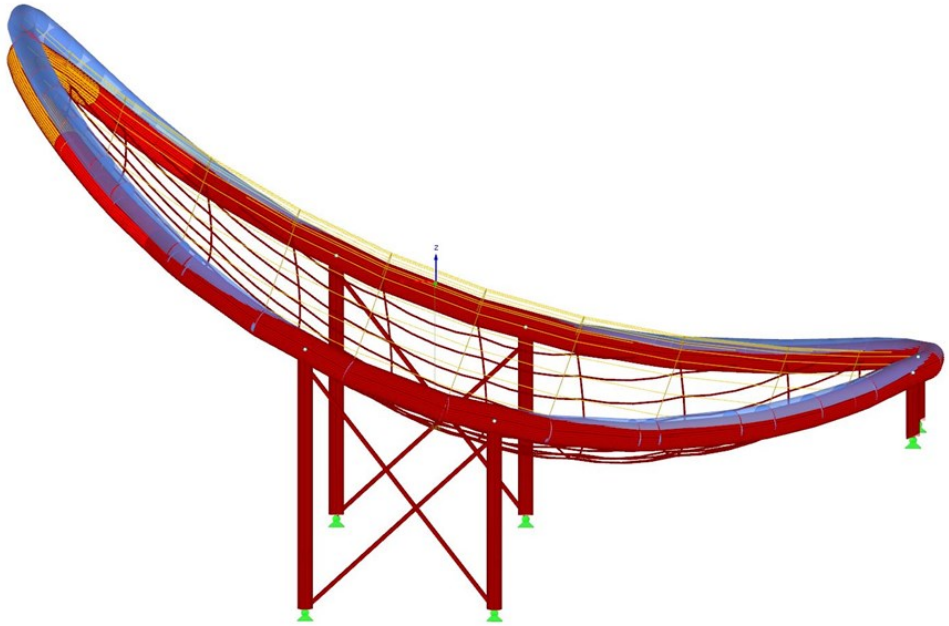


Figure 13. Deformation of the contour tube in the transverse direction (towards x-axis)

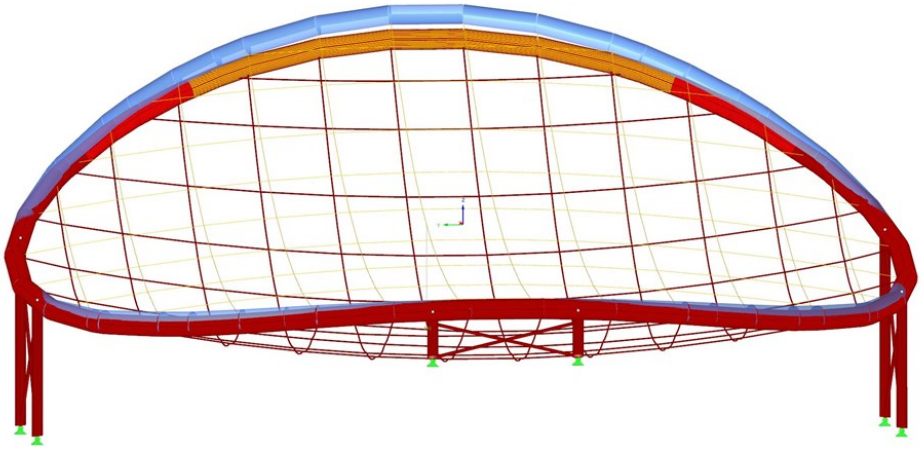


Figure 14. Deformation of the contour in longitudinal direction

In the beginning of the exploitation period, the roof's load was transferred to the contour, ca ¼ via the cables and ca ¾ via the timber shell. Due to additional deformations of the timber shell, the described relation shall later be 50/50 %. As a result of the additional deformations of the cross-nailed timber (plastic deformations in time), the distribution of the internal forces between the shell and cables changes. The influence of these deformations is also seen in the increase of the construction's displacements in years (see below: scheme 1 and tables 1, 2 and 3). The testing that was carried out during exploitation involved symmetric and antisymmetric stimulation and showed the range of oscillation frequency 2.34… 6.83 Hz (average > 4 Hz).

Now we will look at some situations from the construction period (photos of installation, the contour temporary supporting on masts, the construction of the timber shell and the elimination of the masts, see fig. 15, 16, and 17).

Figure 15. Assemblage of the contour tube

The contour tube was attached to the support frame on the ground in four parts, one element of the front arch, two elements of the sides and one of the back arch, which then were hoisted to the project position on three temporary masts in the front (see fig. 15) and supports on the sides and in the back. Then the elements of the arch were welded together. It must be noted that the elements were surprisingly compatible with each other. After that the necessary sections of the contour tube were filled with concrete (see fig. 7 and 8).

The temporary front arch masts were removed after the cable network had been installed and pre-stressed, and the timber shell had been built (fig. 16 and 17).

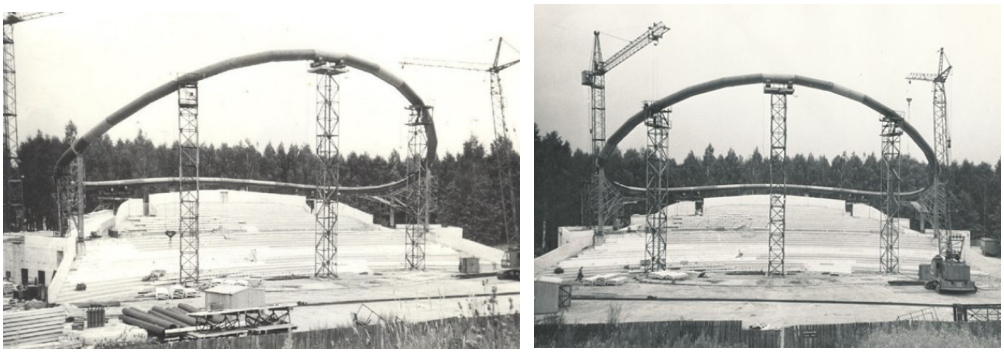


Figure 16. Temporary masts supporting the contour tube

Figure 17. Construction of the timber shell

Figure 18. Timber shell viewed from above

Figure 19. Installation of the Sarnafil hydro insulation on the timber shell

Figure 20. General view of the song festival tribune from the back

During the first years of the exploitation period, there was one very snowy winter. Despite the relatively slippery Sarnafil covering, there was a thick snow layer reaching the very top of the roof. Finally, on one day the huge snow layer drifted, there was an avalanche (see fig. 21). The weight of the drifted snow was approximately 30 tons. Nothing happened with the construction. Therefore, the construction also stood the test of such extraordinary load.

Figure 21. Snow drifting from the upper part of the roof

During the first years of exploitation, the functioning of the construction was also monitored by measuring the displacements (see fig. 22, locations of the measuring flagpoles). The measuring results for each year have been brought in tables 1, 2 and 3 in which H refers to differences in vertical displacements, A and B respectively those in x and y axial direction.

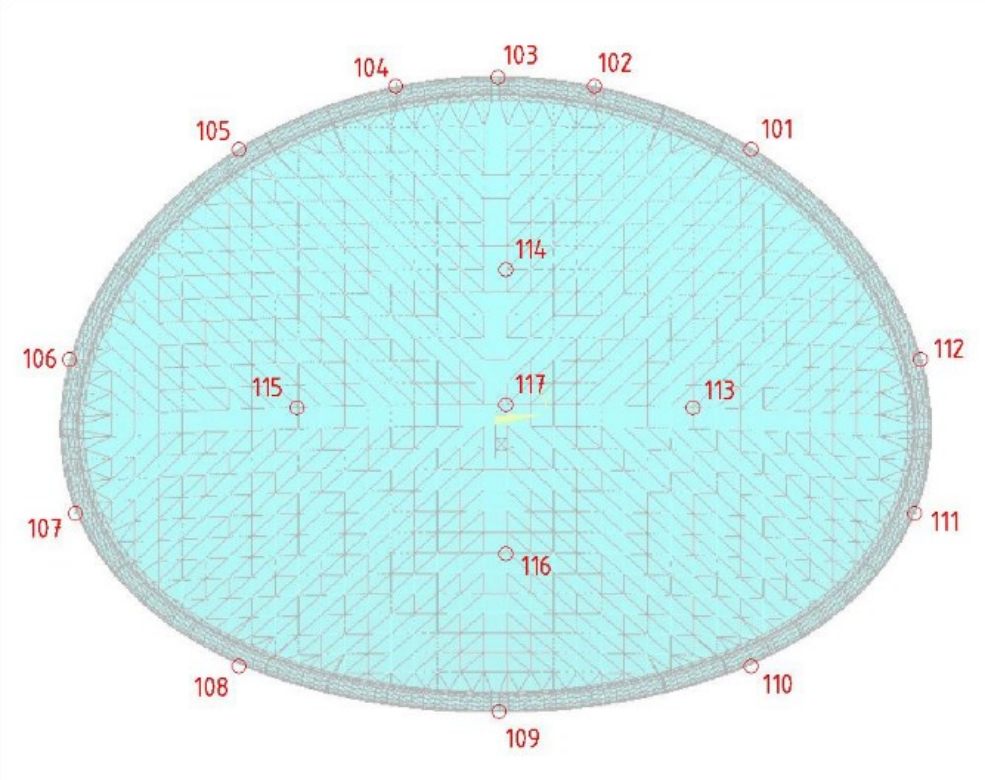


Figure 22. Locations of the flagpoles for measuring displacements in time

Table 1. Results of geodetic measuring
Vertical displacements of the acoustic screen's monitoring flagpoles

No of the monitoring flagpole	Results of geodetic measuring [mm] (time of measuring mm, yy)							
	05.91	02.92	05.92	05.93	06.93	06.94	05.00	03.11
	H_1	H_2-H_1	H_3-H_1	H_4-H_1	H_5-H_1	H_6-H_1	H_7-H_1	H_8-H_1
101	0	-6	-8		-18	-21	-23	-28
102	0							
103	0	3	-4			0	3	
104	0	1	-4	-1	0	0	0	
105	0	-11	-13	-20	-27	-28	-28	-51
106	0	-2	-5	1	-3	2	3	6
107	0	-4	-5	-1	-3	-1	0	1
108	0	-31	-31	-27	-90	-105	-118	-148
109	0	-6	-7	6	-123	-146	-171	-220
110	0	-10	-9	-2	-60	-78	-91	-117
111	0	-2	-4	2	4	0	0	3
112	0	1	-2	3	4	2	2	4
		H_2	H_3-H_2	H_4-H_2	H_5-H_2	H_6-H_2	H_7-H_2	H_8-H_2
113		0	23	-240	-228	-218	-227	-280
114		0	34	-294	-241	-204	-198	-289
115		0	28	-246	-238	-218	-226	-285
116		0	11	-212	-255	-259	-272	-332
117		0	36	-272	-267	-248	-260	-324

Table 2 x^1-axial direction displacements of the acoustic screen's monitoring flagpoles

o of the monitoring flagpole	Results of geodetic measuring [mm] (time of measuring mm, yy)							
	05.91	02.92	05.92	05.93	06.93	06.94	05.00	03.11
	A_1	A_1-A_2	A_1-A_3	A_1-A_4	A_1-A_5	A_1-A_6	A_1-A_7	A_1-A_8
101	0	-9	-5		3	4	2	-1
102	0							
103	0	1	4			-2	-2	
104	0	-2	-7	-3	-3	-2	-2	
105	0	2	-5	-16	-13	-9	-7	-22
106	0	6	3	-61	-57	-57	-53	-60
107	0	6	1	-69	-70	-73	-69	-92
108	0	-3	-8	-40	-42	-49	-42	-49
109	0	-5	-4	-23	-20	-26	-20	-22
110	0	-13	-9	-13	-4	-14	-9	-5
111	0	-6	-3	42	49	40	45	66
112	0	-8	-6	52	49	42	43	68
		A_2	A_2-A_3	A_2-A_4	A_2-A_5	A_2-A_6	A_2-A_7	A_2-A_8
113		0	2	1	6	4	6	15
114		0	0	-2	4	5	1	-7
115		0	0	-21	-20	-22	-20	-30
116		0	0	-22	-16	-24	-18	-17
117		0	2	-11	-7	-7	-9	-9

Table 3 y-axial direction displacements of the acoustic screen's monitoring flagpoles

No of the monitoring flagpole	Results of geodetic measuring [mm] (results of measuring mm, yy)							
	05.91	02.92	05.92	05.93	06.93	06.94	05.00	03.11
	B_1	B_1-B_2	B_1-B_3	B_1-B_4	B_1-B_5	B_1-B_6	B_1-B_7	B_1-B_8
101	0	11	1		43	38	42	68
102	0							
103	0	10	-2				74	
104	0	6	-6	73	70	63	70	
105	0	2	-7	41	42	40	44	104
106	0	2	-2	-1	0	-1	1	-25
107	0	2	-1	2	2	1	2	-5
108	0	20	28	-18	32	47	58	52
109	0	-11	0	-116	-13	7	26	32
110	0	2	7	-49	-2	10	20	18
111	0	5	5	5	6	5	5	0
112	0	-16	-17	-15	-16	-17	-15	-8
		B_2	B_2-B_3	B_2-B_4	B_2-B_5	B_2-B_6	B_2-B_7	B_2-B_8
113		0	-13	70	79	78	87	98
114		0	-17	76	79	71	79	101
115		0	-10	86	97	93	103	111
116		0	0	50	92	100	111	123
117		0	-15	71	93	88	100	111

Conclusion

The complex construction in which there is cooperation between the contour, prestressed cable network and nailed cross laminated timber shell, which also is a substructure for the roof, is a normally functioning solution and could also be used in the case of larger openings. At the same time, while designing the construction and carrying out related constructions, one must consider the shell's additional plastic deformations (connected with time) that can be imitated in calculations by varying the elastic characteristics of the timber shell.

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Latvia

Best Building of the Year – Warehouse Reborn in Cultural Ambience

Antra Ērgle
Editor of the magazine *Būvinženieris* (Civil Engineer) of the Latvian Association of Civil Engineers
Photo from the archives of the magazine *Būvinženieris*

In April, the winners of the 22nd Latvian national contest *Best Building of the Year 2019* were announced via live video online and the awards were delivered in line with the rules regarding the restrictions on public gatherings during the Covid-19 pandemic. The jury, consisting of 50 experts, viewed and assessed 90 civil structures commissioned last year, with the ***Grand Prix*** **awarded to Riga Culture Centre *Hanzas Perons***, rebuilt from an abandoned railway warehouse.

"Among the civil structures in the 2019 contest, we can see more ambitious designs than ever before. The most satisfying observation is that the long-term perspective is becoming increasingly important in our construction industry. Civil structures are ordered by much more knowledgeable and meticulous customers requesting better construction materials and higher quality building processes. These are the main prerequisites for an outstanding and contemporary finished building which guarantee its carefree maintenance. Hence, we can conclude that the industry is showing positive trends," concludes **Normunds Grinbergs, Chairman of the Jury of *Best Building of the Year***.

Eight Nominations

Buildings were nominated for eight awards. The best new public building award went to the Concert Hall *Latvija* and Ventspils Music School, with its reconstructed facilities on the adjacent Big Square (*Lielais laukums*). The most outstanding manufacturing building – office buildings with warehouses and a reservoir in Babite. The best reconstruction – the *Alfa* shopping mall in Riga.

An old wooden house at 14 Vecpilsētas Street in Jelgava is an excellent example of restoration. The best wooden structure in the Baltic States that must not be overlooked – the *Mītava* outdoor concert venue located on Pasta Island in Jelgava, with its curved and glued timber constructions.

The most significant engineering structure is the power transmission line *Kurzeme Ring* which plays a significant role in the economic growth of the western part of Latvia. The landscaping award was given to the sports and recreation facilities built in the courtyard of the multi-storey buildings in Saulkalne. Finally, the multifunctional centre *Akropole* in Riga was announced as the best building information modelling (BIM) application object.

Historical Freight Station

The multifunctional Culture Centre *Hanzas Perons* in Riga opened in the summer of 2019. It was developed by *SIA Pillar Development* which belongs to *New Hanza Capital* Group. The project was designed by the architecture company *Sudraba Arhitektūra* and architect Reinis Liepiņš. The general contractor *SIA Pillar Contractor* also employed more than 30 subcontractors on the building site. The total investment amounts to around EUR 11 million.

Formerly built in 1903, the restored railway freight station perfectly blends the past and present and now serves as a unique testimony to Riga's industrial heritage. Construction works lasted from September 2017 to July 2019. Now *Hanzas Perons* is a prominent cultural and recreational venue that hosts concerts, exhibitions, conferences and many other public events.

As envisaged in the detail design, the former station warehouse has acquired a new roof construction and glazing along its circumference, with a double facade on the southeast, southern and southwest part made of vertical planks that serve as shading. The wood and brick structures have been retained as decorative interior elements, thus integrating the old building into the new one. After reconstruction, the building acquired a larger area – instead of the historical 2,114 m^2 it was expanded by another 2,312 m^2, with a total area now comprising 4,426 m^2.

Piles at a One-Metre Distance

In order to extend the structure, 454 piles were bored along the perimeter of the original building, while some were placed one metre away from the original foundation. According to Uldis Siecenieks, Chief Construction Manager of SIA *Pillar Contractor*, this required continuous monitoring of the warehouse walls and foundation to prevent formation of cracks. At the same time, ground water was pumped out while closely monitoring ground water levels to prevent them from falling underneath the old foundation, which was three metres deep.

Normunds Tirāns, Director of *SIA IG Kurbads*, explains the process: "We had developed solutions for separating the new and the original foundation structures. Careful work helped to construct the basement floors right at the historical brick walls and their foundations in very complicated geotechnical conditions. The underground area was

built by using a gentle pile boring technology, namely, double-rotor drilling. That helped to reduce the potential risks related to increased vibration or soil mass disturbance. Thanks to the meticulous control of all technological processes, both basement areas were built without affecting or damaging historical structures."
The piles were bored so that they overlap and provide a waterproof wall which helped to lower ground water levels on the internal side of the pile wall during the underground construction works to prevent excessive fluctuations of the ground water outside the wall. The acquired waterproof pile wall prevented ground water levels from dropping during excavation of basement areas; hence the historical brick walls also remained intact during the subsequent building process.

Metal and Glass Walls

Assembly of the metal structures was one of the most time-consuming processes. The structures were reinforced with high-strength structural bolts HV10.9 and welded joints. Metal constructions serve to hold the timber structures of the original roof, which has now been transformed into the roof lining. Project architect Reinis Liepiņš explains why this solution was chosen: "The historical beams did not have sufficient load-bearing capacity, hence we decided 'to wrap the building inside a new shell' made of steel and glazed structures. It ensured a good microclimate and the building did not require thermal insulation. The glazed vertical plane visually removes the borderline between the exterior and interior, which actually was one of the architectural concepts."
Metal constructions at the bottom part were complemented with glazed units that required extremely high precision. The total glazed area comprises 4,128 m^2, while steel structures account for around 330 tonnes of steel.
As designed by the architect, glass structures have also been used in the roof plane. The 6-metre-high vertical wall abuts the 1.40 metre long glazed roof slope. No cornices or any other separating elements were used that way further emphasising the unity of interior and exterior. The ancient building has retained its historical shelters, with the interior glazed slope hiding behind the original canopy and creating the effect of a glazed conservatory.

Unique Beams

The elements that contribute to the uniqueness of this building are the structural glass beams which secure the roof structure that connects the old and new parts of the building. "That emphasises the significance of this building and its openness to the world. Here, we have the facade of a historical building which has now been converted into the interior element, while glazing and roof lights create a feeling of volatility, increase the scope and transform the building into a serious and significant cultural edifice," describes the architect Liepiņš.

Kaspars Jurēvics, Project Manager of *SIA Pillar Contractor*, admits that the usage of structural glass beams is not very common in the Latvian construction industry: "There is no applicable regulation in place that would give guidance for calculating the structural characteristics of glass because normally glass is not designed to be used for load-bearing structures."
The glass beams are made of several glued glass panels and supported with metal structures. Before their development, special load tests were carried out. The length of the longest beam is 4,480 mm, the height – 300 mm, and it consists of four laminated 10-mm safety glass interlayers.
Aldis Cimermanis, Director of the glass structure manufacturing company *SIA UPPE*, explains: "We developed a prototype for the longest glass beam by making it intentionally with half as many glass layers as required, and performed load testing with three times the load that could be expected during normal operation. The glass beam endured the load without breaking."

Locally Sourced Acoustic Panels

For better visual effect, specially selected glass with a lower content of iron oxide was used to reduce its green tint. Glass panels are glued to glass beams by means of the structural glass bonding technology offered by the company *Sika*, which is widely used in automotive manufacturing and also ensures airtight sealing of the glazing system and flexibility of joints between the components.
Thanks to the acoustic panels supplied by the company SIA *Cewood*, the desired acoustic comfort has been achieved. It is a natural material produced from wood chips acquired from locally grown timber in Latvia and top-quality cement. According to Ingars Ūdris, Member of the Management Board of SIA *Cewood*, the panels were attached to the finished metal constructions thanks to their easy cutting characteristics and on-site customizability.
The exclusive titanium-zinc material was chosen for the roofing solution. Architect Reinis Liepiņš says that over time the roof will oxidise and change colour just like copper material, hence the building will constantly acquire ever new visual effects. The company *Rheinzink* was selected as a supplier for this solution.

Left in Slope

As many wooden planks from the former building as possible were used for the new wooden lining structures. They were all carefully selected and treated with a fire retardant. The former brick wall has also been retained very much like the original wall. The water damaged window and door openings have now been restored and reconstructed. "Most walls were in good condition because brick does not deteriorate much unless it is affected by water. The walls have been cleaned twice and treated against dust," Jurēvics explains.
Authentic rail tracks cross the room in the western part, with a little extension outside the building up to the greenery area. The rail track in the hall was cemented evenly on the floor level, with a rail carriage-bar left on one part that serves as a functional design element. Underneath the carriage, rails remain intact – even with the sleepers.
Project Manager Siecenieks reveals that the entire former building had a longitudinal gradient of 30–40 cm towards Hanzas Street. One reason could be subsidence of the structure over time, which is possible in unstable ground. The other possibility is that the building was constructed this way on purpose because the building itself and the adjacent platform both had a slight gradient. Perhaps it was done with the intention of enabling carriages to slowly roll on and stop at the platform after being detached. During reconstruction, the former structure was left with the same gradient, but this is not visible in every location of the building.

Oversized Cobblestone Pavement

The area between the greenery and *Hanzas Perons* building that runs parallel to Pulkveža Brieža Street is designed as a venue to host summer events with tents, stalls or theme festivals. The outside improvements feature the historical carriage buffer stops, a separate section of rail tracks built into the cobblestone pavement on a grav-

el ballast and sleepers, as well as a bolder-paved car park.
The surrounding territory is paved with charcoal grey concrete paving slabs manufactured in Latvia especially for this building site. The size of the paving slabs is 375x750x80 mm, with a tinted surface 2-cm deep. Cobblestone pavement in pedestrian areas is laid on a shingle ballast, whereas driving zones are built by means of road work technology, namely, using cement bound granular mixtures (CBGM). The paving edging is also tailor made – round top edging kerbs sized 200x300x1000 mm and built 10 cm above the ground level. Particular attention was paid to environmental accessibility solutions that include tactile, raised surfaces. Benches are made of the original sleepers of the rail freight station and covered with massive oak beams.

Owner's Responsibility

Edgars Miļūns, Chairman of the Management Board of *AS New Hanza Capital*:
"The origins of *Hanzas Perons* date back to the turn of the 18th and 19th centuries when a railway line was built in Riga which ran to Mangali with a branch line to the grain elevator in Andrejsala. This was the home of the Riga rail freight station where the last freight was transhipped in 2009. Today only a few of the former buildings have been retained, however, the idea of linking distant and different for the common benefit has remained through transformation into a new and contemporary form.
The building at 16a Hanzas Street is located in the conservation area of the historical centre of Riga City, which has been listed as a UNESCO World Heritage Site. This industrial heritage faced its first revival in 2003 when it was acquired by *ABLV Bank*, which decided to create a symbolic gateway from Riga's *art noveau* district to the spacious *New Hanza* territory. The ambitious reconstruction of the building started in 2017 by implementing the concept by architect Reinis Liepiņš of combining the building's 120-year history with a contemporary approach to develop a multifunctional cultural edifice.
Thanks to shareholders Ernests Bernis and Oļegs Fiļa, *Hanzas Perons* is the first large-scale cultural building in Latvia after the restoration of independence to be built solely with private funding. It opened its doors in August 2019."

Outstanding Best Practice

The contest commended another site developed by *Pillar* – **Kaspars Bondars** was awarded ***Designer of the Year 2019*** by the magazine *Būvinženieris* for innovative solutions designed for the pumping station at Mihails Tāls Street in Riga.
Normunds Tirāns, Chairman of the Latvian Association of Civil Designers, comments: "Several constructions commissioned last year in Latvia stood out with their structural solutions – a pedestrian bridge over the Vecgauja River in Carnikava, the *Mītava* outdoor concert venue in Jelgava with glued timber constructions, *Hanzas perons* and Data Centre in Georgia. Yet, our discussions highlighted the merits of the pumping station at Mihails Tāls Street in Riga, recognising it as the most outstanding civil construction. It should be particularly praised for the tensiometers built in the piles and tension loading tests carried out both during and after construction. The contracting company *Pillar* also deserves to be commended for implementing the designer's suggestion to use this innovative solution. The acquired data on pile activity will provide both the designer and all Latvian civil engineers with brand new information about the deformation properties of muddy soil. The construction design and field supervision of this civil structure envisage further study of circumstances and constructions during their operation, and should be highlighted as an example of particularly outstanding best practice."

More information about other nominees for building awards can be found in the magazine *Būvinženieris* and on the Latvian Association of Civil Engineers' website blbs.lv.

Malta

Are Architects & Civil Engineers essential personnel?

The current COVID-19 health crisis has brought about a different consciousness to our understanding of 'normality' which has affected all strata of society. And whereas most refer to it as a health, and consequently a financial crisis, it is worth tracing the etymological meaning of *crisis* which defines the word in a vaster sense and is certainly more applicable today than ever. Coming from the Latinized form of the Greek *krisis*, it refers to the decisive point or state of things in the progress of a disease, or a point at which change must come, for better or for worse. It is in such moments of crisis where the meaning of essential changes. But the question is, essential from whose perspective?

Historically, the built environment has never been separate from public health. For instance, the bubonic plague that began in China in 1855 and later on the cholera outbreak pushed urban planners to rethink the urban environment. This changed the design of more things that we can fathom; from drainpipes to door thresholds and building foundations, in the war against rodents. The aesthetic of modernism was partly a result of tuberculosis, with light-flooded sanatoriums inspiring an era of white-painted rooms, hygienic tiled bathrooms and the recognisable mid-century recliner chair. This also led to the modern street grid and prompted the introduction of sewage systems that required roads to be wider and straighter, along with the creation of new zoning laws to prevent inhabitant overcrowding.

Form has followed fear of infection, just as much as it has followed function.

In light of the above, it becomes clear that architects and engineers have been essential in reshaping the built environment in order to safeguard the health of citizens. What is essential here is to move away from the understanding that the city is static. Instead, we ought to perceive the 'changing city' as a serious unit of analysis. It is through such an analysis that crises can be addressed realistically and with creativity. Mobility trends will change due to the shift in work-life practices. Human patterns and minimum expectations of what dwellings should incorporate may also need to be re-analysed. Gone are the days where the home is just seen as the place of rest. More natural light, an increase in living and some outdoor space may now be deemed as basic necessities. Advancements in materials and paint coatings which will reduce surface transmission of bacteria and viruses will also be expected. Like societies, the built environment is never still and needs to adapt to a new normal.

The COVID-19 pandemic, like its kin pandemics, sparked a new consideration of what is 'essential'. Malta, like other European countries, on partial lockdown since the beginning of March 2020, entered a debate on what services and professions are regarded as essential for the continued day-to-day life of society. To date, its understanding has been understood from a partial perspective and seems to have only considered public health and the market.

So where does the built environment stand in that debate? Are architects and civil engineers essential?

The history of our profession (both architects and civil engineers in Malta are embodied in one profession: that of the 'Perit') is to protect the health, safety and welfare of the public. It is not just the finished project which provides protection to the public. There are even more immediate considerations. For instance, the re-conceptualisation of infrastructure is central to the health strategy of containment and social distancing. Devising new circulation pathways and innovative structures can also be detrimental to the economy. From this perspective, architects and engineers become essential. Such significant input can also lead to more jobs as architects and engineers may re-train or create new opportunities in the job market.

All projects which are ongoing may pose safety issues to the general public. Additionally, 'essential' may also be seen with respect to the bigger picture: because ultimately, even as periti are duty-bound to protect the health, safety and welfare of the public, their own health, safety and welfare are just as essential .

It is in this spirit that the Kamra Tal-Periti (KTP), through consultancy with the Superintendence of Public Health, committed itself to keep the profession informed during this unprecedented period, giving clear instructions on how to implement social distancing measures while still maintaining productivity. For instance, KTP has been very prompt in issuing recommendations and guidelines on how best to deal with inspections of occupied third-party properties, both residential and commercial, as well as best practise on construction sites including inspections and meetings. This was essential.

It is impossible, however, to have a complete discussion without the acknowledgment that some construction projects have been delayed and some cancelled, as a result of the impacts of COVID-19 on the companies that commissioned them. Furthermore, possible supply chain bottlenecks of equipment and materials have caused project delays in ongoing projects, or reduced spending on future ones.

This has had a knock-on effect on local professional practices that have had to let go of some staff members in attempt to safeguard the legacy they have created over the years and which is now vulnerable to bankruptcy. Perhaps here, the issue is resistance to change. Maybe it is time to be creative and rethink the profession of the perit which has been under pressure for some time. After all, creativity is core to the discipline.

It is probably fair to say that the only constant in society is change; jobs become anachronistic over time.

A survey conducted by KTP has shown that as of April 2020, employers indicate that they are expecting a 28% reduction in their workforce, with the main reasons being the decrease in the number of projects, ongoing projects being put on hold by the clients and deteriorating profitability. The turnovers reported are also of significant concern, as nearly half of the respondents of the survey are expecting their April billing to be over 30% less than their 2019 average. A similar trend was noted in terms of ability to collect outstanding dues. As things stand, 50% of professional practices are expecting that more than 30% of their outstanding dues for 2020 will not be recovered immediately.

The most seasoned of professionals have likely been through at least one economic downturn before the one currently being caused by the COVID-19 pandemic, with the most recent significant recession having taken place just a little more than a decade ago. They, therefore, know what to expect and how to keep their focus on recovery. However, it may be time to shift from recovery and move into creative-action mode. How can this be achieved?

The younger members of the profession have most likely not been affected by such a crisis before since construction projects have been on the increase since the financial recession of 2007-2009. The best way young professionals can weather the current uncertainties would be to focus on their digital media skills. Hence, the younger generation may be crucial to industry success. Virtual space can also facilitate a 'third' space where design professionals can remain connected and be able to network and promote their professional development.

It is clear that the COVID-19 crisis has left the thirst of change in its wake. Besides the re-direction of the profession through a shift towards digital architecture and engineering, the key is for periti to take this serendipitous change seriously. Additionally, what will make a difference is how sensitively this change is incorporated at a disciplinary and professional level, but also at a national level through new customary legislation. Are periti willing to change their *modus operandi* in what is essentially an old-fashioned way of conducting their operations locally? This does not change our obligation to progress as a profession but enhances it. We are collectively faced with new obstacles in terms of working methodologies and patterns. Our default has been forcibly challenged and our circumstances

drastically altered. This could be our point of departure.

We hope that the effects of this change will not only be merely reflected in the more spacious office desk layout, but may more professionals be interested in fully embracing the implementation of digital software such as BIM and VR into working practices and go as far as to replace hard copies of documents and drawings with the use of digital ones. Not only are these methods more environmentally friendly, they are more effective and well-rounded for presentations and discussions.

This change could also be taken to the next level by using technology enabling digital interaction with and that remotely facilitate a construction activity where a virtual replica of the physical world is created or the use of 360° cameras to digitally capture site conditions. Such technology provides a means that could transform the way physical industries operate.

Apart from the recognition of the damaging global impact of the current crisis, one hopes to incorporate issues like mitigation of climate change, as well as the impact of greenhouse gas emissions, within this newly inspired framework.

On a positive note, and on a global scale, it is enlightening to see stories emerge of nitrogen dioxide levels in China lowering and Venetian canals running clear. The ongoing coronavirus pandemic will most certainly have impacted the global Net Zero agenda and that had most likely been pushed down the list of priorities. We are faced with economic uncertainty but as professionals within the built environment and spatial planning we should ensure that decarbonisation remains a vital agenda item. When industries bounce back, let this be done with Net Zero Carbon at the forefront.

In order for professionals in the built environment to be able to shape the post-COVID-19 world, an inclusive collaboration of several professionals and inter-disciplinary research amongst scholars and the industry is of utmost importance. Academics, practitioners and even politicians must come together as limits are pushed in search of creative solutions. We need to use this time to reinvent the way we do economy. Buildings need to be reinstated back into the ecosystem.

We are all both students and catalysts of human behaviour; we want to understand it and to engage with it.

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Russia

Contest "Innovative technologies and ecological perspectives in civil engineering"

To identify talented young scientists and civil engineers the Moscow department of the Russian Society of Civil Engineers (MD RSCE) has announced a Contest of scientific works.
Within the frames of the Contest "Innovative technologies and ecological perspectives in civil engineering" the MD RSCE has received 30 scientific paper works from the leading civil engineering higher educational establishments and scientific research centers of Moscow, i.e. the Moscow Automobile and Road Construction State University, the University of Civil Engineering, the Scientific Research Center "Construction", Skolkovo). 28 works have met the requirements of the Contest Regulation.
The results of the Contest were summed up by the end of May 2020. A Jury was convened for the assessment of the works. The leading experts of the construction industry were invited to give their assessments.
For the time being the initial expertise of the scientific paper works has been carried out. The assessment criteria have included:

- Relevance and novelty of research
- Scientific approach of works
- Publication level

Each work has received an expert review.

The MD RSCE has evaluated the expertise results, calculated the votes and determined 3 finalists:

- 1st place – Mr. Zvezdov A., the engineer of the Scientific Research Center "Construction", with the work "Principle calculation schemes of determination of bearing capacity of screw piles in the permafrost soils";
- 2nd place – Mr. Kozikov I., the engineer, postgraduate of the Moscow Automobile and Road Construction State University, with the work "Development of road covering from cast asphalt concrete with improved operational properties";
- 3rd place – Mr. Vorobyev P., the student of the University of Civil Engineering, with the work "Monitoring the progress of construction of buildings and structures as well as automated determination of the volumes earth-

work and erection of load bearing and enclosing structures using an unmanned aerial vehicle and photogrammetry methods".

ECCE President Aris Chatzidakis is a member of the Jury that will assess the three predominant paper works which are presented below.

SCHEMATIC DESIGN SCHEMES FOR DETERMINING THE BEARING CAPACITY OF SCREW PILES IN PERMAFROST SOILS

Author: Anton Zvezdov

Screw piles are widely used in the energetic industry in the construction of linear structures such as oil and gas pipelines, as well as high-altitude transmission lines. Currently, the issue of using screw piles in construction is not sufficiently studied, there are no requirements in Russian regulatory documents for the use of multi-blade screw piles. At study of the issue there are two principal calculation schemes based on both foreign and Russian sources.

The first calculation scheme implies that each blade of the screw pile works separately, in the second scheme, the screw part forms a soil cylinder (in some cases a truncated cone) at the soil-soil contact. To determine the interaction of a multi-blade screw pile with a frozen soil base, an experiment was performed. The tests were carried out on the specially designed stands based on a hydraulic press in the cryochamber with a temperature below zero. Two scaled models of multi-blade screw piles □57 mm with blades □100, 87 and 73mm were used for testing. Each of the blades has a different diameter, which decrease to the tip of the pile. Static tests of piles were performed in accordance with GOST 5686-2012, considering additional requirements. During the tests, thermometry of the soil foundation was carried out once a day in accordance with GOST 25358.

At the end of testing scaled models of multi-blade screw piles, the density of the frozen soil foundation was determined. As a result of determining the density of the soil base in the screw part of the pile, it was found out that in the zone of soil deformation due to the vertical movements of the blades under the action of a vertical pressing load, the soil base was compacted. It has also been stated that under the action of a vertical pressing load over each blade are formed cylindrical cavities at an angle of 90º, the height of which corresponds to the moving of the pile.

Key words: screw piles, multi-blade piles, pile foundations, screw pile foundations, foundations, permafrost, frozen soils.

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DEVELOPMENT OF ROAD COVERINGS FROM CAST ASPHALT CONCRETE WITH IMPROVED OPERATIONAL PROPERTIES

Introduction

Most of the funds in the road sector are spent not on the construction of a new road network but on scheduled repairs. An unfavorable combination of a set of operational, weather and climate factors leads to premature destruction of asphalt concrete pavements. The so called "under-repair" of the existing network of Russian highways that has accumulated over many years has a detrimental effect on the condition of coating as well as traffic condition.
A noticeable improvement of the quality and pace of construction and repair of roads can be achieved only by using the latest technologies of unconventional building materials.
Such construction material as cast asphalt modified by various mineral and organic additives should also be attributed to them. The use of cast asphalt concrete in the upper layers of pavement as a replacement of the traditional fine-grade asphalt concrete will not only increase the pace of construction and repair but also increase the durability and quality of pavement.

Work description

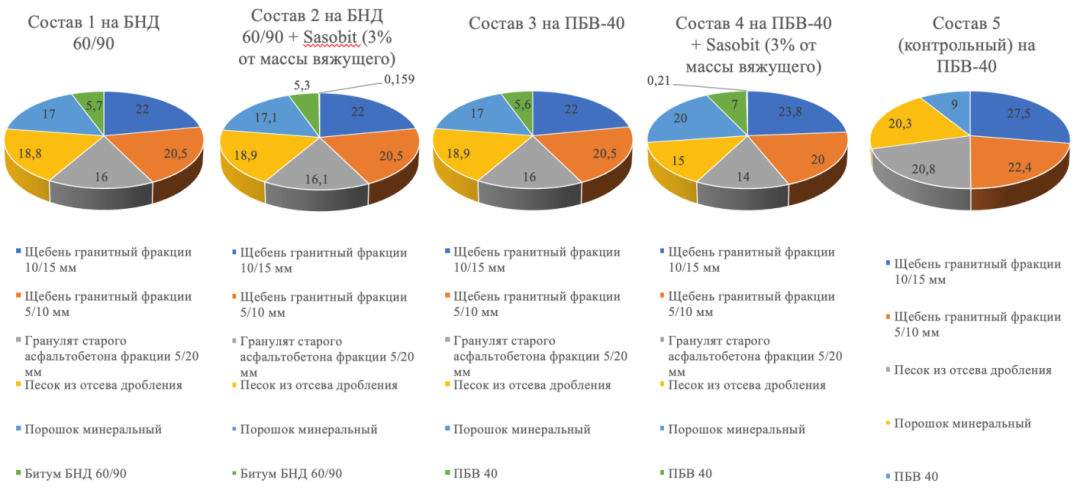
In order to reduce the cost of production of cast asphalt mixture in accordance with GOST P 54401-2011 it is allowed to use recycled asphalt concrete (asphalt granulate) as a filler content.
The effect of asphalt granulate on the properties of asphalt concrete is associated with aging of the binder in granulate. Aging is manifested in the viscosity increase of bitumen and, accordingly in the increase of strength and the decrease in the deformability of the asphalt concrete.

The deterioration of the compactibility of mixture with asphalt granulate along with the increase of bitumen viscosity is associated with the presence of untreated binding surfaces formed when granulate is added. Untreated binder surfaces resulting from crushing of granulate can be represented by both acidic quartz and granite rocks and also basic, if particles of mineral powder obtained by grinding limestone rocks are present on the split surface. These factors worsen the properties of asphalt concrete when crushed asphalt granulate is used as part of mixtures.
To ensure the required temperature for preparing the finished regenerated cast asphalt concrete mix (210-230 ° C) in an asphalt mixing plant, an increase in the heating of new stone materials (crushed stone and sand) is required. The specific value of the heating temperature of new stone materials is determined by the amount of asphalt granulate in the composition of the regenerated mixture, its required temperature, as well as the humidity of the old asphalt concrete.
In order to make a good preparation of cast asphalt mix, it is important to take into account the characteristics of asphalt granulate associated with its heterogeneity, since when disassembling the coating and storing the granulate, materials from various objects are mixed.
To improve manufacturability, reflux condensers are introduced into the mixture - additives that reduce viscosity. The use of reflux condensers allows to make the mixture workable, without a noticeable decrease in strength, as well as reduce the heating temperature, fuel consumption and the amount of harmful emissions into the atmosphere. Currently, a number of technologies have been developed using such additives to reduce the temperature of preparation and placement of asphalt mixes without compromising the strength characteristics of the coating. Recently, the most widely used additives are Sasobit, Lacomont BS100, AsphaltanB. Sasobit additive is a synthetic paraffin wax obtained by gasification of coal or natural gas (methane). Sasobit was used in the form of granules or powder in bags of 2.5 or 20 kg. Above 120 ° C, Sasobit is completely soluble in bitumen.

Experimental part of work

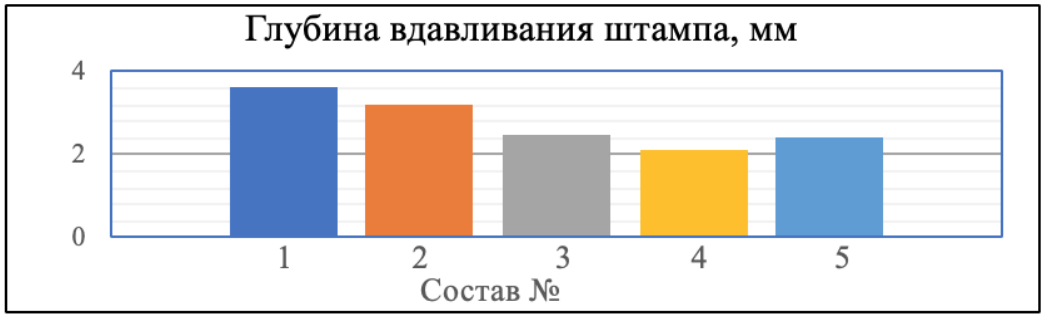
At ABZ Kapotnya JSC (Moscow), experimental work was carried out to assess the effect of Sasobit additive together with asphalt granulate and PBB on the technological properties of cast asphalt mixes.

A study was conducted of 5 compositions of cast asphalt mixtures. (Sch. 1)

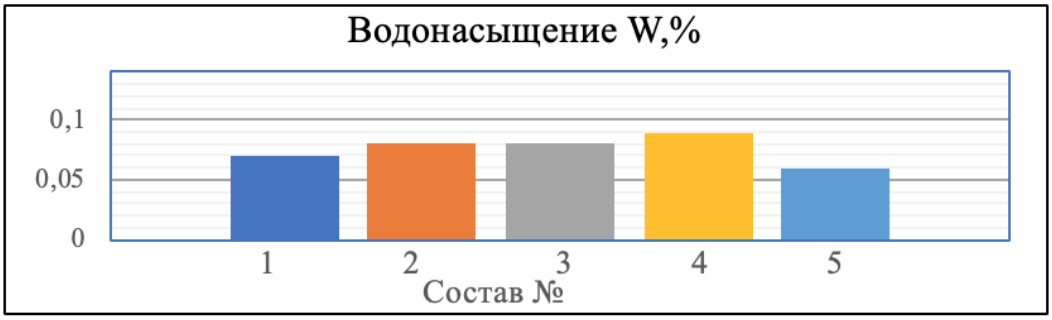


Scheme 1. Composition of cast asphalt mixtures.

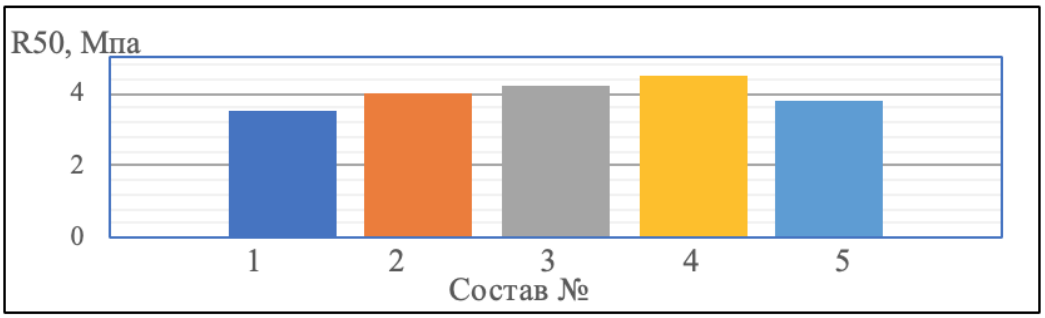
The main parameters of the proposed mixture are determined (Sch. 2-Sch. 4):

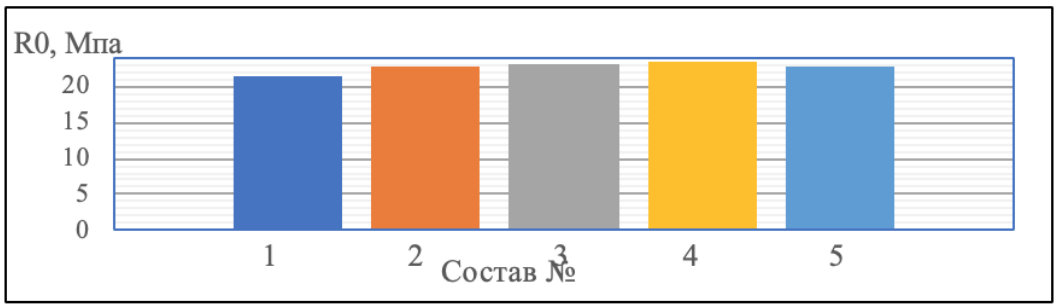


Scheme 2. Stamp indentation depth



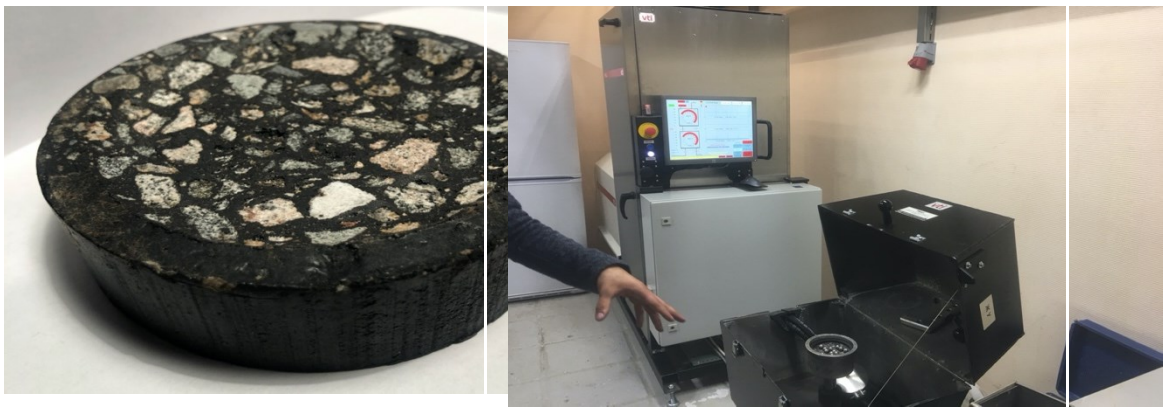
Scheme 3. Water saturation



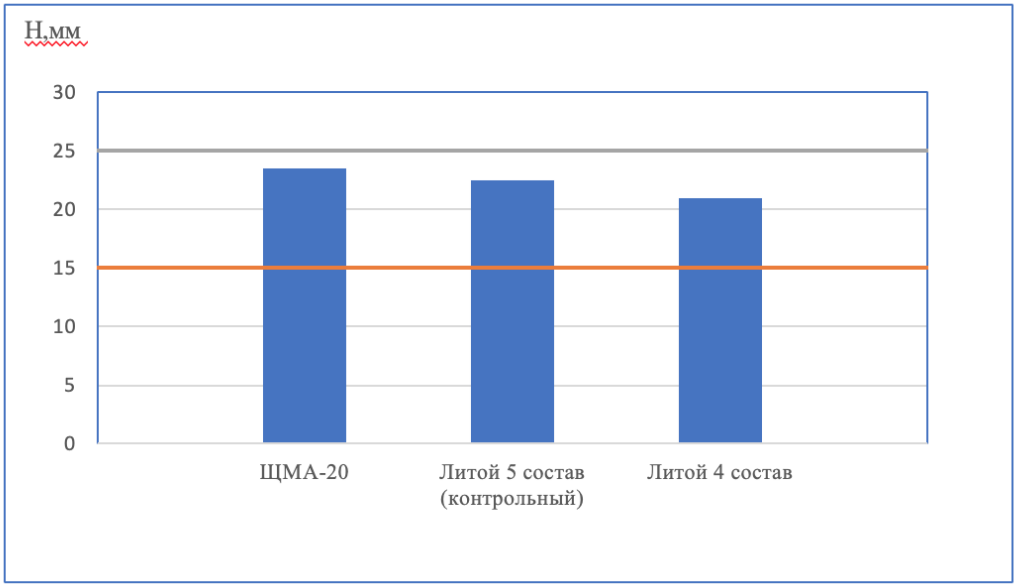


Scheme 4. Strength characteristics at a temperature of 50 and 0 ° C

Optionally, tests were carried out to determine the fatigue strength and abrasion parameter in comparison with ЩМА-20.

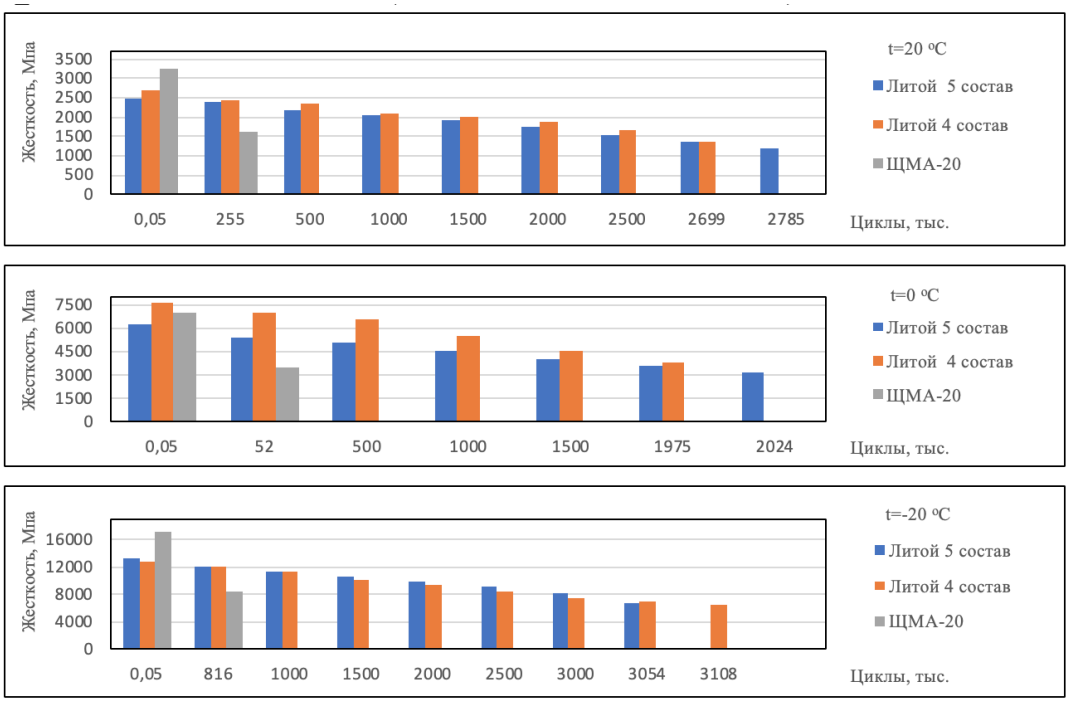


Scheme 5. Sample and device for determining abrasion (PNST 180-2019)



Scheme 6. Determination of abrasion (PNST 180-2019)

Scheme 7. Sample and device for determining the parameters of fatigue strength during repeated bending (PNST 135-2016)



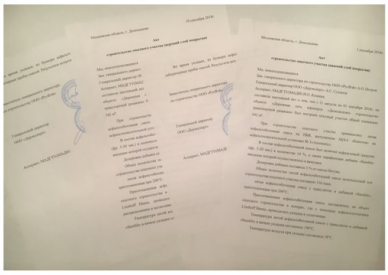
Scheme 8. Determination of the parameters of fatigue strength during repeated bending (PNST 135-2016)

On the basis of the positive test findings of the cast asphalt mixture with improved properties, the construction of a pilot site at the Domodedovo Airport was carried out.

Выгрузка и распределение смеси (25-40 минут) t=180-175C

Уплотнение смеси (2-3 минуты) t=170-150C

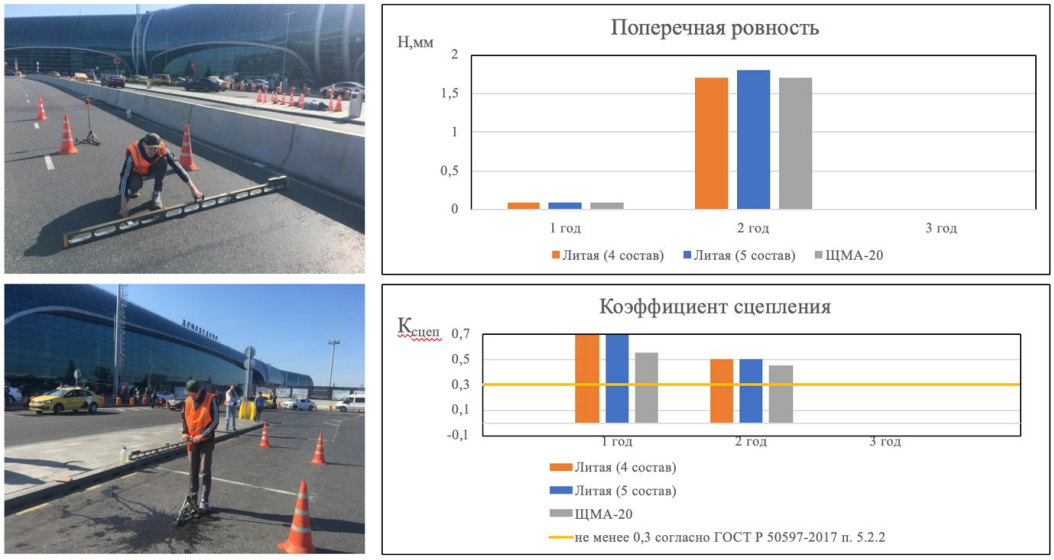
Прикатка черненого щебня ручными катками (15-25 минут) t=150-140C



Акты опытного строительства

Scheme 9. Pilot construction at Domodedovo Airport

This site has been observed for 2 years as well as a site with similar technical and operational characteristics from ЩМА-20 and cast mixture without the addition of asphalt granulate together with the Sasobit reflux condenser.



Scheme 10. Survey of the experimental site at Domodedovo Airport.

Conclusions

The study and pilot construction show that the improvement of the properties of cast asphalt concrete is possible due to the combined use of polymer-bitumen binders, reflux condensers and asphalt granulate with a decrease in the cost of cast asphalt concrete. Unlike conventional cast asphalt, the proposed mixture will increase the deformation characteristics (minimizes rutting). A significant part of the materials in the mixture is reused, which makes it attractive from an environmental and economic point of view. Also, this coating is more effective for use on bridges / overpasses, as it works better in tension / compression than standard asphalt concrete.

DESCRIPTION OF THE PROJECT SUBMITTED FOR PARTICIPATION IN THE STARTUP TOUR "OPEN INNOVATIONS"

Project name: Monitoring the progress of construction of buildings and structures, as well as automated determination of the volume of earthwork and erection of load-bearing and enclosing structures using unmanned aerial vehicles and photogrammetry methods.

Author: Vorobyev Pavel Yuryevich, a student of NRU MGSU in the field of study 04.15.03 - applied mechanics.

Ensuring the safety and reliability of the construction and subsequent operation of buildings and structures is a serious and responsible task. Its implementation depends on many factors. This is a well-made design, compliance with the rules of construction technologies, as well as timely monitoring of the construction progress.

During the work, deviations from the design documentation, violations of the technology of production processes, violations of the construction schedule may happen, and the effective use of all resources at the construction site can not be ensured. These unfavorable factors often lead to delays in construction, the cost of eliminating identified violations, unjustified downtime of construction equipment, and difficult analysis of the progress of construction by the regulatory authorities and the customer. Therefore, careful monitoring of the progress of construction and operational management of the implementation process is so vital.

Nowadays, monitoring of a construction process is carried out by supervisors and representatives of regulatory bodies directly at the construction site by signing relevant acts and documents. Monitoring is also possible with the involvement of a team of surveyors who are able to carry out measurements using special instruments and tools.

Moreover, such an approach does not ensure transparency of processes, neither does it make possible to enter information quickly into a digital model of a building or structure.

At the same time, the scientific community has shown a significant interest in research, revealing the prospects for the use of unmanned aerial vehicles (UAV) in construction.

The analysis of international research databases has shown that the main areas of research in this area are the following:

- Research and justification of the possibility of using UAVs at all stages of the life cycle of construction objects;
- Development of machine vision technologies and methods for converting visual information into digital computer-readable formats;
- Automation of solving construction problems using UAVs.

Also, according to the results of an expert assessment of the activities of large construction companies, some of the most frequent reasons for the rise in price of construction were identified, among which it is worth noting:

- Increased construction time as a result of poor organization of production processes at the construction site;
- Failure to comply with technological requirements for construction processes as a result of a lack of funds and operational monitoring capabilities. And therefore, the need to eliminate identified inconsistencies of the actual state of the facilities with design decisions.

According to the results of an expert assessment of the activities of companies operating construction facilities, some of the most popular reasons for the increased cost of operating facilities were identified, among which are the following:

- Lack of relevant data on the real state of the building structure;
- Low optimization of measures for the repair of buildings and structures.

That is why my aim is to develop my own solution in the field of monitoring the progress of construction, which will include:

- **Hardware solution.** UAV, a docking station for its placement and data exchange with a remote server directly from the construction site.
- **Software solution.** Development of scripts and macros that implement automated UAV control, collection and analysis of information received, unloading and processing of the results using third-party software.
- **Methodological solution**. Development of a methodology for working with a hardware-software complex.

Thus, if we briefly formulate the process, the provision of which is the goal of the project, we get the following: for monitoring the progress of construction of buildings and structures and determining the volume of excavation work and erection of load-bearing and enclosing structures at the construction site (or in its immediate vicinity) prior to the immediate start of construction work, a stationary base with a UAV placed in it is installed. The base provides UAV recharging, data transfer from UAVs to a remote server via wireless communication, as well as physical protection of UAVs from environmental influences. At a given frequency or according to a predetermined schedule, the UAV carries out an automated flight around the construction site with aerial photography. After that the received photographs are sent through the database to a remote server, where without human intervention using photogrammetry methods based on the photographs, a digital terrain model (DTM) is created with geodetic reference to a global or local coordinate system. Subsequently his digital terrain model can be automatically processed to obtain a comparison of construction schedules with the actual state of affairs at the time of the overflight (in relation to load-bearing and enclosing structures). Also, data on volumes of excavation work performed can be obtained manually or in semi-automatic mode from the DTM. The obtained data can be included in a digital model of buildings or structures and used to remotely monitor the progress of construction, adjust construction schedules, monitor workload of construction equipment, and make changes to work plans.

Such monitoring of facilities under construction will allow:

- **Creating a digital terrain model (DTM) and point clouds (OT).** At the present stage, the DTM is created upon the results of geodetic surveys and requires the involvement of a team of surveyors and several days of work. For comparison, the creation of a georeferenced DTM and from an area of 1 ha using UAVs and photogrammetry methods will take 15 minutes of flight time and about 4 hours for computer processing of the obtained materials;
- **Definition of volumes and control of the work performed (earthworks, enclosing and supporting structures).** Today, the measurement of the volume of excavation work is practically uncontrollable and is carried out by approximate methods. Monitoring compliance with the construction schedule in the field of erection and installation of facade and load-bearing structures is carried out by manual methods, which leads to delays and overdue conflicts. The use of UAVs and photogrammetry methods makes it possible to accurately determine the volume of excavation work performed, as well as using algorithms to automatically recognize erected facade and load-bearing structures and compare the actual situation at the construction site with the established construction schedule;
- **Monitoring the quality of construction.** Today, monitoring the quality of construction in the field of visually detectable deviations is carried out with the involvement of experts, which often leads to large time delays. In this case, according to the photogrammetry of the building and structure being constructed, remote visual as well as automated determination of such damages as: cracks, deviations from the allowable clearances between the structural elements is possible;
- **Inspection of the construction site.** Today, inspection of a construction site requires a visit to the construction site. Using the UAV will allow you to transfer recordings or broadcast online photo and video materials from the construction site via the Internet, to fix the position on the site of construction equipment;
- **Automatic classification of objects.** At DTM and from using algorithms, you can classify a point cloud, dividing it into classes (green spaces, houses, roads, parking lots, etc.);
- **Damage monitoring.** Nowadays, structural damage monitoring in the field of visually detectable deviations is carried out with the assistance of experts and is often carried out irregularly, and effective repair measures are not applied on time, which leads to an increase in the cost of operating the facility. In this case, according to the photogrammetry of the building and structure under construction, remote visual as well as automated determination of such damage as cracks, deviations from the allowable clearances between structural elements is possible.

You can evaluate the final cost of the solution by analyzing the components of the technologies used.

The ability to perform flight tasks and navigate in space using the GPS module puts forward a number of technological requirements for the UAV used. Today, a ready-made solution from DJI is used - Mavic Pro Platinum (~ $ 1000). In the future, the creation of UAVs for each specific order will be carried out by a project team using purchased individual components (~ $ 2000-5000). At this stage of the project, the docking station is at the idea stage, and there are few examples of the use of such technology in the world. Its technical characteristics and cost require a separate assessment.

The complete set of the remote server is formed based on the planned volume of the measurement frequency. To minimize data processing time and speed up performance, standard server configuration is planned using the following components: Intel Core i9-9900K processor, 2 Nvidia GeForce RTX 2080ti video cards, 32 GB RAM, 2000 GB DISK SPACE (~ $ 3,500).

At the present stage, there are several software systems that allow you to create GIS-content, DTM and OT of sufficient quality. The ongoing project uses domestic software - Agisoft Metashape (~ $ 3,500) from Agisoft LLC. The performance of all functions not implemented in the used software will be provided by the developed set of scripts in the Python programming language.

The project implementation plan can be divided into three stages, the first of which has been completed today and includes the testing of technology elements, in the framework of which:

- **Inspection of the building facade using UAVs.** The facade of the building under construction was examined in order to determine the size of the gaps between the hinged plates formed as a result of a violation of the installation technology of the building envelope. The result - photographic materials - are attached to the expert opinion.
- **Measurement of construction debris.** At a frozen construction site, using UAVs and photogrammetry methods, the volume of construction waste not taken out by the developer in violation of the contract with the customer was measured. The measurement results were used in a lawsuit against the developer by the customer.
- **Formation of a topographic plan of treatment facilities for future reconstructed**. Using UAVs and photogrammetry methods, a CMM was obtained, which allowed to produce: geo-referenced orthophotomap of the terrain, a map of the heights of the terrain, topographic plan of the terrain. Measured distances taking into account the terrain, given recommendations on the organization of energy supply of the construction process.
- **Formation of a 3D model of the rock surface.** Using photogrammetric methods, a 3D model of the surface of the rock sample was obtained, which was used to determine the surface area with high accuracy for the subsequent use of this value in calculations of adhesion of materials.

The second stage of implementation contains 4 tasks for 2020:

- Purchase and installation of necessary equipment for the design of UAVs. Training of the project team in UAV design. (Partially completed - today a room for the construction of drones is equipped).
- Conducting a series of scientific studies with the publication of results in journals peer-reviewed by the RSCI and SCOPUS. The research results will form the basis of the developed hardware-software complex.
- Writing a script that forms the flight mission for the UAV based on the loadable BIM-model.
- Design and assembly of a quadrocopter capable of performing flight tasks.

The final stage of the project implementation contains the tasks until 2025:

- Creation of a scripting system that implements the declared functionality within the framework of the project at all stages of the life cycle of buildings and structures.
- Pilot project implementation at the capital construction facility.
- Conducting a number of scientific studies, the results of which will form the basis for the development and improvement of the software and hardware complex.
- Defense of the dissertation on the subject of the project.
- Conclusion of the project to the commercial stage.

At the same time, if we speak in more depth with respect to the scientific component of the project, we can distinguish the following research tasks necessary for the development of technology:

- Study of the parameters for photographing objects of control of various geometries in order to determine factors affecting the quality of TsMM and OT obtained by photogrammetry methods. Determination of the optimal parameters for photographing for the formation of DTM and RT by photogrammetric methods.
- Research and testing of existing methods for monitoring the quality of construction and damage to test objects based on the results of photography.
- Definition and implementation of technological and business processes associated with the introduction of UAVs and photogrammetry methods, as well as laser scanning in the construction process.
- Assessment of the impact of the introduction of UAVs and photogrammetry methods in the construction process on the final cost of the facility under construction.
- Assessment of the experience of introducing UAVs and photogrammetry methods in the implementation of the capital construction project, finding out the possibility of using laser scanning as an alternative to photogrammetry.

Ultimately, the implementation of this project, although it requires a lot of effort, will be a qualitative step towards the automation and digitalization of construction processes, as well as the close integration of these processes with BIM technologies.

Slovenia

Celebration of Slovenian Engineering Day 2020 with 1000 engineers was a success

The 4th of March was a special day for Engineers around the world because UNESCO recognized the date as an annual World Engineering Day. In celebration of this, the Slovenian Chamber of Engineers prepared the event in Cankarjev Dom, the biggest Slovenian congress centre, where more than 1000 engineers gathered.

The main theme of the event was education, in the first part at the Plenary session we hosted an important guest from Austria, **Mr Michael Proprenter**, who was in charge of the Semmering Base Tunnel project. The topic was Integral planning, which was also the main talking point at the round table, where we hosted the biggest Slovenian investors in housing, energy and transport departments, including our president Mr Crtomir Remec, director of Slovenian Housing Fund.

In the afternoon, we prepared Sections for different fields of interest of our engineers, the biggest one was the Section of Construction. In total, more than 1000 Slovenian engineers gathered for a very informative celebration of »our« day, which was met with great responses from the engineers, which were glad that they got the opportunity to exchange their thoughts and experience.

So, Slovenian Engineering Day 2020 was a success, we are already looking forward to the next one in 2021!

News from ECCE Partners

American Society of Civil Engineers (ASCE)

ASCE's 2021 President Elect Dennis D. Turax

Dennis D. Truax has been elected ASCE's 2021 president-elect by a majority of Society members.
Truax, Ph.D., P.E., DEE, D.WRE, F.NSPE, F.ASCE, has spent four decades on the civil engineering faculty at Mississippi State University. Since 2006, he's served as the James T. White Endowed Chair and Department Head.
He has also worked as a consulting engineer or managing principal of several firms. In addition, he has served as adviser and regulatory consultant with various governmental agencies.
"I'm pleased that the members of ASCE feel that I merit their trust," Truax said. "Everything I am is a result of being a civil engineer. This profession has afforded me great opportunities, and in the same breath, I cannot disconnect ASCE from the profession or my successes.

"Having an opportunity like this, to continue what I've been calling my servant-leadership at ASCE, it's humbling and very exciting."

Truax's lengthy ASCE career includes service as District 14 Director from 2001 to 2004, two terms as the Society's treasurer and tenures on many Society-level committees and working groups. This includes his current role as chair of the Committee on Technical Advancement and member of the Committee on Licensure. At Mississippi State, Truax was ASCE Student Chapter faculty adviser for 26 years. He has served in multiple roles for the Mississippi Section, including president (1991-92).

Constitutional amendments pass

As part of the 2020 ASCE election, the membership also approved, by the required two-thirds vote, proposed constitutional amendments intended to improve the organization's flexibility, nimbleness and responsiveness, as well as giving voting equity to dues-paying Affiliate members.
"One of my goals as president is to help modernize and streamline the organizational structure of the Society, making it inclusive and more nimble," said ASCE President K.N. Gunalan. "And these constitutional amendments will do just that."
Truax will join Gunalan and 2021 ASCE President Jean-Louis Briaud as ASCE's presidential triumvirate when he is inaugurated as president-elect at the Annual Business Meeting this fall during the ASCE 2020 Convention. He will succeed to 2022 president the following year.
"There's a lot of work to be done to ensure that our Society addresses the needs of our members, our communities and our profession," Truax said. "It's exciting for me to be a part of that. New opportunities, new challenges, new ways of doing things.
"I think we can take it to the next level."

Future World Vision: What's Next? The Megacity

The questions facing the megacity of the future are not simple.
Here's a sample, for starters:
How does a city increase its density to accommodate 50 million inhabitants while preserving its historic character, promoting accessible green space and supporting a plurality of lifestyles and economies?
Not exactly the kind of question that can be answered in an afternoon. That's why it's so important that civil engineers start working toward tomorrow's solutions today.
And this is exactly what ASCE's Future World Vision project does.
ASCE's Future World Vision is a deeply researched scenario-planning tool to help civil engineers consider the needs of the built environment 50 years from now. And an ASCE Future World Vision special virtual event, June 2, revealed what engineers can expect from the next phase of the project – the forthcoming megacity experience.
"One of my favorite aspects of the Future World Vision project is that it does not represent an ideal future," said Elizabeth Ruedas, P.E., ENV SP, M.ASCE, leader of the Future World Vision social ethos group. "Instead, it is meant to serve as a provocation tool that raises red flags with regards to things that we might want to take a closer look at, or maybe completely avoid in the future."
At the outset of the project, the Future World Vision research team identified six trends – alternative energy, autonomous vehicles, climate change, smart cities, advanced materials and policy/funding – to develop four future scenarios.
The first fully developed future world – the Floating City – debuted last fall at the ASCE 2019 Convention in Miami.
The second – the Megacity – is set for a full unveiling this October at the ASCE 2020 Convention.

Register for the next Future World Vision webinar - "Scenario Planning for Epic Disruptions," July 22

PHOTO: Experimental

PHOTO: Experimental

As with the Floating City, the interactive, immersive Megacity is being constructed in a real-time 4-D computer simulation, allowing for both individual experiences and community collaboration.

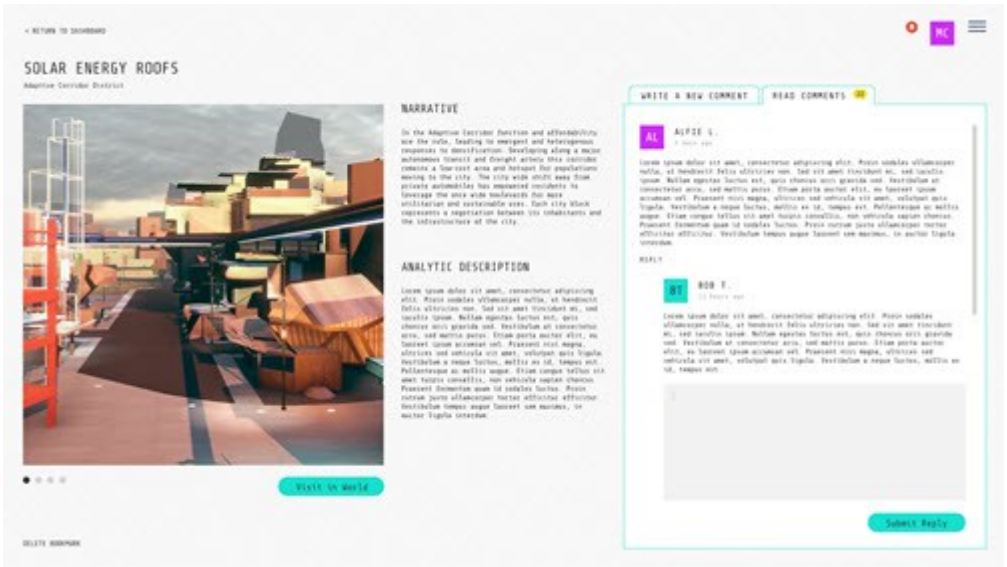


PHOTO: Experimental

PHOTO: Experimental

Visitors to the Megacity can explore through several levels of interface – the city story, the energy lens, the transportation lens, the water and wastewater lens and the data view.

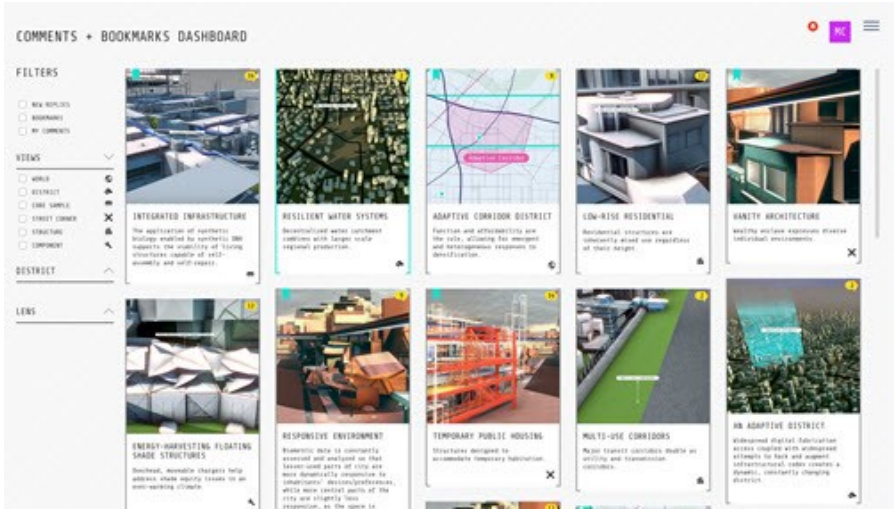


PHOTO: Experimental

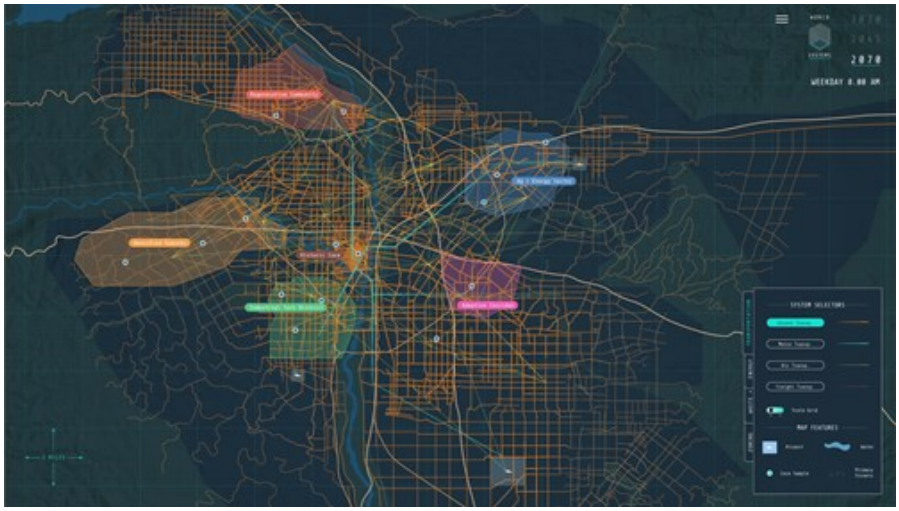


PHOTO: Experimental

Experimental, the creative team behind the Floating City experience, is continuing its work with ASCE's Future World Vision research cohort – including working groups on social ethos, communications and use cases – to develop the Megacity.

For more ASCE news please follow the link here.

Japan Society of Civil Engineers (JSCE)

JSCE President 2020-2021 Hitoshi IEDA

Brief Profile

April 2016	Retired the Unversity of Tokyo. Visiting Professor or Researcher at the Research Institute on Air ans Space of West Germany, the University of the Philippines, Tsinghua University and Peking University during the period
April 2014	Promoted to a professor simultaneously at the National Graduate Institute for Policy Studies (GRIPS)
Nov. 1995	Promoted to a professor at the University of Tokyo
June 1986	Awarded the Doctoral Degree of Eng. form the University of Tokyo as well as the title of Professional Engineer, and promoted to an
May 1984	Entered the University of Tokyo as a Research Associate
April 1978	Entered Japan National Railways
March 1978	Graduated the Dept. of Civil Eng. the University of Tokyo

Activities in the JSCE

FY 2019	JSCE President-Elect
FY 2011-2012	JSCE Vice President
FY 2004-2006	Chief Editor of JSCE Magazine
FY 2005	JSCE Fellow Member
1984	JSCE Member

You can access the latest JSCE International Activities Center Newsletter of June 2020 at the link here IAC News No.92, June 2020.

Korean Society of Civil Engineers (KSCE)

Message from Man Yop Han, Ph.D., 2020 President of the Korean Society of Civil Engineers

Distinguished members of the Korean Society of Civil Engineers (KSCE)!

The KSCE is the largest society representing the construction sector in the Republic of Korea. Since its foundation in 1951, it has grown to become a society with more than 26,000 members. The organization consists of 9 branches and 71 committees, which are performing various activities to contribute to construction technology and academic development.

Recently, the construction environment surrounding us is changing drastically, and it is time to prepare for adapting to these changes. Technologies considered part of the fourth industrial revolution such as big data and artificial intelligence, are being introduced into the construction industry. It is our responsibility to prepare for such technology to be utilized systematically.

Therefore, we will concentrate every means of the Society's capabilities to strengthen policy functions for the development of construction industry, to propose efficient management plans for aging infrastructures, to secure disaster response technology, and to discover future construction technology. Through these activities, we will make continuous efforts in approaching the people in their everyday lives. In addition, the KSCE will do our best to create the vision of future civil engineers by faithfully carrying out efforts to revitalize the overseas construction industry and to take lead in the future construction industry.

In order to fulfill our goals, we kindly ask for your interest and advice to help our Society play a pivotal role in the development of our nation. We hope that this website will be used as a platform for exchanging useful information and active communication.

Man Yop Han, Ph.D.
President
Korean Society of Civil Engineers

Strategic Initiative for Year 2020
"Civil Engineering for Creative Future!"

Industry prosperity and knowledge sharing

- Enhance policy function of Civil Engineering Research Center
- Build a knwoledge-sharing platform
- Reorganize the "Committee on Public Construction Policy" to the "Construction Leaders Council"

Comunication cooperation network

- Increase communication and participation of members
- Publish Newsletter using SNS (link with the knowledge-sharing platform)
- Establish the Construction Engineer Future Forum TF

Globalization of the society

- Expand AOC and diversify international cooperation with developing countries
- Participate in CECAR8 and strengthen ACECC cooperation
- Establish a close cooperation system in Northeast Asia

Establishing tradition of construction culture

- Assess and promote social value of civil engineering heritage
- Develop interchange program with the arts and literature fields
- Establish the "Civil Engineering Heritage Committee"

President-Elect (2021)

Seung-Ho Lee, Ph.D.
Professor, Sangji University

Immediate Past President (2019)

Jong-Seh Lee, Ph.D.
Professor, Hanyang University

You can access the KSCE International Newsletter at the link here KSCE International Newsletter.

World Federation of Engineering Organizations (WFEO)

Message from the WFEO President GONG Ke

Dear National and International Members,

Dear Associates,

Dear supporters, friends, partners of WFEO,

I sincerely wish this newsletter will find you all well.

During the pandemic, engineers have worked continuously with a strong sense of responsibility and solidarity by every possible means to fight the COVID-19 and promote SDGs.

Engineers and engineering community are contributing actively in the whole circle against the pandemic. Good examples include building quarantine and healthcare infrastructures, retooling production lines from industries originally not related to the healthcare system, and initiating R&D efforts to find cures and vaccines options. We have set up a COVID-19 Information Portal which provides relevant information, news feeds and media articles highlighting the engineering responses to fight the COVID-19. Moreover, we are supporting our members and partners, especially in Africa with expertise and experiences against the pandemic.

It was a great pity that we had to cancel the WED ceremony at UNESCO HQ. However, the online campaign has achieved a big success. The Program of WED ceremony at UNESCO HQ on March 4th, 2020 has been transferred to a quickly developed Webpage of "Global Online Celebration of the World Engineering Day", including WED videos, WED messages from UNSG, UNESCO DG, WFEO and global engineering community; WFEO's voices on emerging technologies, on COVID-19, on climate change, on women in engineering, and Small Islands Developing States (SIDS); WED2020 podcasts, local and regional events, results of surveys and competitions, etc. There were 88 events held in 40 countries, including 4 international events. There are more than 9 papers published in or cited by more than 100 top-tier media. The WED contents in social media have reached up to 30 million people.

Along with the de-confinement, engineers shall play key roles in achieving a transformative recovery to accelerate the conversion to a sustainable development model. We have been making significant progress on engineering education with UNESCO and IEA for a global benchmark standard of engineering education. Furthermore, WFEO is actively engaging in making voices of the engineering community to address pressing global challenges, such as climate emergency, clean water, anti-corruption in engineering projects, or women in engineering.

Again, best wishes to all of you and your colleagues.

GONG Ke

President of WFEO

You can access the WFEO Flash-Info #34, May 2020 at the link here WFEO Flash-Info #34, May 2020.

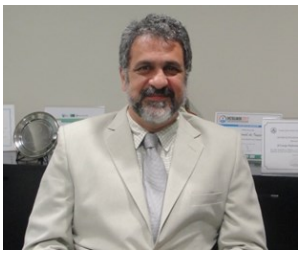
World Council of Civil Engineers (WCCE)

WCCE's Standing Committee on Water Chairman appointment as Spanish government new water Director general

Spanish Council of Ministers has appointed Teodoro Estrela Monreal, Current chair of WCCE's Standing Committee on Water, Water Director General of the Spanish government. Before his appointment, he chaired the Hydrological Planning Office of river Jucar's Basin Authority.

Ph D in Civil Engineering from the Polytechnic University of Valencia and public service official since 1989, the new Water Director General has worked at the Center for Hydrographic Studies of Cedex, where he held the office of technical-scientific coordinator of the Hydrology Area and collaborated with the European Environment Agency as a member of the European Thematic Center for Inland Waters.

Defining civil engineering - A column by Jorge Abramian, WCCE President Elect



A previous research about the civil engineering profession sparked the interest to investigate how different countries define this practice. The mentioned research related to the number of civil engineers available in different countries, and showed a correlation with population, being the average of the 38 sampled countries close to 1.050 civil engineers per million inhabitants.

However, the data scattered and its standard deviation was somewhat large. Interestingly, some of the respondents pointed out that in their countries the definition of civil engineers was generally broader than in the rest of the world – those countries were not taken into account in the mentioned investigation as would bias the results.

In these cases, they explained, civil engineering was understood as the opposite of, for example, military engineering. Hence, civil engineering was an umbrella that covered construction, mechanical, chemical, transportation engineering and others as specializations of civil engineering.

This comments triggered the question: how are we defining what a civil engineer is? To answer the above stated question, WCCE conducted a survey responded by representatives of 25 countries. To design the survey the mind was set in the actions that a civil engineer is legally able to do.

Countries participating in the survey

Country	Structures, transportation,	Topographic surveys	Water supply & Sani-	Power lines,	Remarks
Argentina	•	•	•		Topography depending on jurisdiction, power lines and others restricted to buildings
Australia	•		•		
Austria	•	•	•	•	
Bolivia	•		•		
Botswana	•		•		
Brazil	•	•	•	•	
Chile	•	•	•	•	Electrical, mechanical, industrial, etc. are considered specialties of Civil engineering, but hold different degrees and scopes of competence.
Congo	•	•	•	•	The concept of civil engineering is broader and may include, as specialties, mechanical, electrical, etc.
Costa Rica	•	•	•	•	
Cyprus	•		•	•	
Egypt	•	•	•		
Honduras	•	•	•		
Kenya	•		•		
Mexico	•	•	•	•	
Montenegro	•	•	•	•	The concept of civil engineering is broader and may include, as specialties, mechanical, electrical, etc.
Nigeria	•	•			
Peru	•	•	•	•	Electrical, mechanical, industrial, etc. are considered specialties of Civil engineering, but hold different degrees and areas of development
Portugal	•	•	•		There are many specialties, but usually engineers work up to two areas of expertise
Puerto Rico	•		•		Civil engineering encompasses all disciplines, but practice should be limited to area of expertise
Rwanda	•	•	•		
South Africa	•	•	•	•	
Spain	•	•	•	•	
Uganda	•	•	•		
USA	•		•		Civil eng. encompasses all disciplines, but practice is limited to area of expertise
Zimbabwe	•	•	•		

Results

The survey only comprised four questions, the first of which was the country name of the respondent and the last one was a text box for additional, optional comments. The main questions were aimed to understand what the field of action of the civil engineer is, as regulated by the authorities. Here are the results:

In 100% of the surveyed countries, civil engineers can design and build structures, highways, railways, ports, transportation systems, dams, channels, irrigation systems and other hydraulics systems. Only in a few countries they cannot perform soil mechanics studies and foundation designs (reserved to geologists or mine engineers).

In 96% of the cases, civil engineers are allowed to design and build sanitary facilities like landfills, treatment plants, sewage, etc.

In 72% of the countries, civil engineers can perform topographic and hydrographic surveys.

In 44% of the countries, civil engineers can work in electrical systems, pipelines, firefighting facilities, and others.

Only in 12% of the cases, civil engineers would cover broader areas of actions. In some cases, they would access these broader areas through specific academic degrees, independently of the civil engineering program. For instance, they may be called “Mechanical Civil Engineer” after following an academic program specifically oriented to mechanical engineering.

In the case of topographic surveys, in some countries, like Argentina and Bolivia, the situation is evolving. Time ago, the capacity of civil engineers to perform such works and sign legal survey documents or drawings was undeniable. However, in the present, surveyors fight for their reconnaissance as the only professionals able to undertake such responsibilities. Many countries feature completely separated licensing processes for civil engineers and surveyors.

In most countries, civil engineers can design and build housing or architectural constructions and they would be able, too, to design and install the ancillary services, like the electrical wiring distribution or the water piping but, for example, they are not allowed to design power plants or power lines (except for the supporting structures). However, in some countries, the ancillary services must be designed and installed by mechanical or electrical engineers.

One question that was not added to the survey is related to territorial planning or urban planning. Some of the comments pointed out that absence. An interesting field usually recognized as a civil engineering area of development that is also shared with architects and geographers.

Preliminary Conclusions

Given these clarifications, the survey results show that there is a pretty good agreement on the definition of what a civil engineer is and can do. However, some comments included in the answers highlighted a few aspects that are worthwhile to mention. Civil engineers cover a vast field of action that could remind the license of James Bond. The latter had the license to kill; civil engineers have the license to do almost everything related to construction and associated disciplines. Many answers pointed out that even when a civil engineer has a background and theoretical knowledge to serve in a variety of specialties, the license is subject to an ethical constrain: one must be in charge of projects within his own area of expertise. This means that even though you can choose from a number of subspecialties, you are still bounded to restrict your practice to those for which you have taken interest and experience.

While this latter is true, it is also true that an ample field of action is desirable when civil engineers start their careers. Moreover, as civil engineers are particularly vulnerable to economic downturns, government budget cuts, and the end of construction jobs, a wider potential area of practice could help overcome economic difficulties: an engineer could later take interest in a different area of expertise within the civil engineering and change his scope. In the end, to have an ample field of action benefits the professionals and makes them more flexible to adapt to changing situations.

One additional thought could be added to the former ones related to the tendency to open schools that offer undergraduate degrees based on traditional civil engineering areas of expertise. For example, there are schools that offer degrees in transportation engineering, independently of the civil engineering core program. Traditionally, a civil engineer will specialize in transportation engineering choosing this major in the undergraduate school and acquiring additional knowledge by practice or by pursuing graduate degrees. May be, to enlighten this discussion another survey should be conducted.

Hopefully, WCCE will keep preparing databases that allow our members to build a common language to help resolve issues like professional mobility, continuing education, and international cooperation.

Covid-19 Safety Guidelines for Construction Sites

WCCE members are fully aware of the need to slow the Covid-19's virus spread. Bearing in mind that quite a large number of countries are considering construction as an essential activity which is labour intensive, it is the responsibility of our professional to prevent the spread of the virus in the workplace. On such grounds, WCCE has become to compile safety guidelines for construction works from different jurisdictions in order to help other professional organizations which lack them or have not been put in force yet.

For the time being, guidelines from 15 countries have been collected but we expect that with everybody's collaboration, we would be able to build a relevant repository on the topic.

Contribute on the following link.

For more information and for consulting the repository please follow the link here.

European Council of Engineers Chambers (ECEC)

ECEC Statement on the COVID-19 situation and the impact on Chartered Engineers

The COVID-19 Crisis and the impacts on the profession of Chartered Engineering Consultants

1. Compensating COVID-19 related extra efforts

Digitalisation is a major factor in the daily professional lives of Chartered Engineers, therefore to continue working during the crisis with home-office-based employees is a matter of course. This is essential for the economic restart after the shutdown. The work of Chartered Engineers is a basis for any form of project planning and construction work after the crisis. In order to provide the basis for the continuation of construction projects, Chartered Engineers take risks for themselves and their employees in the interest of society.

But, of course not even the use of advanced technology can fully prevent that the performance of Chartered Engineers is hindered by the crisis. As authorities and clients also have to face work obstructions, deadlines cannot be met, etc.

All this leads to considerable extra efforts that were not foreseen and are not regulated in the contracts. It is necessary to clarify that Chartered Engineers shall not carry the costs for the extra efforts based on the COVID-19 crisis all on their own.

2. Retaining highly qualified personnel

It already became clear during the financial crisis in 2008 that Chartered Engineers are an important pillar of economy and reliable employers. This will also be proven during and after the COVID-19 crisis. Employees in Chartered Engineering companies are mainly highly qualified and experienced professionals that cannot be substituted easily. Terminating employees' contracts therefore needs to be avoided even in cases of a temporary decline in projects due to the COVID-19 restrictions.

Support measures – such as the possibility for "short-time work" that is currently implemented in many EU countries and partly covers personnel costs for a limited duration of time – against the termination of employment contracts are important. It has to be guaranteed that such measures are also open to Chartered Engineers and their employees.

3. Drawing the right conclusions from the crisis

Liberal professionals such as medical doctors and Chartered Engineers play a major role in overcoming this crisis in regard to both the health and the economic aspect. It became very obvious, that systemically important medical, engineering and other professions are the essential pillar of overcoming the COVID-19 crisis and also how much our society depends on their professional knowledge and expertise.

In many areas – from medical technology and infrastructure to AI applications and strategic calculation mechanisms - medical approaches rely on engineering excellence. Apart from direct medical applications Chartered Engineers play an important role in keeping up the communication and infrastructure systems that are a basis for the current digitalisation boost that enables economic activities in a shutdown situation.

The COVID-19 crisis once again shows the important role of liberal professions for health, safety, and welfare. The longstanding European Commissions´ deregulation approach in broad areas of policy now shows its weaknesses and limitations in full force. It became very obvious that the market cannot fix everything and that excellence based on high qualification is an indispensable resource when challenging a crisis. It is absolutely necessary for the European Union to re-think its approach to national professional regulation. Risking the quality of systemically important liberal professional services because of controversial economic beliefs in the impacts of deregulatory measures must stop immediately. Europe is a knowledge-based society that needs to enhance and not diminish medical as well as engineering excellence.

European Civil Engineering Education and Training (EUCEET) Association

13th General Assembly of the EUCEET Association

The 13th General Assembly of the EUCEET Association will take place in Castilla-la-Mancha, Spain, on 18th September 2020, kindly hosted by the University of Castilla-La Mancha (UCLM).

2021 EUCEET Association Conference

The 5th International Conference of the EUCEET Association will be held in the spring of 2021 and will be hosted by Aristotle University of Thessaloniki (Greece). This Conference on Civil Engineering Education will be a joint EUCEET/AECEF event.

The Association of European Civil Engineering Faculties (AECEF) is a free association of Civil Engineering educational organisations and their staffs, research institutes, engineering companies, and other - public as well as private - organisations or individuals involved in civil engineering.

AECEF was founded on 14th September 1992 as a non-governmental, apolitical and non-profit making organisation.

European Construction Industry Federation (FIEC)

New FIEC President and Steering Committee elected for the mandate 2020 - 2022

Further to the FIEC General Assembly meeting held on 22/05/2020, the German contractor Thomas BAUER is the new President of the European Construction Industry Federation, at the head of the newly elected Steering Committee.

Prof. Thomas BAUER succeeds the Norwegian contractor Kjetil Tonning, whose term of office has come to its statutory end.

Bauer has, for more than 20 years, represented the interests of the construction industry in leading positions both nationally and at EU level as Vice-President and President of the German Construction Industry Federation HDB, and since 2016 as Vice-President of FIEC and President of its Economic and Legal Commission.

He is currently Chairman of the Supervisory Board of BAUER AG (Schrobenhausen, Germany). Holder of numerous honorary awards, he is also on the board of the Confederation of German Employers' Associations BDI.

The newly elected members of the FIEC Steering Committee are:

- Thomas BAUER (DE), President
- Vice-Presidents (in alphabetical order):
- María-Ángeles ASENJO (ES), representative for Spain
- José Michaël CHENU (FR), representative for France
- Philip CRAMPTON (IE), representative for the group IE, PT
- Michail DAKTYLIDIS (GR), representative for the group CY, GR
- Philippe DESSOY (BE), representative for EIC (European International Contractors)
- Lubomir KATCHAMAKOV (BG), representative for BG, CZ, EE, HU, HR, LT, LV, RO, SI, SK, UA
- Juha METSÄLÄ (FI), representative for the group DK, FI, NO, SE
- Rüdiger OTTO (DE), representative for Germany
- Piero PETRUCCO (IT), representative for Italy
- Alexander PONGRATZ (AT), representative for AT
- Joël SCHONS (LU), representative for the group BE, LU, NL.

A word from the FIEC President Thomas Bauer

In the last few decades, the European Union has created unity for its member states. We have all enjoyed greater benefits and freedom in our personal lives and for our businesses during this time. People have become used to it and they look at these benefits as a given part of life.

In fact they are not a given, they are the result of hard work in politics and all organisations in our societies. They are the result of the setting of common rules, the opening of markets, of friendship between people and solidarity. Solidarity means accepting giving some of our own assets to others in exchange for even more common advantages, which the European Union creates for all people and players in its own territories as well as in the rest of the world.

In recent years, as people have become used to the advantages of Europe, they have at the same time started to become more and more critical about Europe. Many people tend to forget that creating such advantages requires compromises. It is not possible to give people from European countries with cheaper labour costs the opportunity to work in other countries in order to get better living standards for themselves without also accepting some level of competition from these countries. Of course this has to take place in a fair and balanced manner.

With these contradictions, if we want to have peaceful and frictionless development in many respects, we need a lot of effort from organisations like FIEC working with the political institutions, in order to develop suitable rules that allow fair and balanced development for everybody. Within FIEC we are particularly mindful of these principles.

We are all aware that the overall framework at global level, is getting more and more complex and competitive, with increasingly fast changes that are creating additional pressure. Furthermore, the interrelations of our economies and our societies reveal sometimes how fragile our foundations can be and the Covid pandemic is a very clear example of this. One country has left the EU and partners around the world are becoming increasingly selfish. We have to recognise and admit that one country alone cannot survive in this world. All European countries and their businesses need each other to have a prosperous future. Also large unexpected problems, like the Covid crisis, cannot be dealt with by each individual country on its own. The European Union is needed to allow each country to overcome such huge disruption.

The construction industry is one of the largest players in our economy. It employs around 7% of all the workforce and builds the basis of a sustainable and competitive society. Construction plays a key role in increasing our quality

of life, in ensuring the success of our economies, as well as our culture and wellbeing, our mobility and for sustainable development in general. One of the main objectives of FIEC is precisely to facilitate all necessary political and economic initiatives to enable the construction industry with all its workforce to play this important role in the best possible manner. We aim to ensure the cooperation required between all parties concerned for the successful management of businesses for their employees, owners and other stakeholders.

FIEC wants to continue to be recognised as a representative, strong and reliable partner at European level for the benefit of all. In order to be able to do so FIEC needs a strong involvement and commitment from all its member federations, as well as dialogue, patience, common goals and mutual trust. Being able to improve our own abilities will be critical for our success.

It is along these lines that I intend to operate during my presidency and I am counting on the support of each one of you.

The European Federation of Engineering Consultancy Associations (EFCA)

The European Federation of Engineering Consultancy Associations (EFCA) published in 2019 Consulting a comparative study across Europe titled "Engineers' liability and insurance requirements".

The integration of the European internal market constitutes a major objective of the European Union.

Firms often face several difficulties when they wish to provide their services in another EU country, among which easy access to accurate information they need about national legislation on liability, regulatory requirements and the local insurance market.

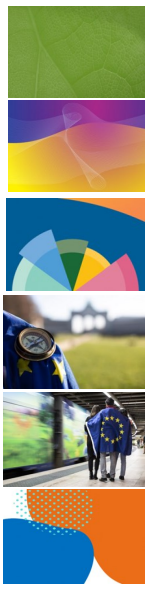
The purpose of this comparative report is to provide the National Associations and their consulting engineering firms with an overview of the liability and insurance conditions in European countries.

The report summarizes the responses to the 2009 survey and updates received in 2013 and respectively late 2018 - early 2019, from the member associations of 20 representative European countries, namely Austria, Belgium, the Czech Republic, Denmark, England, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Portugal, Romania, Spain, Sweden, Switzerland and Turkey.

The report can be downloaded here.

EU News

European Commission priorities for the period 2019 – 2024



A European Green Deal
Striving to be the first climate-neutral continent

A Europe fit for the digital age
Empowering people with a new generation of technologies

An economy that works for people
Working for social fairness and prosperity

A stronger Europe in the world
Europe to strive for more by strengthening our unique brand of responsible global leadership

Promoting our European way of life
Building a Union of equality in which we all have the same access to opportunities

A new push for European democracy
Nurturing, protecting and strengthening our democracy

European Commission Annual Activity Reports
At the end of the year, all departments draft an annual activity report on their performance in achieving targets set in their strategic/management plans.
The Annual Activity Reports can be found here.

The European Construction Sector Observatory (ECSO)

The European construction sector observatory (ECSO) is an initiative under COSME. It regularly analyses and carries out comparative assessments on the construction sector in all 27 EU countries and the UK – aiming to keep European policymakers and stakeholders up to date on market conditions and policy developments.

What are ECSO's objectives?

- to monitor market conditions and trends, as well as national/regional strategies and progress towards the 5 priorities of construction 2020
- to encourage knowledge sharing and the replication of good practice
- to raise awareness on policy measures and initiatives impacting the construction value chain

Country fact sheets
ECSO profiles the construction industry in the 27 EU countries and the UK, and produces detailed country fact sheets (CFS) for each country. Each CFS provides an analysis of key figures, macro-economic indicators, economic drivers, issues and barriers, innovation, the national/regional policy and regulatory framework, and the current status and national strategy to meet construction 2020 objectives.

Analytical reports
Analytical reports are documents providing the EU with a wide analysis of the socio-economic and environmental performance of the construction sector and recommendations for possible strategies to increase the sector's competitiveness.

- Thematic objective 1: stimulating favourable investment conditions
- Executive summaries: analytical report objective 1 in EN, FR, DE, ES, IT, PL
- Thematic objective 2: improving the human capital basis
- Executive summaries: analytical report objective 2 in EN, FR, DE, ES, IT, PL
- Infographics on Improving human capital basis
- Thematic objective 3: improving energy and resource efficiency
- Executive summaries: analytical report objective 3 in EN, FR, DE, ES, IT, PL
- Thematic objective 4: strengthening the internal market for construction
- Executive summaries: analytical report objective 4 in EN, FR, DE, ES, IT, PL
- Thematic objective 5: international competitiveness of EU construction firms
- Executive summaries: analytical report objective 5 in EN, FR, DE, ES, IT, PL
- Housing affordability and sustainability in the EU: analytical report
- Executive summaries in FR, DE, ES, IT, PL
- Infographics on housing and sustainability
- Late payment in the construction sector: analytical report
- Executive summaries in FR, DE, ES, IT, PL
- Infographics on late payment

Trend papers
Trend papers are analytical reports that describe specific aspects of the main trends in the construction sector. The reports also contain relevant good practice examples from a policy and industry perspective.

- Integrating digital innovations in the construction sector: The case of 3D printing and drones in construction
- Building information modelling in the EU construction sector
- Infographics on digitalisation
- EU construction sector: in transition towards a circular economy

For further information on the topic please visit the European Commission website here.
You can also subscribe to the ECSO Newsletter by following the link here.

Open Public Consultations

Through public consultations you can express your views on the scope, priorities and added value of EU action for new initiatives, or evaluations of existing policies and laws.

EU competition law – market definition notice (evaluation)
Topics: Competition
Consultation period: 26 June 2020 - 9 October 2020

Pharmaceuticals – safe and affordable medicines (new EU strategy)
Topics: Public health
Consultation period: 16 June 2020 - 15 September 2020

European Globalisation Adjustment Fund – final evaluation (2014-20)
Topics: Employment and social affairs
Consultation period: 10 June 2020 - 2 September 2020

New competition tool
Topics: Competition
Consultation period: 3 June 2020 - 8 September 2020

Digital Services Act: deepening the Internal Market and clarifying responsibilities for digital services
Topics: Digital economy and society
Consultation period: 2 June 2020 - 8 September 2020

Digital Services Act package: ex ante regulatory instrument of very large online platforms acting as gatekeepers
Topics: Digital economy and society
Consultation period: 2 June 2020 - 8 September 2020

Investment protection and facilitation framework
Topics: Banking and financial services
Consultation period: 26 May 2020 - 8 September 2020

Trans-European energy infrastructure – revision of guidelines
Topics: Energy
Consultation period: 18 May 2020 - 13 July 2020

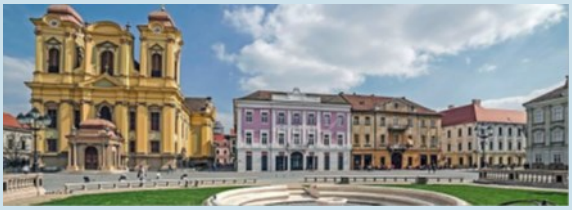
Adapting to climate change – EU strategy
Topics: Climate action
Consultation period: 14 May 2020 - 20 August 2020

Evaluation of the EU agricultural promotion policy
Topics: Agriculture and rural development
Consultation period: 8 May 2020 - 11 September 2020

Waste shipments – revision of EU rules
Topics: Environment
Consultation period: 7 May 2020 - 30 July 2020

Upcoming events

Date	Event	Place
03.07.2020	IABSE – ECCE Webinar: Characteristic Seismic Failures  https://us02web.zoom.us/meeting/register/tZIvdO6upzMuGt0r6GtDjztt2zTsy-l01R8y?utm_content=buffer08a28&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer	VIRTUAL

Date	Event	Place
15-17.09.2020	The 8th World Sustainability Forum https://wsf-8.sciforum.net/	VIRTUAL, Basel, SWITZERLAND
20-24.09.2020	SEFI 2020 Annual Conference https://www.sefi.be/2020/05/07/sefi-2020-annual-conference-in-a-new-format/	VIRTUAL
21-22.09.2020	ICCEEL 2020: International Conference on Civil Engineering Education and Learning  https://waset.org/civil-engineering-education-and-learning-conference-in-september-2020-in-toronto	Toronto, CANADA
19-20.10.2020	47th International JVE Conference  https://www.jveconferences.com/conference/TIMISOARA-2020	Timisoara, ROMANIA
28-30.10.2020	ASCE Convention 2020 https://www.asceconvention.org/	VIRTUAL
18-20.01.2021	14th Baltic Sea Geotechnical Conference 2020  https://www.ril.fi/en/events/bsgc-2020.html	Helsinki, FINLAND
19-20.05.2021	Digital Construction Week https://www.digitalconstructionweek.com/	London, UNITED KING-DOM

Date	Event	Place
1-4.09.2021	18th International Conference for Women Engineers and Scientists ICWES 18 18TH INTERNATIONAL CONFERENCE OF WOMEN ENGINEERS AND SCIENTISTS https://warwick.ac.uk/fac/sci/eng/icwes18/	Warwick, UNITED KING-DOM
19-24.06.2022	3rd European Conference on Earthquake Engineering and Seismology (3ECEES) 3rd EUROPEAN CONFERENCE ON EARTHQUAKE ENGINEERING &SEISMOLOGY A joint event of the 17th European Conference on Earthquake Engineering & 38th General Assembly of the European Seismological Commission International Conference Centre, Bucharest, Romania. 19 – 24 June 2022 https://3ecees.ro/	Bucharest, ROMANIA

European Council of Civil Engineers

European Council of Civil Engineers

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"Civil Engineers at the Heart of Society Building Life Quality and a Sustainable Environment"

The European Council of Civil Engineers (ECCE) was created in 1985 out of the common concern of the professional bodies for Civil Engineers in Europe that the Civil Engineers working together across Europe could offer much more to assist Europe advance its built Environment and protect the natural environment.

At the European Union level, ECCE aims to promote the highest technical and ethical standards, to provide a source of impartial advice, and promote co-operation with other pan-European organizations in the construction industry. ECCE also advises and influences individual governments and professional institutions, formulates standards and achieves a mutual compatibility of different regulations controlling the profession, and formulates standards for a European Code of Conduct of the Civil Engineering Profession and disciplinary procedures applicable throughout the Union.