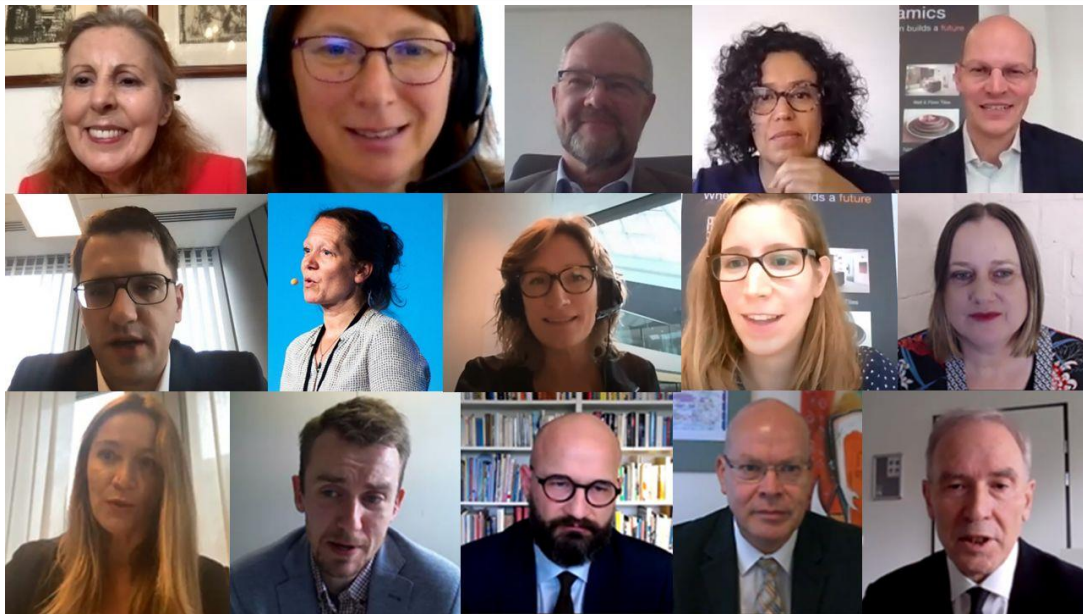


Cycle of Webinars on Circular Economy



Report on the CU Cycle of Webinars on Circular Economy

In March 2020, the European Commission launched its Circular Economy Action Plan, one of the major elements of the European Green Deal, the growth strategy of the European Union. The European Ceramic Industry plays an active role in this transition with sustainable products and has developed numerous solutions to minimize the consumption of raw materials and the waste generated during the production process, as well as to increase the rate of reuse and recycling of its products.

In this context, **Cerame-Unie** published a **Brochure on Circular Economy and Sustainability | Best Practices from the Ceramic Industry**, highlighting how the Ceramic Industry contributes to the shift towards circular economy through innovative production processes and sustainable products, and organized (between June and October 2020) a series of public webinars on the contribution of the ceramic industry to circular economy. The Kick-Off webinar provided an overview of the ceramic industry's contribution to circular economy and was followed by two sectoral webinars dedicated to sustainable construction through circular economy and the contribution of refractories to circular economy.

The Webinars were moderated by **Kathryn Sheridan** (CEO & Founder, Sustainability Consult) and gathered **stakeholders** from various **backgrounds**: Cerame-Unie Members, high-level representatives of the European Commission, Members of the European Parliament, representatives from Member States, European Associations, Research & Innovation entities, Universities, and stakeholders from the ceramic industry value chain. This report provides an overview of the key messages and discussions developed during the webinars.

Kick-Off Webinar: Opportunities of Circular Economy for the ceramic industry, under the Green Deal – 19 June 2020

This kick-off webinar counted with the presence of the following speakers and an attendance of more than **170 participants**:

- **Maria da Graça Carvalho**, MEP, Member of the ITRE Committee
- **Paola Migliorini**, Deputy Head of Unit “Sustainable Production, Products & Consumption”, DG Environment, European Commission
- **Gerhard Koch**, Head of Public Affairs, Wienerberger Building Solutions / Cerame-Unie
- **Silvia Machado**, Senior Advisor for Environment & Climate, CIP - Business Confederation of Portugal

Maria da Graça Carvalho



Maria da Graça Carvalho, MEP, ITRE Committee, highlighted in her keynote speech the importance of the current policy context with the adoption of the Recovery Plan and the European budget together with the Green Deal, the digital strategy, the data strategy, and the industrial strategy that are new pieces of policy that will give orientations in the next few years. MEP Carvalho also insisted on **the role of breakthrough technologies in the shift to circular economy** and how the technological developments may be founded via the Innovation Fund, Horizon Europe, SPIRE, and other funds managed by Member States. Lastly, **MEP Carvalho highlighted the barriers and the role of policy makers to removing them** while insisting on the need for the industry to have a predictable and stable framework across climate and energy policies applying to the whole lifecycle.

Paola Migliorini



Paola Migliorini, Deputy Head of Unit “Sustainable Production, Products & Consumption”, DG Environment, European Commission, underlined that the consumption and the extraction of materials have tripled over the past decades, but that only 12% of materials come from recycled materials. In this context, the European Commission developed the Green Deal and the Circular Economy Action Plan, presented by Ms. Migliorini. Ms. Migliorini highlighted that the **actions cover the entire lifecycle of products and focus on making products more sustainable with the improvement of durability, reusability, upgradability, and reparability requirements**. It was also specified that some actions target essential sectors such as the construction and buildings sector with a Strategy for a Sustainable Built Environment.

Gerhard Koch



Gerhard Koch, Head of Public Affairs, Wienerberger Building Solutions / Cerame-Unie, provided first an overview of the ceramic industry, represented by 80% of SMEs and employing about 200,000 people in Europe. **Mr. Koch underlined that the durability of the ceramic products is essential when addressing the circular economy and resource efficiency.** In addition to that, Mr. Koch highlighted that the shift to circular economy requires innovative business models, so that products produced by manufacturers can be reused or recycled after the lifecycle. Mr. Koch finally presented the numerous solutions

developed by the ceramic industry to minimize the raw material consumption, reduce waste of production processes, and increase the reuse and recycling of ceramic products with best practices from manufacturers.

Silvia Machado



Silvia Machado, Senior Advisor for Environment & Climate, CIP - Business Confederation of Portugal, mentions the many challenges to the implementation of the new Circular Economy Action Plan. One is to guarantee the necessary investments, both private and public. Another challenge for circularity, is to achieve a fair system of requirements. New rules are establishing a rewarding system for manufacturers based on their sustainability performance and level of product eco-design. In both cases, the requirements

may not be easy to quantify nor the objective clear enough. **Another challenge that still represents a problem is the difficulty in adapting the supply and demand or creating a market for secondary resources.** In practice, these materials compete with virgin materials, which meet all products specifications, while still available at a lower price. It can be very difficult to recover investments in recycling. For secondary raw materials' suppliers, it is hard to meet the quantity and the quality requirements. Even if the quality is guaranteed by using specific harmonized standards or technical specifications, secondary raw materials are still seen as lower value materials. Due to this, they can be used only in products with lower specifications or low-value processes. Furthermore, the process of setting criteria on by-product classification can also be very restrictive. **Ms. Machado considers there are many obstacles and difficulties to overcome but as well many solutions and possibilities to explore.**

2nd Webinar: Sustainable construction through circular economy under the Green Deal – 30 September 2020

The Webinar counted with the presence of the following speakers and an attendance of more than **175 participants**:

- **Christian Doleschal**, MEP, IMCO Committee, European Parliament
- **Josefina Lindblom**, Policy Officer, DG ENVI, European Commission
- **Gitte K. Nielsen**, Managing Director, Danish Brick & Roofing Tiles Association



Christian Doleschal

Christian Doleschal, MEP, IMCO Committee, European Parliament, highlighted that the EU has put a strong focus on the sustainability of buildings and construction products through several activities, such as the revision of Construction Products Regulation (CPR). Mr. Doleschal has drafted a report on this review, giving emphasis to the inclusion of sustainability in construction using the CPR and calling the Commission to **find a quick and practicable solution to improve the standardization process** to eliminate the backlog of unpublished harmonized standard. Mr. Doleschal underlines that it is vital to ensure a level playing field for economic operators and that the **needs and financial burden to SMEs, should be included in the evaluation and review of the CPR**. The goal is to **make the construction sector more sustainable by creating a sustainability performance for the construction products as announced in the economic plan and renovation wave**. Nevertheless, the inclusion of sustainable development objectives, should also be assessed, as well as the relevance of incorporating some requirements such as sustainable criteria into harmonized standards. In the light of the COVID-19 pandemic and its economic consequences, it is important not to impose unnecessary and unjustified bureaucratic obstacles to the construction sector. Stakeholders require clear and feasible solutions to work towards economic recovery. It is very important to ensure policy coherence and avoid legal uncertainty for businesses.

Josefina Lindblom



Josefina Lindblom, Policy Officer, Sustainable Buildings, DG ENVI, European Commission, shared information regarding Level(s), a framework to assess and report the sustainability performance of buildings. **Level(s) takes the lifecycle approach and provides a robust approach to measure and support the improvement from design to the end-of-life.** Level(s) is set up for residential buildings as well as offices. Level(s) is based in several core indicators which have been developed and tested in collaboration with many stakeholders across the building sector, and it covers indicators such as carbon, materials, water, but also health, comfort, and resilience to climate change. Level(s) will support the full circularity of the lifecycle and will look at the design, the construction, the use of materials, and the use of the building at the end-of-life. EU policy is directly linked to the EU Green Deal, to the EU Circular Economy Action Plan and the Renovation Wave, where lifecycle and circularity will play a big role.

Gitte K. Nielsen



Gitte K. Nielsen, Managing Director, Danish Brick & Roofing Tiles Association, starts by underlining that **ceramic products are made of clay, a widely available, easy to extract, high longevity and low ecological impact raw material.** Throughout the years, the ceramic industry has worked actively to minimize the use of raw materials, through its **focus on zero waste production, the reuse and recycling of ceramic products.** Ceramics produce clean products because the clay and water used in the production process can be recycled, repeatedly. Excess heat from industrial kilns is reused in drying process, internal scrap is reintroduced in the process and waste from other industries is recycled and reused, such as fibers from paper. The Ceramic Industry has also worked actively on product design optimization. Currently the consumer has access to removable and reusable floor tiles, sanitaryware created with less raw material but the same quality, energy efficiency and long-lasting products. Housing bricks have more than 150 years of life span, as clay pipes. Ceramic tiles for flooring last up to 50 years, as sanitaryware. Clay pavers have 125 years life span and expanded clay, unlimited. Reusing roofing tiles due to its high quality and long life has been ongoing for many years and the same thing for the clay pavers. Clay pipes and bricks are 100% recyclable and reusable. Ms. Nielsen stresses that there are plenty of innovative ways of reusing products from the ceramic industry. **In the Construction sector there is much energy and such an immense volume of materials, which the main goal should be to keep them in the economy, for as long as possible.** One of the challenges is to design buildings fit for deconstruction. There is a high interest in reusing construction products, but one of the main issues is availability. **There must be an efficient infrastructure responsible for ensuring circularity and the quality and technical performance of the products.** Regarding regulatory aspects, Ms. Nielsen acknowledges the stricter regulations for construction products, which result in their exclusion from being reused in the industry. Ms. Nielsen considers the Ceramic sector as one of the flagships for circular economy, due to their unquestionable potential for reuse.

3rd Webinar: Refractories fostering energy intensive industries' competitiveness through circular economy – 26 October 2020

The Webinar counted with the presence of the following speakers and an attendance of more than **120 participants**:

- **Susana Solis Pérez**, MEP, Renew Europe, European Parliament
- **Chiel Berends**, Policy Officer, Unit Waste Management and Secondary Materials, DG Environment, European Commission
- **Dr. Christian Meyre**, Chair of PRE Safety and Environment Committee
- **Rinus Siebring**, Manager Technology Refractories, Centre of Expertise, Tata Steel
- **Patrick Bikard**, PRE President, Cerame-Unie



Susana Solis Pérez

Susana Solis Pérez, MEP, Renew Europe, European Parliament, stresses that the EU needs to have more autonomy in industrial sectors and must adopt a **lifecycle thinking** to all manufacturing decisions and for this it should look to circular economy. In this transition **the refractory industry has a key role to play**, because of the long-life cycle of materials and their high potential for reuse, recycling, and recovery. **Ms. Pérez considers crucial to remove regulatory barriers but also to address the hardships that are hampering circular solutions** from succeeding and to work together with all stakeholders to put in place measures and legislation that provides legal support to companies and foster innovation. The new sustainable product policy framework proposed by the Commission and the industrial strategy should be guided by the principles of designing out of waste, implementing eco-design measures that ensure the products are fit for circularity and setting rules that reduce the total environment and resource footprint of European products and consumption. The priority is prevention of waste and recovery of high quality secondary raw materials. Ms. Pérez underlines that a necessary precondition for circular economy is innovation, which is of vital importance at all stages of their raw materials value chain, from mining to waste recovery. It is also imperative to **remove market barriers, to establish a well-functioning European market for secondary raw materials**. This will require **common standards, and harmonized end-of-waste criteria aligned with the waste framework directive to ensure high-quality waste recovery**. Digitalization also plays a key role in this transition. The EU needs to make circular economy a business model for companies and consumers, and to emphasise the specific role that SMEs are playing the transition to circular economy. Businesses should consider the implementation of the circular economy, not as a burden but as an opportunity, because manufacturing costs would be significantly reduced if the materials are reintroduced in the value chain. For that **the industry needs a clear political signal to invest in the design, collection, recycled content, and recycling on the long-term**. For all this, there must be a coherent approach that encompasses the different strategies in the EU, a behavioural change, and funds. Huge investments are needed, and the private-public collaboration is essential. The EU recovery plan should be used to put in place circular economy initiatives and infrastructure, but regional policy is equally relevant.

Chiel Berends



Chiel Berends, Policy Officer, Unit Waste Management and Secondary Materials, DG Environment, European Commission, underlines the importance of the Circular Economy Action Plan and its key deliverables, such as the sustainable products policy framework. This framework is still in its early phases, but it is aimed to make **sustainable products the norm instead of niche products and will also look at end-of-waste criteria**. Remains to be seen if it is necessary and feasible to adopt further criteria on an EU scale (horizontal criteria). Regarding the waste framework directive, he stresses that the EC will, by 2024, review the target, assess the feasibility and the necessity of doing so, and investigate material specific fractions.

Dr. Christian Meyre



Dr. Christian Meyre, Chair of PRE Safety and Environment Committee, starts by informing that **all high temperature industrial processes use Refractories**, such as steel making, cement, petrochemical processes, glass, ceramics, etc. He underlines that the refractory industry is already very successful in reusing materials from all kinds of industries. Refractories can also recycle sophisticated materials and reuse them in less demanding applications. A big challenge is how to clean used refractories and make them useful for another life cycle. Regarding the regulatory framework, **there are still big obstacles in the material classification such as the difference between raw material VS by-products and secondary raw materials**. Logistics of the process, such as transportation, handling, storage, also play a decisive role in the economic aspects of the Refractory Industry. One of the most relevant problems of recycling is the long distances it needs to travel before reaching a refractory plant where it can be reused. **Currently some refractory bricks already contain up to 75% of recycled materials**. Another challenge in Refractories in achieving and maintaining consistency, while using recycled material. Materials that have been used in high temperature processes are often contaminated with minor elements, and this can compromise the refractiveness of the products. It is vital to ensure the cleanliness of the material, which is not a simple and economical process. Another barrier results from national legislations limiting the use of secondary raw materials and the different classifications for used refractory materials between countries of the EU. These different classifications lead to different interpretations of end-of-waste and by-products, which means the very same material can be considered as a raw material in one country and as a waste in another country. Another challenge to tackle is the cross-border transportations of secondary raw materials. Transporting secondary raw materials between member states is a very complex process and leads to enormous financial burden. This burden limits the uptake and competitive advantage that recycled materials should have, comparatively with average materials. Mr. Meyre concludes stating that **the regulatory framework across the EU should create a single market for secondary raw materials**.

Rinus Siebring



Rinus Siebring, Manager Technology Refractories, Centre of Expertise, Tata Steel, kindly shares how Tata Steel uses Refractories, how they handle refractory waste and how they use recycled material. **The objectives behind the use of recycled materials are of course a concern for safety, health, and environment, but also to ensure a good, consistent, predictable quality of steel, while lowering the costs of the process.** Tata Steel is using around 50.000 tons of refractories per year. Approx. 25% of the refractory waste is reused in the steel production process. Another advantage of using recycled materials is that the steel manufacturer can produce lighter refractory materials, which is beneficial for the production process and results in an increase of the production. Tata Steel have materials with up to 80% of recycled content. One of the most important aspects to consider when using refractory products containing recycled material is to **ensure that the refractory behavior is predictable and consistent.** Another key aspect to ensure the quality of the products is an honest and pro-active communication between the refractory supplier and the steel producer. An open and clear communication speeds up the process of using recycled materials, but trust is key, in the sense that **the refractory supplier must ensure and deliver constant and consistent products.**

Patrick Bikard



Patrick Bikard, President, PRE - EUROPEAN REFRACTORIES PRODUCERS FEDERATION, stresses that the **Refractory sector is already doing recycling today**, wishes to do more, and are invested and committed to overcoming the hurdles. But for that it is **vital to have a consistent joint effort between industries.** Beyond this effort and the benefits drawn from it, Mr. Bikard underlines that refractories are huge contributors to sustainability. Though R&D efforts undertaken by the sector, **Refractories contribute to a greener World**, with the reduction of material losses and CO2 emissions, and making sure the processes are more efficient.