

## WELCOME TO EU GLASS INDUSTRIES NEWS



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## EU COMMUNITY NEWS

### NEW EU LEGISLATION

#### Commission Regulation

##### N° (EU) 2018/1017 of 18 July 2018

This Regulation amends Regulations 2017/366 and 2017/367 imposing definitive countervailing and anti-dumping duties on **imports of crystalline silicon photovoltaic modules and key components** originating from the People's Republic of China and implements Regulations 2016/184 & 185 extending the countervailing and anti-dumping duty on imports from Malaysia and Taiwan, whether declared as originating in Malaysia and in Taiwan or not.

The product under review is crystalline silicon photovoltaic modules or panels and cells of the type used in crystalline silicon photovoltaic modules or panels (the cells have a thickness not exceeding 400 micrometres), consigned from Malaysia and Taiwan, whether declared as originating in Malaysia and in Taiwan or not, currently falling within CN codes ex 8501 31 00, ex 8501 32 00, ex 8501 33 00, ex 8501 34 00, ex 8501 61 20, ex 8501 61 80, ex 8501 62 00, ex 8501 63 00, ex 8501 64 00 and ex 8541 40 90.

After enquiry the Commission concluded that the company Longi (Kuching) SDN.BHD should be added

- to the list of companies that are exempted from the countervailing duty and anti-dumping duty imposed by Implementing Regulation (EU) 2016/184 and Implementing Regulation (EU) 2016/185, respectively.
- to the list of exporting producers contained in Regulations 2017/366 & 367.

*All details on page 1 at:*

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2018:183:TOC>

21332/O.J. L183 – 2018.07.19

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## TRADE POLICY

### Bilateral Trade Agreement between the EU and the USA

Agreement concluded in Washington on 25 July between European Commission President Jean-Claude Juncker and US President Donald Trump on bilateral trade raises hope and questions across the EU. The deal is on a plan to defuse the latent trade dispute between the European Union and the United States and is notably based on the negotiation of a possible agreement on total tariff liberalisation for industrial products (except cars) and on the Europeans' promise to import soybeans and liquefied natural gas (LNG).

Germany, whose record trade surpluses and automobile industry competitiveness are the prime target of Trump's protectionist attacks on Europe, has hailed the agreement reached by Juncker.

*"Not only is the threat of customs duties on automobiles pushed back, but we also agreed to work together against unfair trade practices and for a reform of the World Trade Organisation (WTO)", Germany's Foreign Affairs Minister Heiko Maas stated. "This release could avoid a trade war and save millions of jobs! That is good news for the global economy", his colleague in charge of the economy, Peter Altmaier, said.*

*"It is crucial to prevent a trade war with the US. A close partnership between the EU and the US is important for economic growth and stability in the world. It is good that Mr Juncker is working with Mr Trump to strengthen the partnership between the US and EU, and to promote free and fair trade. In Austria, exports guarantee one in two jobs – that's why I support Mr Juncker in this domain", Austria's Chancellor and current rotating president of the EU Council Sebastian Kurtz stated.*

*"It is very important that the EU and US cooperate on trade and do not oppose each other", Dutch Prime Minister Mark Rutte said.*

**Not a new TTIP.** France, which feared Trump would also take agricultural products into account in addition to tariffs on cars, came across as more circumspect.

*"France and the EU never wanted a trade war with the US. The agreement yesterday between Trump and Juncker is useful, but we must be careful to preserve our European interests", France's President Emmanuel Macron tweeted on Thursday.*

*"I am not in favour of our launching into the negotiation of a huge trade agreement, like with TTIP, because the context does not allow it", Macron then warned, reaffirming his opposition to include agriculture. "I consider that no European environmental, health or food standard should be removed or lowered. Clear gestures are needed from the US too – signals of de-escalation on the steel and aluminium to which illegal taxes have been applied. For me, this is a precondition before any concrete step forwards", Macron said.*

At the European Parliament, Manfred Weber (Germany), the leader of the EPP group, to which Juncker is affiliated, hailed the agreement.

*"We are relieved that further escalation of the trade conflict was avoided and duties on European cars do not seem to be an issue any more at this point.*

*However, as long as the US has not lifted the illegal tariffs on aluminium and steel, the situation remains critical", S&D group leader Udo Bullmann (Germany) stated.*

*"The fact that the EU acted united and with harsh counter-measures towards the illegal tariffs imposed by the US has put Trump under pressure", Bullmann added.*

**EU position weakened, according to Bernd Lange.** The chair of the European Parliament's international trade committee, Bernd Lange (S&D, Germany), said that the EU's negotiating position in the face of Trump is now *"weakened"*. *"Trump has withdrawn neither his customs tariffs on steel and aluminium, nor his threat on the import of cars"*, he said, deeming there was a risk of trade war in the discussions to come.

*"Let's not be naive. We must keep a direct line with Trump and get rid of the taxes on steel and aluminium"*, the leader of the ALDE Group, Guy Verhofstadt (Belgium), said.

**Doubts about taxes on cars.** US Treasury Secretary Steven Mnuchin stated the objective was to conclude an agreement on trade but that the priority was to find a way out on the customs taxes on steel and aluminium. He also confirmed that there would not be any customs taxes on imports of European cars during the negotiations.

US Commerce Secretary Wilbur Ross said that Trump had asked the US Department of Commerce to continue its investigation, under Section 232 of the 1962 US Trade Expansion Act, into the imports of European vehicles (including lorries and spare parts) to determine the impact of these imports on US national security.

Ross nevertheless also said that Trump had ordered that no measure be taken during these negotiations, and he announced the publication of the results of the investigation in August.

In the opinion of White House economic adviser Larry Kudlow, Trump has obtained more than he hoped from the agreement with Juncker. Kudlow gave assurances that Juncker had committed to help the US to force China to change its trade practices.

21333/Press Release – 2018.07.27

**WTO:** Tusk invites China, United States and Russia to work with EU to reform WTO  
European Council President Donald Tusk issued a call on 16 July to China, the United States and Russia to work with the EU to improve the rules-based multilateral system, beginning with reform of the World Trade Organisation (WTO). *"It is a common duty of Europe and China, America and Russia, not to destroy this order, but to improve it. Not to start trade wars, which turned into hot conflicts so often in our history, but to bravely and responsibly reform the rules-based international order"*, he said after the EU-China summit in Beijing, inviting the Chinese leadership along with Presidents Trump of the United States and Putin of Russia *"to jointly (with the EU) start this process from a reform of the WTO"*.

21334/Press Release – 2018.07.16

## ENVIRONMENT & ENERGY

### **Climate Protection and Circular Economy among Austrian Presidency of Council Priorities**

As part of the continuity with the Bulgarian Presidency and under the slogan of “*a Europe that protects*”, the Austrian Presidency of the Council of the EU intends to make progress on a large number of dossiers in the environment and climate domain and, indeed, conclude these dossiers to help benefit the health and quality of life of citizens, environmental protection and sustainable growth.

Beate Hartinger-Klein, the minister for Employment, Social Affairs, Health and Consumer Protection informed MEPs at the European Parliament's environment committee on Tuesday 10 July that climate protection and the circular economy would be priorities and part of the process for implementing the 2030 Agenda for sustainable development. With regard to these dossiers, she was intervening on behalf of her colleague, Elisabeth Köstinger, the Environment Minister, who is on maternity leave.

The strategy for tackling plastics in a circular economy, clean transport and the preparations for the COP 24 in Katowice (3-14 December), as well as the effective implementation of the Paris Agreement on the Climate will therefore be ranked highly in the work programme for the next six months.

**Climate protection.** The Minister stated that “*In the climate protection domain, the Presidency wants genuine participation from the EU and all its member states during the climate negotiations*”. In October the Presidency will be presenting the Council conclusions for the December COP 24 in Katowice where the Paris Agreement Rulebook will be finalised. The Minister explained that “*Our common objective is that at the COP 24 we will have a solid regulatory framework for the future climate governance system. In Katowice, we have to obtain a good result that reflects a high level of ambition and which is applicable to all stakeholders and that takes into account the different framework conditions of the different parties*”.

She provided assurances that the Austrian Presidency would maintain a “*close dialogue*” with the European Parliament as part of the preparations for this COP.

The Austrian Presidency is particularly keen on promoting clean mobility based on healthy transport systems with fewer CO<sub>2</sub> emissions. “*Our objective must be to encourage investment and innovation and the domain of cleaner technologies and, above all, more efficiency when using fuel*”. An informal Environment and Transport Council ministerial meeting (29 and 30 October in Graz) will tackle this subject.

On the proposal establishing CO<sub>2</sub> standards for cars and new vans after 2021, the Presidency has high hopes that the EU 28 will obtain a general approach at the Environment Council on 9 October so that it can swiftly begin triologue negotiations (see EUROPE 12048). The objective is to reach an agreement by the end of the year

The Presidency is also hoping for progress on the proposal for heavy duty vehicle standards.

**Circular economy and plastics.** Ms Hartinger-Klein said that *“We are putting forward a very ambitious European ‘plastics’ strategy. We want to commit ourselves to tackling pollution caused by plastics in our rivers and seas”*.

The draft directive seeks to limit the consumption of certain single use plastic products in an effort to reduce the environmental impact - this is a priority. The Presidency said that it is ready to launch the dialogue with the rapporteur at the Parliament, Frédérique Ries (ALDE, Belgium) and that the objective is to *“make some substantial progress by the end of the year”*.

**Biodiversity.** The Austrian Presidency is hoping to make progress on the post-2020 LIFE programme but progress will depend on the negotiations on the next EU multiannual budget.

It is also hoping to adopt conclusions at the Environment Council in October for international biodiversity policy as from 2020, in view of the COP 14 at the International Biodiversity Convention.

**Other legislation.** Negotiations on the proposal to revise the clean water directive will continue at the Environment Council working party. The Austrian Minister explained that *“The high quality of drinking water and consumer trust must be guaranteed, whilst take into account the different structures that help to obtain drinking water”*.

21335/Press Release – 2018.07.11

### **EU & China Joint Declaration on Climate (COP 24)**

With less than five months to go until COP24 in Katowice (3-14 December), where the Paris Rulebook is due to be finalised, the leaders of the EU and China adopted a joint statement, in Beijing on 16 July, on Climate Change and Clean Energy.

On the climate front, the final statement of the 20th summit and this specific statement that is annexed to it bear witness to both parties' commitment to find joint solutions to a global challenge. They formalise a response to the US administration's defection when it turned its back on this universal agreement. The two parties reaffirm the importance of combating climate change and engaging to contribute actively to the conclusion of the Paris Agreement work programme in order to ensure full and effective implementation of the Paris Agreement.

The EU and China commit to increasing their cooperation to become low carbon emission economies and to applying the Paris Agreement. Both parties agreed to step up their political, technical and scientific cooperation on climate change and clean energy.

European Commission Vice-President Jyrki Katainen and the president of China's National Development and Reform Commission furthermore signed a memorandum of understanding on strengthening cooperation between the European Commission and the Ministry of Ecology and Environment of the People's Republic of China on the emissions trading system (ETS) , which was launched last year.

### **Climate but also protection of environment and circular economy**

In the final statement, the two parties also underline the importance of assuming greater leadership as regards the global agenda on the environment, particularly on issues like the prevention and control of pollution, the conservation of biodiversity, and the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The EU commends China's commitment, with the country due to host the International Convention on Biological Biodiversity in 2020, which should enable the adoption of a post-2020 global framework on biodiversity.

The EU and China hail the United Nations' adoption of the resolution entitled 'Towards a Global Pact for the Environment' and are expecting a report by António Guterres at the next UN General Assembly as the basis for work for moving forward.

The EU and China furthermore decided to establish a high level political dialogue on the circular economy.

21336/Press Release – 2018.07.16

### **EU & Japan Joint Declaration in Favour of the Paris Agreement**

The signing of the EU-Japan economic partnership agreement may have dominated the 25th bilateral summit in Tokyo on 17 July, but tackling climate change was not ignored. In their final declaration, the two parties reaffirmed their *“strong commitment to implement the Paris Agreement, through ambitious climate action”*, in particular through reducing emissions while promoting innovation, climate finance, development of sustainable energy technologies, and improvement of energy efficiency so as to reach a global carbon-neutral economy over the course of the second half of the century. On the previous day, the EU and China adopted a joint declaration on climate and clean energy

21337/Press Release – 2018.07.18

### **Public Consultation on Future EU Long-Term Strategy to Implement the Paris Agreement**

The Commission has just launched an online public consultation, to run until 9 October, on the long-term EU strategy for implementing the Paris Agreement. All interested citizens and stakeholders are invited to submit their contributions on the types of transformations required, the level of ambition and key actions. The Commission goal is twofold: to gather views and opinions on the technological and socio-economic pathways that should be explored for a long-term EU greenhouse gas emissions reduction strategy; to collect factual information, data and knowledge, including drivers, opportunities and challenges relevant to the long-term strategy. Ahead of the COP 24 in Katowice (3-14 December), the Commission will bring forward a document that will be more a vision than a strategy. The European Council called for a strategy by March 2019.

21338/Press Release – 2018.07.18

### Circular Economy

The European Commission opened a **public consultation** on 23 July **on the interface between chemical, product and waste legislation**. The consultation will run until 29 October.

The Commission wants to gather the views of all interested parties in the communication and the working paper on this issue which it presented in January of this year at the same time as the EU plastics strategy.

Stakeholders will be asked, more specifically, to give their views on the four options envisaged to clarify the interface with a view to improving the tracking of substances of concern in products, recycled materials and products made from recycled materials and overcoming difficulties encountered in applying EU waste classification methodologies. These are the four obstacles identified by the Commission to the creation of a genuine single market in secondary raw materials. EU environment ministers held a general discussion on the issue in March. The Commission has indicated that it has not ruled out legislation.

The public consultation is available online in the 23 official languages:

<https://ec.europa.eu/eusurvey/runner/CPWInterface2018>

21339/ Press Release – 2018.07.24

## SOCIAL ISSUES

### Unemployment Rates

The euro area seasonally-adjusted unemployment rate was **8.3%** in **June 2018**, stable compared with May 2018. This is the lowest rate recorded in the euro area since December 2008. The EU-28 unemployment rate was **6.9%** in June 2018, also stable compared with May 2018. This is also the lowest rate recorded in the EU28 since May 2008.

Eurostat estimates that 17.105 million people in the EU28 were unemployed in June 2018, an increase by 4,000 in the EU28 and by 14,000 in the euro area compared with May 2018.

Czechia	2.4%	Slovenia	5.6%
Germany	3.4%	Belgium	6.0%
Hungary (May)	3.6%	Sweden	6.2%
Poland	3.7%	Portugal	6.7%
Malta	3.9%	Lithuania	6.8%
Netherlands	3.9%	Slovakia	6.9%
UK (April)	4.1%	Latvia	7.4%
Romania	4.5%	Finland	7.6%
Austria	4.7%	Cyprus	8.2%
Bulgaria	4.8%	France	9.2%
Estonia (May)	4.9%	Croatia	9.2%
Denmark	5.0%	Italy	10.9%
Ireland	5.1%	Spain	15.2%
Luxembourg	5.2%	Greece (April)	20.2%

#### Elsewhere

USA	3.9%	Russia	4.7%
Canada	5.8%	Brazil	12.4%
Japan	2.4%	Australia	5.3%
Switzerland	2.4%	India	3.52%
Turkey	9.7%	China	3.83%

21340/Eurostat Press Release – 2018.07.31

## GENERAL ISSUES

### Future of the European Union

#### BREXIT Developments

##### **1. UK White Paper**

The UK's white paper got a polite welcome from the EU, but the evolution will have to become a revolution if a deal is to be done. And it's not just the UK that will have to move.

Firstly, and importantly, the UK said there would be a white paper on the future relationship and there was a white paper. The fact that it came more than two years after the Brexit referendum was not lost on Brussels.



Lead negotiator Michel Barnier said the bloc would “analyse” the UK’s proposals, but that the EU’s offer remains an “ambitious” free trade agreement and “a strong security partnership” with the UK.

MEPs in the Brexit steering group welcomed the text as “a step towards” a future deal, and were upbeat that it “could take the form of an Association Agreement”, as the white paper says. But, they warned, there is “no space for outsourcing the EU’s customs competences”.

That appears to knock back the central tenet of the UK’s economic partnership idea: an EU-UK free trade area for goods and food, with a “combined customs territory”, where the UK would abide by certain EU rules, collect tariffs and conduct product checks on behalf of the bloc.

One senior EU diplomat said the white paper contained “interesting things” but also “some ambiguities” on trade and customs that amounted to “cherry picking. It reads to some in the EU as if the UK will abide by the rules until it decides not to,” the diplomat said. “They talk of making concessions, but the forum for this is the negotiations.”

British officials say the white paper shows a “clear evolution” in their position, something the EU does not want to dismiss out of hand. “No other free trade agreement has what we are proposing here,” one British source said of the white paper’s non-regression clauses on state aid, environmental and labour standards, which they hope will unlock more market access for UK companies.

But the EU’s abiding fear remains: that they will be undercut by a less-regulated Britain. They are also simply annoyed at having to accommodate the UK. “We need to protect the EU’s external border to preserve the integrity of our market.”

British officials maintain that their free trade and customs area would deliver a frictionless Irish border, but the Irish are not convinced. The EU insists on a backstop solution for the border in the withdrawal treaty, whatever happens in the future.

On financial services, there is some hope. Commission vice-president Valdis Dombrovskis said the white paper showed the UK was “looking for a pragmatic and realistic solution” with their proposals for a kind of beefed up equivalence regime.

21341/Press Release – 2018.07.14

## 2. UK Cabinet Reshuffle

David Davis has resigned as **Brexit secretary**, with housing minister **Dominic Raab** appointed as his replacement to lead the Department for Exiting the European Union. Davis resigned stating that he would be “a reluctant conscript” to the strategy agreed by the Cabinet, called the Friday’s agreement and establishing a new “free trade area between Britain and the EU to avoid friction at the border, protect jobs and livelihoods, and ensure both sides meet their commitments to Northern Ireland and Ireland”. This would include “a common rulebook for all goods” with the EU, and a legal treaty to ensure “ongoing harmonisation” with European regulations.

In the process, Boris Johnson also resigned as **UK foreign minister** and was replaced by **Jeremy Hunt**.

On 24 July, British Prime Minister Theresa May announced that she will now lead the Brexit negotiations. In a written statement to the parliament, the Conservative leader says that it is essential that the government be organised more effectively to enable the UK to leave the European Union. The two parties warned last week against the risk of a non-agreement and spoke of their readiness to accelerate the negotiations.

21342/Press Release – 2018.07.25

### **3. Commission recommends all sides to prepare for all possible Brexit outcomes**

The European Commission is still officially working on the premise that agreement on Brexit will be reached with the United Kingdom in October but it is preparing for all possibilities, including that of no deal. It was the no deal scenario that it detailed in a Communication on 19 July designed to assist the member states, companies and citizens prepare for this eventuality. In this Communication, the Commission outlines the ongoing work on the preparation for all outcomes of the UK's withdrawal from the EU. The text calls on the member states and private parties to step up their preparations, following the request by the European Council in its EU27 format to intensify preparedness at all levels for all outcomes.

The Communication underlines that whether or not there is a deal between the EU and the UK, Brexit will cause disruption. In any case, preparing for post-Brexit is important. As the UK notified the European Council of its intention to leave the EU on March 29 2017, at 00:00 on March 30 2019, all Union primary and secondary law will cease to apply to the UK. As such, stakeholders and EU authorities will need to prepare both for a scenario in which there will be a transition period and EU law will only cease to apply to the UK on January 1 2021 and for a scenario in which there will be no transition period and March 30 2019 will be the true Brexit date.

In more specific terms, in the first scenario, the negotiations for the future relationship will continue during the transition period and the impact on stakeholders and other parties will not be immediate. In the second scenario, however, the impact would be immediate and mean that there would be no specific arrangement in place for EU citizens in the UK and UK citizens in the EU, and the EU-UK relationship on border, trade and regulatory issues would revert to a situation of the UK being a third country. This would mean severe impacts on transport between the two parties and customs, sanitary and phytosanitary controls at borders could cause significant delays.

The Commission is also asking the European Parliament and the Council to give priority treatment to those legislative proposals that are related to the withdrawal in order to have those acts in force by the withdrawal date.

Talks are continuing on the various aspects of the withdrawal but **there are only 13 weeks left before the October European summit.**

The Commission has already published 68 notices for companies informing them how to proceed after 30 March 2019, for example, with their permits and other authorisations obtained in the UK. Every sector is covered, from customs policy to the medicines sector, from professional qualifications to the agrifood sector and air transport, with the aim of preventing major disruptions.

The communication attempts, too, to deal with the fate of European citizens but, in the event of no deal, the Commission says simply that EU citizens in the UK will not be covered by any particular arrangements.

Transport between the United Kingdom and the European Union could be “*seriously impacted*”, the communication says, adding: “*Customs, sanitary and phytosanitary controls at borders could cause significant delays, e.g. in road transport, and difficulties for ports*”.

In trade and regulatory issues, relations between the EU and the UK will be governed by World Trade Organisation rules, the document states.

**The House of Lords** EU Financial Affairs Sub-Committee has **invited contributions to its new inquiry into the UK's future relationship with the European Investment Bank (EIB)** and the potential consequences of the UK losing access to EIB funding. The Committee seeks evidence on various topics in particular how reliant UK firms are on EIB funding and investment and how dependent UK venture capital and SME sectors are on European Investment Fund (EIF) financing. The peers have also asked how the future withdrawal of the UK will affect the ease of securing affordable finance and what options there are for future participation in the EIB's lending programmes. Could the UK remain a member of the EIB or should the Government focus on the Investment Fund to be incubated by the British Business Bank, is another line of questioning from the committee. The deadline for responses is September 14 2018.

21343/Press Release – 2018.07.19

#### **4. Michel Barnier and Dominic Raab enact progress in Brexit talks and outstanding issues**

European Union Brexit negotiator Michel Barnier and the new British minister responsible for the United Kingdom's exit from the EU, Dominic Raab, examined the state of the Brexit talks on 26 July, before the talks resume in mid-August.

The two politicians stressed the positive in a new week of talks, along with the complex issues still hanging such as the 'backstop' on the question of the UK's border in Northern Ireland with Ireland, and the UK's view of customs union to respond to this issue.

Among the areas of progress, Michel Barnier said that maritime security relations with the EU could be extended because the UK had given new guarantees of respect of fundamental right via its remaining as a party the European Convention on Human Rights.

This guarantee opens the door to the more extended cooperation developed in terms of the exchange of data about air passengers (PNR), DNA or information about vehicles (data covered by the Prüm decision). Cooperation may also be closer in extradition procedures, added the EU's negotiator.

Michel Barnier admitted, however, that in terms of future economic relations, not surprisingly it is more difficult to find a middle ground.

Dominic stressed the British government's desire to settle the remaining issues and its work now consists of doing three things: - (1) concluding the withdrawal agreement, the minister citing progress on agreement governance; - (2) concluding the protocol on Ireland in the framework of future bilateral relations, as London constantly demands. Raab says application of the backstop will necessarily be limited in time while awaiting the solution introduced within the parameters of future relations; - (3) working to establish the new EU-UK relations which, the minister said, would be based in part on a free-trade zone for goods applying common EU standards and other rules for services, as set out in the British White Book of 12 July.

The White Book and the proposals for customs arrangements have yet to win over the EU. Michel Barnier pointed out that the EU had no opposition in principle to a customs solution going beyond the safety net for Northern Ireland and applying to all of the United Kingdom. But questions remain open, such as the integrity of Customs Union and other European policies. The system must also be doable and not create an overload for Europeans.

21344/Press Release – 2018.07.26

#### **5. UK technical notices to prepare its citizens and economic actors for hard Brexit**

On 23<sup>rd</sup> August, the British government published 25 technical notices to assist economic and other players in society to prepare for the possible scenario of no agreement with the EU.

The British government's technical notices cover all areas in which disturbances will be possible in the event of 'no-deal', namely agriculture, taxation, obtaining European funding for research programmes, medical devices and medication, as well as studying in the EU or the United Kingdom. By way of introduction, it explains that it considers a no-deal scenario as unlikely, as it would be against the *"mutual interests of the UK and the EU"*, but that it is their duty, with only eight months to go until the official date of withdrawal from the EU, to set out the consequences of such a no-deal scenario.

On the same day, the British Brexit minister Dominic Raab told the BBC that he was nonetheless *"confident"* that an agreement could be reached with the European negotiators and that progress had been made at every round of talks. On Tuesday 21 August, he and his counterpart Michel Barnier, also announced that they would now be negotiating continuously rather than the timely discussion sessions staggered over a few days that they have carried out previously.

The Commission itself published a communication on the no-deal scenario in July. In its preamble, the British government points out that it has already acted on its *"duty to prepare [the UK] for all scenarios"*, for instance having prepared the necessary budget (an extra £3 billion) to ensure that *"departments and the devolved administrations [can] prepare effectively for Brexit"*. This money comes on top of the £700 million previously made available for preparations over the official two years of negotiations. The country has made other provisions to this effect, such as the 2018 law on nuclear safeguards, which establishes a British nuclear safeguard regime when the country leaves Euratom, according to the government of Theresa May.

The documents can be consulted at [https://www.gov.uk/government/collections/how-to-prepare-if-the-uk-leaves-the-eu-with-no-deal?utm\\_source=6054ae58-1dda-4d09-890b-0f1122f9db5f&utm\\_medium=email&utm\\_campaign=qovuk-notifications&utm\\_content=immediate](https://www.gov.uk/government/collections/how-to-prepare-if-the-uk-leaves-the-eu-with-no-deal?utm_source=6054ae58-1dda-4d09-890b-0f1122f9db5f&utm_medium=email&utm_campaign=qovuk-notifications&utm_content=immediate)

21345/Press Release – 2018.08.23

### Inflation Rate

Latest Eurostat figures show that the annual inflation rate was **2.1% in July 2018 in the Euro area**, up from 2.0% in June. **The EU28** annual inflation was **2.2% in July** up from 2.1% in June.

The largest upward impacts to euro area annual inflation came from energy (+ 0.89%), followed by services (+ 0.64%), food, alcohol & tobacco (+0.49%) and non-energy industrial goods (+0.12%).

Greece	0.8%	Sweden	2.2%
Denmark	0.9%	Spain	2.3%
Ireland	1.0%	Lithuania	2.3%
Cyprus	1.4%	Austria	2.3%
Poland	1.4%	Luxembourg	2.5%
Finland	1.4%	UK	2.5%
Italy	1.9%	France	2.6%
Netherlands	1.9%	Slovakia	2.6%
Germany	2.1%	Belgium	2.7%
Malta	2.1%	Latvia	2.7%
Slovenia	2.1%	Estonia	3.3%
Czech Republic	2.2%	Hungary	3.4%
Croatia	2.2%	Bulgaria	3.6%
Portugal	2.2%	Romania	4.3%

### Elsewhere

USA	2.9%	Russia	2.5%
Canada	3.0%	Brazil	4.5%
Japan	0.7%	Australia	2.1%
Switzerland	1.2%	India	4.2%
Turkey	15.9%	China	2.1%

21346/Eurostat News Release – 2018.07.18 & 08.17

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## GLASS NEWS

### FLAT GLASS

#### Glass Companies

##### AGC



#### **AGC and Ubiquitous Energy announce strategic development agreement for transparent solar glass**

The recently-announced development agreement between AGC and Ubiquitous Energy will focus on the development of Ubiquitous Energy's transparent and neutral solar coating to create windows that produce electricity.



Ubiquitous Energy's transparent solar coating, ClearView Power™, selectively absorbs and converts non-visible light (ultraviolet and infrared) to electricity while transmitting visible light. Additionally, ClearView Power™ doubles as a solar control coating in addition to its electricity generation by blocking infrared light that is commonly known as solar heat. The transparent solar coating can be applied to vertical surfaces of buildings, turning traditional windows into highly energy efficient and electricity generating windows that are aesthetically pleasing and acceptable to architects, designers, and occupants.

Applied directly to glass using standard glass coating equipment, ClearView Power™ is a highly transparent, colour neutral coating. Using standard thin film coating equipment will enable leveraging of the more than 8 billion square meter per year annual global glass production capacity. This novel and patent protected technology will provide a truly transparent energy harvesting solution to the Building Integrated Photovoltaic (BIPV) market enabling zero net energy buildings and beyond.

"We have been watching Ubiquitous Energy since its beginning and believe that this collaboration will fit in perfectly with our strategy of providing the best environmentally friendly glass solutions," said Marc Van Den Neste, CTO, Building & Industrial Company

of AGC. “By creating aesthetically pleasing, transparent, power-producing glass, we will equip designers and architects with a BIPV solution that is beautiful and seamlessly integrated.” Masatoshi Ueno, AGC Ventures, a corporate venturing arm of Asahi Glass, added: “We are thrilled by supporting Ubiquitous Energy as a partner as it opens up new horizons for making the best environmental use of façades.”

21347/News Release – 2018.07.03

### **Saint-Gobain**

#### **1. Saint-Gobain signs contract for ORC systems from Turboden**

Saint-Gobain signed two contracts with Turboden, an Italian manufacturer of Organic Rankine Cycle (ORC) systems, to install ORC systems in its facilities in India and Italy. Saint-Gobain will use a 1.2 megawatt unit to install at its float glass plant in Bhiwadi, Rajasthan, India, as well as a 1.2 MW heat recovery system for its float facility located in Pisa, Italy.

While the plant in India uses Turboden ORC technology for a 1.2 MW, the plant that recovers heat from the exhaust gas from the glass production process, the plant in Pisa will use recovered gases to generate compressed air as well as generate electricity. The strategy of Saint-Gobain aims at limiting its own environmental impact, and the company is an official partner for COP21.

21348/Press Release – 2018.07.26

#### **2. The industrial supplier HyGear will install gas recovery systems in Saint Gobain's Germany facility.**

HyGear has signed a contract with Saint-Gobain for its Hy.REC mix, which is used to recover the gas mixtures from the tin bath in float glass production.

Niels Lanser, Director of Marketing and Sales at HyGear, said: “The installation of our Hy.REC mix technology at Porz is the result of an extensive engineering effort from both companies over the past two years. We started out with basic designs based on tests of spent gases in Pisa and Herzogenrath plants and tailored the design further based on small scale tests in real life situations. From these tests, we learned that the potential savings were tremendous.”

The 10-year-contract will see HyGear recover, upgrade and recycle between 300 to 600 Nm<sup>3</sup> per hour of spent industrial gas mixture consisting of hydrogen and nitrogen from the float line.

Thomas Schuster, Industrial Director at Saint-Gobain Glass Industry Germany, said: “In close cooperation with Saint-Gobain, HyGear has developed this highly interesting recycling system which gives us the opportunity to reduce our hydrogen and nitrogen consumption and therefore reduce our environmental impact as well as our costs. This capturing of innovations among the supply chain is completely in line with our groups sustainability programme and the groups World Class Purchasing strategy.”

By feeding the polluted gas mixture into HyGear’s Gas Recovery System, a fraction of the hydrogen and nitrogen can be recovered and reused as a new reductive gas mixture. This will improve product quality due to the increased atmosphere refreshment rate.

21349/Press Release – 2018.08.06



## Guardian

### 1. Guardian facing the technical challenges of glass for megatall buildings

Glass is as important to a megatall building as the steel and concrete inside it due to wind loads, temperature and altitude differences, and condensation.



On the Burj Khalifa project, there was the challenge of the temperature difference between the production and installation temperatures of the IGUs. Glass for megatall buildings (i.e. skyscrapers over 600 metres high) often tends to be taken for granted in terms of its technical functions. Yet the high-tech, high strength glazing that covers today's megatall buildings – such as the Burj Khalifa in Dubai – is as important to the building's performance as the steel and concrete inside it.

When it comes to megatall structures, the main challenges are wind loads, temperature and altitude differences, and condensation.

Close to the ground, wind is disrupted by trees and other buildings, but as a building rises to supertall heights, these obstacles disappear. The tower then faces the full, unobstructed force of the wind.

Other major factors are light and heat. Tall buildings, because of their enormous internal heat mass, tend to need constant air conditioning, even in the colder months of the year. Air conditioning is a skyscraper's single biggest energy cost. Megatall buildings present a unique challenge: not only do they have high internal heat mass, but a very large proportion of their overall size is high above their neighbours, so there's nothing to block the sun. Also, most of them tend to be in desert regions of The Middle East, Africa and South East Asia.

To complicate matters further, the skin of megatall buildings is now almost entirely glass, with a premium placed on tall and wide glass panes to offer maximum unobstructed views. The challenge is, these larger glass panes must be extremely strong to withstand the high wind forces, and must be designed in such a way to compensate for the huge amount of light they let in to the building in order to enhance the wellbeing and comfort of the building's occupants.

The surroundings of a building – and, in the case of the Burj Khalifa and the Jeddah Tower, the local desert climate – are important factors to consider. The surrounding areas of megatall buildings such as the hills and other buildings, actually absorb much of the intense heat during the day but continue to radiate or emit this heat to their surroundings through the night. Low-emissivity (low-E) glass helps to reflect this long wave radiation and minimise its transmission. This is why the use of low-E glass (such as Guardian SunGuard® Neutral 60) is one of the best choices.

The local climate in these hot, humid, desert regions – with daytime temperatures reaching as high as 50°C – pose real challenges for the glass in terms of both stress and deflection, but also potential condensation issues.

Most people don't realise how popular low-E glass is in the Middle East and why it should be used. Generally, people think low-E glass is only used in cold weather climates. However, the concept of blocking and reflecting indirect heat at night and during the daytime is something most people wouldn't consider.

With megatall buildings, there is always a risk that condensation may appear on the external glass pane (outside). This is due to the temperature difference between the outside of the building (which is very hot and humid during the summer) and the inside temperature (air conditioning).

Using a low-emissivity glass as the internal pane may help to prevent the cold transferring from the inside of the building to the outside glass pane, while heat treatment (fully tempering or heat strengthening) will make the glass up to five times stronger to resist extreme wind loads and temperature differences.

The altitude difference between the top and the bottom of a megatall building – and the temperature difference linked to this – can cause glass deflection issues on the insulating glass unit due to the pressure difference.

On the Burj Khalifa project, there was even the challenge of the temperature difference between the production and installation temperatures of the IGUs, which were manufactured in January with a temperature of 26°C, and then installed on site in Dubai in August when the temperature was 48°C. The calculations of stress and deflection of the IGUs enabled our technical experts at Guardian Glass to help define the right glass thicknesses to suit different glass installation heights up and down the building.

For the Burj Khalifa, the glass façade was designed to withstand wind loads of up to 250 km/hour. The thickness of the glass used depends on the height of the building where it is installed. The heat treatment is also crucial (fully tempering or heat strengthening) as it will make the glass up to five times stronger to resist extreme wind loads and temperature differences.

21350/Press Release – 2018.07.02

## 2. **Guardian Glass to launch jumbo coater this summer**

Guardian Glass will start its new North American jumbo coater in August. The expansion at the Carleton, Michigan facility is on-schedule to begin producing Guardian SunGuard® coated jumbo glass soon after the start-up.

This jumbo coater is Guardian's 12th, and the first in North America. The company will focus initial production on the most popular double and triple silver SunGuard coated glass for architectural applications. The use of SunGuard coated glass in jumbo sizes – on lites up to 217 square feet – opens up possibilities to architects by delivering expansive views with high performance to their design repertory.

Guardian's SunGuard glass product line for commercial applications offers excellent solar control and a wide variety of colours and performance levels. SunGuard glass products provide innovative, leading solutions for appearance, economics and energy efficiency, and are available through an international network of independent Guardian Select® fabricators.

The National Arts Centre in Ottawa is one North American project that utilizes oversize Guardian Glass. Guardian supplied SunGuard® jumbo, low-iron glass from Europe, bringing value to the setting by giving patrons and visitors openness and abundant natural light for events. The glass curtain wall, which includes insulating glass units up to 95" x 228", delivers uninterrupted views in and out, opening the NAC to the city. The use of low-iron glass ensures those views have striking clarity

21351/Press Release – 2018.07.11

## SCHOTT



The German processor, Schröder Spezialglas, plans to use Borofloat speciality glass by Schott for cars. The special float glass will withstand extreme temperature fluctuations and mechanical stress in the engine compartments of cars. It is an extremely durable glass with an expansion coefficient matched for the semiconductor, to ensure that the sensor is reliable in extreme heat or cold.

Ulrich Schuster, CEO at Schröder Spezialglas in Ellerau near Hamburg, said:

"We've been using this special float glass for over two decades now. We've used it to produce parts and technical glass that were unrivalled by others. Without Borofloat our company wouldn't even exist."

Borofloat has high chemical and mechanical resistance, ideal recyclability, extreme optical purity and permeability of infrared rays. It also has good dielectric properties, making it the perfect substrate for antenna systems, which will be used by the 'connected cars' of the future to communicate with each other and traffic management systems. Even at GHz frequencies, transmission and reception will not be impaired.

The speciality glass also opens up entirely new shapes for holographic head-up displays, which show turns or warnings of obstacles directly on the windshield within the driver's view and is known as augmented reality. This is where the high transparency of this flat glass will help to implement future projection systems in very small areas.

Mr Schuster said: "Soda lime lenses develop a whitish-grey build-up after a year or two and they become blind. However, by using Borofloat, lasting brightness can be achieved as the hydrolysis or glass corrosion does not occur."

Borofloat is made using a microfloat process where the glass ribbon floats on top of a bath of molten tin to then cool down. It is 'floated' at temperatures that are up to 200

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°C (392 °F) higher with variances under half a degree. This process, which also precisely controls the thickness of the glass, guarantees perfect homogeneity, outstanding flatness and the mirror-like surface of the special float glass by Schott.

21352/Press Release – 2018.07.31

### Press Glass

Press Glass will build its \$43.5 million second plant at the Commonwealth Crossing Business Centre in southern Virginia.

The subsidiary of Press Glass Group has started preparatory works towards obtaining a building permit for its second plant in the US.

It will specialise in the production of glass for public and commercial buildings. The plant will gradually increase its performance and offered range, before eventually providing a full range of products.

Once it has been built, the glassworks will have two float glass production lines and its capacity will amount to almost 2,000 tonnes per day.

The plant will be built on 17.5 hectares at the industrial park at the borders of Virginia and North Carolina. Its expected workforce is to be about 200 people. The location is only a few kilometres away from Stoneville, where Press Glass Group's first plant in the US and Press Glass, Inc.'s head office is.

It is expected that the building work will begin towards the end of 2018. The estimated time of the plant commissioning is at the end of 2019. The investment will be supported by American grants.

The decision to build the plant was made by the authorities of Virginia and Henry County, in cooperation with Martinsville Henry County Economic Development Corporation.

21353/Press Release – 2018.08.10

### Vitro Glass

Vitro Architectural Glass (formerly PPG Glass) began producing energy-efficient glass in sizes 112.5 percent larger than standard size lites on a new jumbo magnetron sputtered vacuum deposition (MSVD) glass coater at its Wichita Falls, Texas, manufacturing plant.



Constructed in 14 months, the jumbo coater was introduced at an open house attended by Vitro executives, customers and employees, and government officials from Wichita Falls and the state of Texas.

The unit, reportedly the largest vacuum-temperable-capable MSVD coater in North America, enables Vitro Glass to produce high-performing, low-emissivity (low-e) glasses in the larger sizes preferred by today's building designers.

The coater is 22 percent wider and 50 percent longer than the plant's other MSVD coater, which produces standard size (96-by-130 inches) glass. The jumbo MSVD coater applies Solarban® solar control low-e coatings on a variety of large-area glass substrates in standard thicknesses while providing precision colour control and aesthetics.

It will produce more glass-per-energy-unit than most MSVD coaters currently in operation, while increasing the plant's annual low-e glass production by 20 percent.

Richard A. Beuke, president, Vitro Architectural Glass, said the coater builds on the company's history of innovation. "Vitro Glass was the first glass manufacturer to produce a triple-silver-coated product (Solarban 70XL glass) and the first to develop the quad-silver coating technology now featured in our Solarban 90 glass.

"This groundbreaking manufacturing advance will allow us to more quickly introduce new development platforms for solar control low-e coatings and accelerate our ability to bring new products to market."

21354/Press Release – 2018.08.21

### Everlam (PVB interlayer manufacturer)



Everlam has announced the opening of its new Centre of Competence located in Mechelen, Belgium. This new Centre of Competence hosts a unique combination of the company's commercial headquarters, R&D laboratory and technical centre.

It is designed as an open space to accelerate collaborative shared work, create stronger synergies and foster innovation across the entire company. Centrally located in Europe, it offers easy access and great facilities for welcoming and training customers and partners.

21355/Press Release – 2018.07.02

### Azerfloat

Horn Glass Industries will supply a complete technological line for the Azerfloat glass plant in Azerbaijan.

The scope of supply extends from the batch plant, via the melting furnace, the tin bath and annealing Lehr to the robotised cold end, where the finished glass is cut, stacked, packed and transported, using specially developed storage technology.

The technology line supply also includes the production of nitrogen and hydrogen as well as a shielding gas mixing and cooling water station.

Horn will also supply a fully automated process management system for the hot-end.

The new glass line will produce approximately 250 tonnes of clear and tinted coated float glass per day. The new production facility will create about 300 new jobs. Horn Glass Industries' know-how has a positive effect on the construction of the furnace, the engineering and the installation supervision of the supplied equipment, as well as on the project management and logistics. The float glass plant is to be built in an industrial park in Sumgait, 30km north of the capital, Baku. Construction work commenced last December.

21356/Press Release – 2018.07.17

## **Miscellaneous**

### **Continental Automotive**

Automotive supplier Continental AG announced the ground breaking of their new factory in Kaunas, Lithuania. This factory will start producing electronic components for the European market in the second half of 2019, including units for Continental's Intelligent Glass Control system used to control Research Frontiers' SPD-SmartGlass.

Research Frontiers patented SPD-Smart light-control film technology allows users to instantly, precisely and uniformly control the shading of glass or plastic products, either manually or automatically. Products using Research Frontiers' smart glass technology are being used in tens of thousands of cars, aircraft, yachts, trains, homes, offices, museums and other buildings.

Continental indicated that its Intelligent Glass Control system used to control SPD-SmartGlass increases passenger comfort and lowers CO<sub>2</sub> emissions by keeping the interior of the vehicle cooler. As a result, smaller, more efficient and lighter air conditioning units could be used. Calculations showed a reduction in CO<sub>2</sub> emissions of four grams per kilometre. Current regulations coming into effect in Europe regarding CO<sub>2</sub> emissions penalize auto makers for not meeting CO<sub>2</sub>/km emissions targets, and a four gram/km CO<sub>2</sub> reduction would result in avoiding 380 EUR (446 USD) per car in penalties.

Continental estimates that their Intelligent Glass Control system can increase the driving range of electric vehicles by 5.5 percent. When compared to conventional automotive glass, Mercedes-Benz reported that the use of SPD-SmartGlass significantly reduces the temperature inside the vehicle by up to 18 degrees Fahrenheit or 10 degrees Celsius.

Continental also highlighted the safety benefits of its Intelligent Glass Control system in typical driving situations such as when the sun is low on the horizon. Normally the driver has to remove their hand from the steering wheel in order to manually lower the sun visor, resulting in both impaired visibility and a brief decrease in control of the vehicle. Continental's Intelligent Glass Control system can detect this and instantly darken the tint of the glass in the car automatically.

Continental's Intelligent Glass Control system also enhances security and privacy. For example, when the vehicle is parked, the windows darken automatically so the inside of the vehicle cannot be seen from the outside. This also protects the interior of vehicles and their occupants from heat, light and harmful UV radiation.

The new state of the art factory will initially cover 22 thousand square metres, with room for expansion, and is expected to employ over 1,000 people. The energy efficiency of the new factory site has been verified by the internationally recognized LEED Gold certification for sustainability. Continental indicated that it will be investing 95 million EUR (111 million USD) over the next five years.

21357/Press Release – 2018.07.24

### **China's National Planner Halts Flat Glass Capacity Expansion**

Authorities have called for efforts to prevent new capacity being added in China's flat glass and cement industries.

Following efforts to cut capacity, the two sectors have improved their profitability, which prompted certain regions to expand their capacity, according to a notice by the Ministry of Industry and Information Technology and the National Development and Reform Commission, Chinese news agency Xinhua reports.

The notice bans any approvals of new construction projects as the oversupply situation in the two industries remained 'grim'.

Environmental approvals as well as credit support should also be halted, while projects of capacity replacement should strictly follow local plans, according to the notice.

For years, many industries in China, including steel, cement, aluminum, flat glass, and coal, have been running at overcapacity.

Related businesses in land supplies, environmental approvals as well as credit support should also be halted, while projects of capacity replacement should strictly follow local plans, according to the notice.

The move is the latest sign of the government's determination to regulate overcapacity after its efforts to cut capacity in recent years helped support economic growth.

21358/Press Release – 2018.08.20

### **China Releases Standards for Glass Bridges, Walkways**

Hebei Province, in northern China, has released technical standards for glass suspension bridges and walkways at scenic areas to better ensure the safety of tourists, which came into force on 1 August 2018.

According to the Hebei Department of Housing and Urban-Rural Development, the standards provide specific guidelines for materials, location, design, and construction of glass bridges and walkways.



Glass suspension bridges should not be built in areas with high seismic activity. Additional protective equipment and warning signs written in Chinese and at least one foreign language should be installed in potentially dangerous sections, the standards said.

Glass suspension bridges and walkways should be closed during bad weather and natural disasters, such as typhoons, heavy rain, thunderstorms, mountain torrents and mudslides.

The number of pedestrians on glass bridges and walkways will be limited to no more than three per square meter.

Chinese tourist sites in mountainous areas often install glass bridges to attract visitors. The most famous is at Zhangjiajie, a tourist destination in central China, where a 430-meter-long, six-meter-wide bridge hangs between two steep cliffs 300 meters above the ground.

21359/Press Release – 2018.07.31

### **Spring Pool Glass: New Life For Old Glass**



Spring Pool Glass, Taiwan's largest specialized glass processor, has created building bricks that have high fire resistance, developed from recycled glass.

One of the hallmarks of the modern developed state of Taiwan is its serious attitude to the problem of waste recycling, primarily plastic and glass. For example, the International Institute for Management Development in Switzerland stated recently that the most important indicator of the country's competitiveness is the level of processing and recycling of glass. The process of processing glass is laborious, and the cost of the product is low, and if the country copes with this problem, it usually does not arise with other waste products.

Taiwan occupies the second place in the world in terms of the level of glass processing, second only to Sweden. The largest specialized company on the island, Spring Pool Glass, processes about 100 thousand tons of glass per year, or 70% of the national indicators. In particular, the glass battle goes to the production of building blocks.

Demonstrating the possibilities of recycled glass, U Tin-an, executive assistant to the chairman of the board, turns on the blowtorch and directs the fire at a temperature of 800°C to such a building block. After several minutes of direct contact with the fire, the surface of the 'brick' did not suffer at all and even remained cool to the touch. "If a fire breaks out of the bricks built from this material, you will have time to drink coffee before rushing to run," U laughs.

However, the rate of return of this business is extremely low: 1 kg of recycled glass costs about 1 ruble, in terms of Taiwanese currency, and there is no benefit whatsoever, only with large volumes.

Taiwan is one of the world's leading manufacturers of consumer electronics, and every year it has to process large volumes of glass from flat panels. The melting point of this type of glass is higher than that of a conventional one, which increases the cost of electricity, which is quite expensive on the island. In addition, this glass is more difficult to use after processing. But such a glass is excellent for the production of refractory building material.

The principle of producing energy-saving units is quite simple. The glass of the flat panel display is ground into a powder, which is mixed with cement and subjected to foaming. The result is a porous material that has thermal insulation and soundproof qualities. Blocks from this material are environmentally friendly and safe for health, and they are expected to have a great future in the building materials market. In 2014, the UNICODE team of Jiaotong State University used these blocks to build its modular Orchid House, which won the Solar Decathlon Europe exhibition in Versailles.

In 2017, Wu Tin-an initiated a new project, which he named W Glass Project ('Glass W'). Wu, who graduated from the University of Chengong University's Resource Engineering Department in Taiwan and received a master's degree in industrial management from the University of Cambridge, believes that sooner or later even the newest technologies turn into 'traditional' ones. The letter 'W' in the title of the project has a symbolic meaning: it is the first letter of the Romanized writing of the name Wu, and the first letter of the English word 'waste'. But the most profound meaning lies in the consonance of the surname U hieroglyph, which can be interpreted as 'non-existence', 'absence of something'.

Visitors to Creative Expo Taiwan 2017 could walk barefoot through the glass 'ocean' created from 40 tons of recycled glass. In the basin of the Baotou Hot Springs Museum in Taipei, an exhibition of 'water bells' - floating glass 'bubbles' on water, which accidentally come into contact, make a melodious ringing. These art installations became possible thanks to the W Glass project.

At the Spring Pool tourist factory, glass is made in the old fashion, as it was half a century ago. Wu Ting-an believes that modern technology should not kill traditional crafts that have become part of the national culture. In the end, old things acquire a new life, the former concepts are creatively reinterpreted, becoming an impetus for the development of new technologies that do not damage the environment.

## CONTAINER GLASS

### Glass Companies

#### O-I



#### **1. O-I's Helix bottle launches in the UK**

O-I's 'twist to open' Helix bottle continues its conquest. It's now landing in the United Kingdom after establishing itself in France, Spain, Portugal, Benelux, South Africa, China, Japan and the US.

Anthonij Rupert, famous for the quality of its wines and vineyards in South Africa, has chosen Helix to bottle its range of Protea wines.

The Helix bottle is known thanks to its threaded cork stopper and striated lines inside the neck and will boost Protea wine's appeal to British consumers.



The bottle has an original design with a floral decoration made in the O-I Innoval factory located in Chazelles sur Lyon in the Loire, France.

Helix allows the consumer to open a bottle of wine without a corkscrew, thanks to a simple 'twist', while preserving the distinctive 'pop' which is the hallmark of a cork closure.

The innovation has been developed and marketed by O-I and Amorim, specialists, respectively, in glass packaging and corks.

Glass and cork are recyclable, so Helix is also an answer to the many challenges of the environment.

21361/Press Release – 2018.07.12

#### **2. O-I is to expand its production capacity in the state of Pernambuco, Brazil.**

It will restart the operations of its now inactive plant located in the city of Vitória do Santo Antão and will also add a new production line at its factory in Recife, in 2019.

It said the expansion was as a result of rapidly growing market demands due to an improvement in the Brazilian economy.

The combined actions will add capacity of 65,000 tons, or more than 300 million glass containers, to the market.

21362/Press Release – 2018.07.31

## Verallia Group



### **1. Verallia Zaragoza inaugurates furnace during 50th anniversary celebration**

Verallia Zaragoza has inaugurated a new furnace after a €21.5 million plant modernisation. The furnace can produce 1.5 million containers a day, or more than 190,000 t/d of molten glass. It is mainly dedicated to the production of beer bottles.

A ceremony took place on June 29, in which Verallia President and General Director, Michel Giannuzi, General Director of Verallia Spain and Portugal, Paulo Pinto, and plant manager, Eulogio López, were among the 200 attendees.



Mr Giannuzi said: "Verallia is strongly committed to the beverage and food sector in Spain. A competitive and dynamic sector, which has recovered strongly from the crisis, innovating and betting on new markets, with a clear exporting vocation."

Mr Pinto, wanted to "thank the entire team, for their commitment, daily improvement and pursuit of excellence, safety, quality and customer satisfaction."

The event was chaired by Ms. Marta Gascón, Minister of Economy, Industry and Employment of the Government of Aragon.

The site is dedicated to the production of beer, wine, cava and liquor bottles.

Verallia Zaragoza has two furnaces and the new oven will reduce emissions by 9%.

The speciality of the plant is its flexibility to be able to manufacture containers in 12 different glass colours.

Verallia Iberia has six glassmaking plants in Spain: in Azuqueca, Burgos, Montblanc, Zaragoza, Seville and Telde.

21363/Press Release – 2018.07.03

### **2. Verallia gets recognition for Roseline Prestige Rosé Bottle**

Verallia has developed an exclusive bottle for the vintage Roseline Prestige Rosé produced by Château Sainte Roseline (Provence), which won the top Design award during the Pink Rosé Festival 2018. This was in partnership with Lauvige.

The product's elegance and delicacy are underlined by this bottle's details: a rose engraved on the shoulder, a slender neck and dome-shaped push-up.

And one rare feature, the bottle has no label. The name of the vintage is engraved onto the body.



The Château also opted for a glass stopper.  
Verallia's Chalon plant manufactures the 75cl format.

21364/Press Release – 2018.07.10

### 3. Verallia boats two triple-medal-winning bottle designs

Hellstrøm Sommer aquavit and SNÅSA water, both bottled in containers manufactured and decorated by Verallia, have received threefold recognition for their design. Signed Selective Line – Verallia's international premium brand, were envisioned by the Olsson Barbieri design studio.

Hellstrøm Sommer aquavit won prizes at the Visuelt Awards, Dieline awards and European Design Awards. This bottle is produced in Ukraine, then decorated in France by Saga Décor. The translucent green coating of this Moonea model highlights its 360° décor, screen-printed with organic ink. This premium product is part of the master chef Eyvind Hellstrøm's range of Norwegian spirits.



The Norwegian mineral water SNÅSA was recognized during the Visuelt Awards, Dieline Awards and European Design Awards. This extra-flint glass bottle is made by Verallia in Ukraine, then decorated in Poland. The partial coating and screen-printing of this exclusive model highlight the premium nature of the contents.

To support its customers with their glass creations, Selective Line can rely on Verallia's unique manufacturing expertise, including its extensive range of décor techniques produced in its three integrated décor plants in France and Poland.

21365/Press Release – 2018.07.26

### Sisecam Group

#### **1. With the firing of a new furnace at the Eskisehir Glass Packaging Plant in Turkey, Sisecam Group's glass packaging capacity in Turkey has reached 1.2 million tons.**

Sisecam Group has fired its new furnace at the Eskisehir Glass Packaging Plant in Turkey. The plant's fourth furnace starting production in August was built on an investment of USD 66 million. With the new 150.000 tons/year capacity furnace, Sisecam Group's glass packaging capacity in Turkey reached 1.2 million tons.

Sisecam Group Vice Chairman and CEO Prof. Ahmet Kirman said, "We conduct our operations with the aim of sustainable growth. With the last investment, we have commissioned our highest-capacity glass packaging furnace in Turkey."

30.07.2018 - Sisecam Group fired its fourth furnace with an investment of USD 66 million at the Eskisehir Glass Packaging Plant. Sisecam Group, the fifth largest glass packaging producer in the world with its 10 production facilities in four countries including Turkey, has increased its production capacity in Turkey to 1.2 million tons with this latest furnace investment.

Prof. Ahmet Kirman emphasized that they are the third largest glassware producer in the world and the fifth largest glass packaging and flat glass producers, adding that, "we are among the top 10 soda producers in the world, as well as a world leader in chrome chemicals. Our Group continues its activities in 13 countries, and is improving its capacity and technological strength through its innovation, creativity, expertise and experienced workforce, while looking to the future with confidence on the strength of its product and service quality that complies with the changing market conditions."

Kirman underlined that they continued to create value for all stakeholders, "As Sisecam, we conduct our operations with the aim of sustainable growth. In this context, we have commissioned the largest glass packaging furnace in Turkey, and continue our investments, taking bold steps towards our goals."

Kirman recalled that the Eskisehir Glass Packaging Plant was established in 2013 with cutting-edge technology, adding that, "We are glad that our fourth furnace investment at this modern plant has made another contribution to the economy and production in Eskisehir."

Kirman stated that Sisecam Group's existing facilities were constantly being renewed due to technological developments, adding that, "We continue to produce with the latest technology thanks to the fourth furnace installed and equipped in accordance with the Industry 4.0 strategy at the Eskisehir Glass Packaging Plant."

One of the most established enterprises in Turkey, Sisecam Group is a global actor in business fields including all main areas of glass industry, i.e. flat glass, glassware, glass packaging and glass fiber, as well as soda and chromium chemicals.



Today Sisecam, the world's leading supplier of chromium compounds and the 10th largest soda ash producer in the world, is the 3rd largest glassware, the 5th largest glass packaging and flat glass manufacturer globally.

21366/Press Release – 2018.08.01

## 2. Sisecam Glass Packaging wins the "A' Golden Design Award"

Şişecam Glass Packaging has won the "A' Golden Design Award" with its Frederik beer glass bottle designed specifically for Tuborg in the category of "packaging design" in A' Design Award & Competition held by OMC Design Studios SRL and its spinoffs. Sisecam Glass Packaging, designed the Frederik bottle with an angular form, and which is considered a cornerstone for pressurized packaging.



Giving a total 13 awards to 9,803 approved works out of 66,100 entries from 180 countries and in 110 categories, A' Design Award & Competition has a 5-level award system in various categories such as decoration, furniture, architecture, textile, illumination, toys, digital products and aircraft industry in addition to packaging. With its Frederik beer glass bottle, Sisecam Glass Packaging has won the A' Golden Design Award, earned by only 2 percent of all participants, reaching the second highest level in the 2017-2018 period.

21367/Press Release – 2018.07.23

## 3. Şişecam wins Europe's "Environmental and Social Innovation" Silver Award

An award came from Europe to the activities of Şişecam Group in the field of glass recycling. Şişecam won Europe's "Environmental and Social Innovation" Silver Award. The Şişecam Group is continuing to create awareness-raising projects in recycling applications for a sustainable life and its efforts in glass recycling have been awarded at the 27th annual meeting of the European Bank for Reconstruction and Development (EBRD).

Şişecam Group won the Silver Prize among 55 projects in the category of "Environmental and Social Innovation" of the Sustainability Awards for its contributions to resource efficiency, glass recycling and energy efficiency and glass recycling capital.

Each year the most successful projects in environmental and social areas in its the entire operational area are being awarded by EBRD in a total of four categories; Sustainable

Energy, Climate Flexibility, Environmental and Social Best Practice, Environmental and Social Innovation.

The candidates to the 2018 awards were assessed by an independent panel on four criteria: "standards and best practices", "innovation", "visible impact" and "capacity building" and a total of 55 projects were nominated.

Four independent jury members chose the winners and the awards found their owners in a ceremony held in Jordan.

Şişecam Group's activities for glass recycling are of great importance in terms of sustainable production. The use of 10 percent cullet as a raw material in glass production reduces raw materials consumption by 12 percent, energy by 2.5 percent and carbon emissions by 5 percent. With glass, which is a 100 percent recyclable packaging material without any quality loss, a glass bottle cullet as input is enough to produce one full glass bottle.

21368/Press Release – 2018.07.27

### Vidrala



One of Vidrala's glass container manufacturing plants in Portugal will receive renewable energy from Spanish infrastructure group Acciona.

Spanish infrastructure group Acciona SA has announced that it has signed an agreement to supply renewable energy to a glass container manufacturing plant operated by Portugal's Vidrala group.

Through Acciona Green Energy Developments, the company will deliver power to Vidrala's factory in the Portuguese town of Marinha Grande. The supply covers the period from 1 July 2018 to 31 December 2019, the company said.

The contract is one of the biggest won by Acciona in the country since it started operating in Portugal back in 2015. Overall, the glass plant will be able to offset around 40,000 tonnes of carbon dioxide (CO<sub>2</sub>) emissions during the contract term.

Acciona Energia, the subsidiary that acts in the Iberian Electricity Market (MIBEL), has 165 MW of operating facilities in Portugal, of which 119.7 MW come from wind farms and 45.8 MWp from photovoltaic (PV) plants.

21369/Press Release – 2018.07.03

### Saverglass

Saverglass's container making site in Acatlán de Juárez, near Guadalajara, Mexico, has produced its first bottles on June 10, 2018. The French glassmaker, with headquarters in Feuquières Northern France, said the new site was built in 327 days and uses advanced glass and decoration technology. It is the first glassmaking site the company has built in Mexico.

According to the group the site is dedicated to the North American market and meets the development needs of its premium and luxury spirits and wine customers.

21370/Press Release – 2018.08.14



### Gerresheimer

With the acquisition of Swiss Technology company **Sensile Medical AG**, Gerresheimer is extending its business model in the direction of an Original Equipment Manufacturer (OEM) for drug delivery platforms with digital and electronic capabilities for pharmaceutical and biopharmaceutical customers.

“...Sensile Medical lays the foundation for a major extension of our business model in innovative application areas. We have also secured two major orders in our normal business, meaning that we can expect higher revenue growth and increased profitability in the medium term. The first half of the current financial year is going as expected, with earnings per share, in particular, performing well. We anticipate a strong second half year and have accordingly narrowed our revenue forecast to the upper end of the range,” said Rainer Beaujean, Speaker of the Management Board and Chief Financial Officer.

For the financial years 2019 and 2020 - without consideration of Sensile Medical - the adjusted EBITDA margin will therefore be temporarily reduced by approximately one percentage point, compared with the financial year 2017. This is a consequence of proportionately higher revenues in the low margin engineering and tooling business for the new major orders as well as increased expenditures for relocation, employee training and production start-up/ramp-up.

In the years 2021 and 2022, revenues - without consideration of Sensile Medical - are expected to increase by two percentage points beyond the usual rate of growth, as is the adjusted EBITDA margin. Capital expenditure will then return to approximately 8%.

21371/Press Release – 2018.07.13

### Beatson Clark

#### **1. Beatson Clark has manufactured a smaller bottle for M&S salad dressing after research found consumers threw too much of the contents away.**

Research for UK store M&S found customers thought the existing salad dressing bottle was too big. As a result, they often threw away the unfinished product when they felt it had passed its use-by date, creating unnecessary waste.

They also wanted a bottle that would look attractive on the dinner table and offer greater control when pouring.

The bespoke, embossed 275ml dressing bottle was too large and the neck too wide, making it difficult to control the pour and portion control of some of the salad dressings. Research group English Provender Company (EPC) and M&S asked the UK glass manufacturer's in-house design team to create a bottle which would respond to this customer feedback while also taking into account technical considerations such as line constraints and fill speeds.

The resulting 235ml container is a smaller artisan bottle with a narrower neck, which allows consumers to control the flow of dressing more easily.





“Our new dressing bottle looks small but substantial and was designed following extensive testing to make sure it fits into the average fridge door more easily than its predecessor, as well as being easier to pour from,” said Kevin Vyse, Lead Packaging Technologist at M&S.

“With its minimalist and simple design the new bottle looks very different to anything else on the market at present. The clear glass, which contains on average 30% recycled material, lets the consumer see the product within and gives the quality feel we were looking for.”

21372/Press Release – 2018.08.02

## 2. Beatson Clark creates new beverage bottle with unique properties

Elegant cap contains sugar, allowing consumers to decide how sweet they want their drink. Kolibri Drinks asked Beatson Clark to design and manufacture a bottle which allows consumers to control the amount of sugar in their drink.

The sugar is stored in the cap of the bottle rather than in the liquid of the drink. The idea behind the design is to allow the consumer to customise the amount of sugar and flavour in their drink, to suit their own taste and preference.

Beatson Clark’s in-house design team worked with Kolibri Drinks from the early concept stage through to manufacture. The brief was to create an elegant bottle which would appeal to the premium retail and restaurant market.



The bottle itself, designed and produced at Beatson Clark’s glassworks in Rotherham, UK, is a cone-shaped 300ml white flint flask made from 30 percent recycled glass on average.

All the sugar has been removed from the botanical drink in the bottle and is stored instead in an elegant cap, so for the first time consumers can decide how much sweetness – if any – they wish to add to their drink.

Kolibri Drinks co-founder, Kamila Sitwell, said, “At a time when consumers expect premium experiences in all aspects of branding, standard off-the-shelf bottles wouldn’t work for Kolibri Drinks. Beatson Clark worked with us from the very beginning, all the way through consumer and industry testing and the complex incorporation process with the patented cap which enables customisation of sweetness.

“I don’t think many companies are able or willing to go the extra mile to go through a complex and time-consuming process to deliver something truly disruptive.” Charlotte Taylor, Beatson Clark’s Marketing Manager, added, “We’re finding more companies, particularly small businesses with big ideas, approaching us for bottle designs. The drinks business is a multi-billion pound industry, and competition is fierce, so they’re all looking for something to make their product stand out on the shelf. “Rather than being bound by what we can’t do, we take a can-do attitude. This type of bottle is the first of its kind we’ve produced and the finished product looks great.”

21373/Press Release – 2018.07.25

### Vetri Speciali



Italian container glassmaker Vetri Speciali has inaugurated a new furnace at its Ormelle plant. The furnace was inaugurated in early July in a ribbon cutting ceremony at the site in Treviso, about 40km north of Venice.

Part of the funds for the €38 million investment were from the European Investment Bank.

Vetri Speciali said: “This new plant that will bring a significant improvement in working comfort and an even greater attention to the environment projecting the history of the plant and its territory in the global panorama of the great glass industry.”

A total of 84 suppliers were involved in the project, many of them from the local area. Vetri Speciali has its headquarters in Trento and has four plants in total: Ormelle, Gardolo, Pergine Valsugana and San Vito al Tagliamento.

21374/Press Release – 2018.07.10

### Siam Glass

Zippe has secured two orders from Thailand for a glass recycling plant and a batch plant. The contract with **Siam Cullet Co.** includes a recycling plant including metal and non-metal separation, organic separation, ceramic, stone, porcelain separation (KSP), as well as colour sorting. The capacity amounts to 30t/h whereby the plant can be extended up to 45t/h at a later date.

Zippe designs and delivers complete plant control systems, all main components such as the screen and magnet technology as well as the optical sorting machines. The customer will supply the conveying belts as well as the steel construction. Commissioning is planned for the end of 2018.

Zippe has also received an order from **Siam Glass** in Ayutthaya for the extension of a batch plant. The company received an order in 2011 from Siam Glass for the original batch plant. The batch plant supplied a 660t/day furnace, built in 2012. Siam Glass plans to build a second furnace and extend the batch plant.

Due to the significantly reduced cullet share compared to the original design, two new bigger mixers will have to be installed in the batch plant, while the dosing and weighing plant will have to be adjusted due to the significantly reduced cullet share compared to the original design. A new batch plant transport as well as a complete internal cullet return with two scrapers for the new furnace, SGA#2, are also included in the scope of delivery. Both furnaces will produce amber coloured bottles for Siam Glass's own energy drink, M-150.

Commissioning furnace SGA#2 is planned for July 2019.

21375/Press Release – 2018.07.03

### Namibian Groot Glass

Groot Glass has secured a loan of USD 525 million to build two glass factories in Tses village, Namibia, worth USD 750 million.

Raw materials will be sourced from around South Africa, including Namibia and Botswana.

Simon Kapenda, Founder of Groot Glass, said: "We have assembled the world's best technology and engineering companies from Germany, Italy, Ukraine and the US, such as Heye International, MSK, Sorg, Horn, Zippe, Grenzebach, Siemens, Techmash, Specstrojmontazh-Ukraina, and others for the supplying of equipment, technology, engineering and construction of the Groot Glass Manufacturing Factories in Tses.

"We have also assembled the world's best team of professionals mostly from India, Germany, South Africa and Italy with more than 600 years of combined experience in glass manufacturing, technology and engineering, who are tasked for the smooth production and operations of Groot Glass.

"Our aim at Groot Glass is to produce and market the world's quality glass products for the local and regional markets."

A European banking institution will loan the manufacturer USD 525 million. The remaining USD 225 million (30%) will need to be financed by equity funding, of which the manufacturer is currently in discussion with private investors. The total funding of USD 750 million will give Groot Glass a value of about USD 20 million.

Eikana Nangolo, President and COO of Groot Systems, said: "We are just happy to help make an economic contribution to our country and create thousands of better paying jobs for our fellow country citizens, throughout Namibia."



Groot Glass will initially focus on manufacturing glass for the construction industry and commissioning two different glass factories, Groot Container Glass and Groot Float Glass.

The construction of the two factories in Tses is expected as soon as the manufacturer has secured the required 30% of equity funding. More than 650 construction workers are needed during the construction, which will last for about 24 months for the Groot Container Glass factory and 36 months for the Groot Float Glass factory.

21376/Press Release – 2018.07.05

## Miscellaneous

### FEVE

#### **Michel Giannuzzi elected Vice-President; Laurent Zuber appointed as Chairman**

FEVE has elected Michel Giannuzzi, Chairman and Chief Executive Officer of the Verallia Group as Vice President, and Laurent Zuber, Chief Commercial Officer and Managing Director of SGD Pharma, as Chairman of the FEVE Flaconnage Board. Michel Giannuzzi,



Chairman and Chief Executive Officer of the Verallia Group – one of Europe’s leading glass packaging manufacturers for the food and beverage sector – was elected Vice-President of FEVE – the European Container Glass Federation – at its FEVE General Meeting in Rotterdam on 15 June.

“ I am eager to put my experience at the service of this industry which has an unrivaled cultural heritage in Europe and a strong future ahead. Glass continues to be the packaging material of reference for many products despite competition,” says Giannuzzi. “Our European industry association has a leadership role in federating forces towards circular economy”.

The FEVE AGM also elected Laurent Zuber as Chairman of the FEVE Flaconnage Board. Zuber is Chief Commercial Officer and Managing Director of SGD Pharma – a leading manufacturing company of moulded and tubular glass vials for the pharmaceutical industry.



Commenting on his new role, Zuber said: “The European glass flaconnage sector is world leader in the production of specialty bottles for the perfumery and cosmetics, and primary glass packaging to the pharmaceutical sector. Bringing visibility to our sector’s assets and strengths to succeed in supporting the development of our customers’ brands, and, in the pharmaceutical sector, to commit to patients’ safety by delivering the highest quality products will be beneficial to the EU’s economy and external trade, as well as for the whole glass packaging industry. This is one of the main objectives of my mandate in FEVE which I took on with great energy and enthusiasm.”

21377/Press Release – 2018.07.11

### **Friends of Glass and NMA to inspire ‘ocean-friendly’ packaging**

A recently set-up partnership between Friends of Glass and the National Marine Aquarium in the UK will promote recyclable glass packaging for food, drink and toiletries.



The partnership will seek to highlight how everyday choices are an important way of protecting the health of our oceans and marine life.

The Plymouth-based National Marine Aquarium, which attracts around 300,000 visitors every year including 30,000 school students, was the first aquarium in the UK to be run as a separate charity dedicated to the education and conservation of the marine environment.

Over the last 20 years, the NMA has been instrumental in connecting people with our Oceans and promoting pro-ocean behaviour.

The NMA has launched a national education outreach programme with the first hubs in Cardiff and Newcastle, with a target of reaching one million school children and young families in a year, within the next 10years. Friends of Glass will be donating funds to the NMA's innovative schools programme that will be educating students about the impact of packaging materials on our oceans.

Friends of Glass will also be supporting a new NMA initiative launched this summer, which celebrates iconic marine creatures and how the food and drink packaging we choose can help them now and in the future.

Victoria Adams, senior communications officer, British Glass, said: "We are delighted to be working in partnership with the NMA on these programmes. Supporting greater understanding and knowledge about how we can protect our oceans is so important. If everyone made a small change in their habits, like choosing 100% recyclable glass packaging for food, drink and toiletries whenever they can, this would have a positive impact on marine health."

A recent European-wide survey conducted by Friends of Glass found that 82% of Britons (78% Europeans) have recently noticed a change in their behaviour and have greater awareness of the impact on the environment from their actions since concerns were raised about the problem of marine litter worldwide.

Nicola Murray, head of discovery and learning, National Marine Aquarium, added: "The funds raised from the Friends of Glass campaign will help us to continue our vital work with students and teachers to help them understand the importance of the Oceans, not only for marine life but for the whole environment. There is no denying that we must work as individuals and communities together to create healthier Oceans for the benefit and enjoyment of all."

21378/Press Release – 2018.07.17

## DOMESTIC TABLEWARE AND CRYSTAL GLASS

### Glass Companies

#### Libbey



**Libbey®**

Libbey Inc., one of the world's largest glass tableware manufacturers, has reported results for the second quarter ended 30 June 2018.

Net sales were USD 213.5 million, compared to USD 197.5 million in the prior-year period, an 8.1% increase (or an increase of 7.0%, excluding a USD 2.3 million currency impact).

Net income was USD 4.0 million, compared to a net loss of USD 0.8 million in the second quarter of 2017.

Adjusted EBITDA was USD 26.8 million, compared to USD 20.2 million in the second quarter of 2017, a 32.7% increase compared to the prior-year period.

New products, defined as products introduced within the previous 36 months, contributed USD 13.3 million in sales, or 6.2% of total net sales, during the second quarter.

E-commerce platform sales were approximately 12.6% of total US and Canada retail sales.

Net sales improved in all of our geographic regions with the exception of Asia Pacific, and they continue to experience strong contributions from new product introductions as well as the e-commerce platform. Net sales in the US and Canada segment increased 5.4%, driven by favourable price and product mix sold in all three channels as well as higher volume. Partially offsetting the increase was unfavourable channel mix.

In Latin America, net sales increased 10.4% (an increase of 13.1% excluding currency fluctuation) as a result of higher volume and favourable pricing, partially offset by unfavourable product mix in the business-to-business and retail channels and an unfavourable currency impact.

Net sales in the EMEA segment increased 22.9% and were favourably impacted by currency, higher volume and favourable price and product mix on product sold across all channels.

Net sales in Other were down primarily as a result of lower sales volume in China, partially offset by favourable price and product mix and favourable currency impacts.

The Company affirmed its previously provided full-year 2018 sales and Adjusted EBITDA outlook, with expected Adjusted EBITDA margins within the 10% to 11% range, but has modified selling, general and administrative guidance. The Company expects:

- Net sales increase in the low-single digits, compared to full-year 2017, on a reported basis;
- Capital expenditures in the range of USD 50 million to USD 55 million; and
- Selling, general and administrative expense around 16% to 16.5% of net sales.

## LAV

# LAV

Turkey's LAV is well-known for its innovative designs, producing some two million pieces every day. General manager Tugrul Baran spoke to Glass Worldwide about the company's origins, present-day activities and aspirations for the future.

3-page article as factory spotlight.

21380/Press Release – GWW – July/August 2018

## REINFORCEMENT GLASS FIBRES



## Glass Company

### Owens Corning

1. **Owens Corning reported consolidated net sales** of \$1.8 billion in second-quarter 2018, compared with net sales of \$1.6 billion in second-quarter 2017, an increase of 14%.

Second-quarter 2018 net earnings attributable to Owens Corning were \$121 million, or \$1.08 per diluted share, compared with \$96 million, or \$0.85 per diluted share, during the comparable quarter in 2017.

For first-half 2018, net earnings were \$213 million, compared with \$197 million in first-half 2017. Second-quarter 2018 adjusted earnings were \$131 million, or \$1.17 per diluted share, compared with \$135 million, or \$1.19 per diluted share, during the same period one year ago. For first-half 2018, adjusted earnings were \$221 million, or \$1.97 per diluted share, compared with \$232 million, or \$2.04 per diluted share, in first-half 2017.

“Owens Corning grew revenue by 14% on the contribution of Insulation acquisitions and successful pricing actions in both Roofing and Insulation. The company made significant commercial progress in the first-half of the year, partially offset by operational headwinds,” said Chairman and Chief Executive Officer Mike Thaman. “In the second-half, we expect continued commercial execution and improved operational performance. We expect strong financial results for 2018 with momentum heading into 2019.”

### Consolidated Second-Quarter 2018 Results

1. In the second quarter, Owens Corning experienced a recordable incident rate of 0.56, compared with 0.48 in second-quarter 2017. Although increased for the comparative quarter, the company continues to perform at a high level of safety with year-to-date performance consistent with 2017.

2. Reported earnings before interest and taxes (EBIT) for second-quarter 2018 were \$206 million, compared with \$190 million during the same period in 2017. Adjusted EBIT in second-quarter 2018 was \$214 million, compared with \$230 million in 2017 (See Table 2).
3. During second-quarter 2018, Owens Corning repurchased 252,000 shares of its common stock for \$20 million. As of the end of the quarter, 6.2 million shares were available for repurchase under the current authorization.

#### 2018 Outlook

- The company continues to expect an environment consistent with consensus expectations for U.S. housing starts and global industrial production growth.
- In Insulation, the company expects to deliver EBIT growth of approximately \$150 million. First-half EBIT improved \$47 million versus the prior year. The second-half EBIT improvement compared with the prior year is expected to accelerate to over \$100 million based on a larger pricing benefit, stronger manufacturing performance and a continued contribution from acquisitions.
- In Roofing, the company expects the overall U.S. asphalt shingle market to be down mid-single digits on lower storm demand. The company's shingle volumes trailed the market in the quarter and the first-half. During these periods, the U.S. asphalt shingle market experienced high growth in the U.S. Eastern seaboard, where the company has a lower than average market position. The company estimates that approximately 50% of the first-half volume decline was attributable to geographic mix with the remainder associated with timing of shipments. Geographic mix is expected to affect full-year volumes. Pricing performance continues to be strong and the company expects to offset the impact of persistent asphalt and transportation inflation.
- In Composites, the company expects continued growth in the glass fiber market, driven by global industrial production growth. The company now expects EBIT to be slightly below the prior year as a result of higher manufacturing costs, a slightly lower volume outlook, and higher than anticipated inflation.

21381/Press Release – 2018.07.25

#### **2. Owens Corning announced that Brian Chambers has been appointed President and Chief Operating Officer effective August 1, 2018.**

"The creation of a Chief Operating Officer and the appointment of Brian Chambers will create additional senior management capacity to accelerate our progress on growing the company," said Mike Thaman, Chairman and Chief Executive Officer. "The fundamentals of our business are strong, and this change will allow us to further leverage scale across the enterprise."

Mr. Chambers, 51, has been President of Owens Corning's Roofing business since 2014. Under his leadership, revenues for the Roofing business grew 16% in 2017. Prior to his current position, Mr. Chambers was Vice President and General Manager for Roofing, a role he held since 2013. Mr. Chambers returned to Owens Corning in April 2011 as Vice President and Managing Director, Engineered Solutions in the Composites business.

He had spent almost four years prior as President of Saint-Gobain's Distribution business in North America after Owens Corning's divestiture of its Siding Solutions business where he served as President of the Siding and Building Material Distribution businesses. Over the course of his career, Mr. Chambers has held a number of senior commercial and operational roles across a range of businesses and geographies.

Mike Thaman continued, "Brian is a proven and respected leader with nearly 15 years of experience with Owens Corning. He has a track record for delivering strong business results and has demonstrated the commitment to the company and our customers that makes him the right choice for this role."

Gunner Smith will succeed Mr. Chambers as President, Roofing. Mr. Smith has been with Owens Corning since 2008 and has served in his current role, as Vice President of Sales, Roofing, since 2013. He has built a strong field organization that has been the foundation of the company's sustained strong performance in the Roofing business. He will report to Mr. Chambers and will serve as a member of the company's Executive Committee.

21382/Press Release – 2018.07.31

### **Johns Manville**



Johns Manville (JM) announced the successful implementation of Environmental Management Systems (EMS) in all its North American and European plants. JM's 36 North American plants and six European plants have now received third-party certification ensuring that each plant's EMS conforms to the International Organization for Standardization (ISO) 14001:2015 standard.

ISO 14001 requirements enable JM to enhance its environmental performance by using a comprehensive approach that emphasizes continuous improvement and pollution prevention. In adopting ISO 14001, JM considers a variety of topics including air pollution, water and sewage issues, waste management, climate change mitigation and efficient use of resources, helping drive compliance with regulations. JM also considers the outcomes of its product and service offerings from a lifecycle perspective under the ISO 14001 standards.

"JM established a goal in 2012 to improve our approach to environmental management, and in 2015 JM committed to implementing an EMS in all North American and European plants within five years," said Brent Tracy, Senior Director and Associate General Counsel for Environmental, Health and Safety. "I am proud of the hard work of the entire Environmental, Health and Safety team, as well as many other members of our manufacturing facilities, for helping us achieve this goal two years ahead of schedule."

21383/Press Release – 2018.08.09

### **Saint-Gobain**



Saint-Gobain has acquired the German company HKO, that designs, produces and distributes a complete range of very high temperature thermal insulation and fire protection solutions made from various types of glass fibres to cover temperature resistances between 600 and 1,000°C.

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Founded in the 1970s, HKO employs 225 people and has two plants in Germany with sales affiliates in France, USA and China. It reported sales of 39 million euros in 2017. With mostly customized solutions, the company answers the growing needs of customers in the construction, industrial and automotive markets. This acquisition is in line with the Group's strategy of developing technological niches. It will join the ADFORS business within the High-Performance Materials Activity. The acquisition allows Saint-Gobain to expand its range of high value-added solutions by entering into the very high temperature thermal insulation area and becoming a leader of the European market.

21384/Press Release – 2018.08.01

## SPECIAL GLASS

### Glass Companies

#### SCHOTT

#### 1. SCHOTT and Primoceler join forces to advance the next generation of ultra-miniature, ultra-reliable medical implants



**SCHOTT**

Thanks to an agreement to acquire Primoceler Oy, technology group SCHOTT will expand its hermetic packaging portfolio with pioneering glass micro bonding technology.

This process enables the manufacture of vacuum-tight, ultra-miniature electronic and optical devices with superior reliability. Based on laser technology, this state-of-the-art bonding method can be completed without any heat or added materials, allowing device packaging for sensitive electronics made with only transparent materials, such as glass. Offering excellent biocompatibility with new glass types, the technology creates new possibilities for wafer level chip scale packaging (WL-CSP) in a wide range of applications, including medical implants, MEMS devices, and other reliability-critical electronic and optical devices.

Advancements in the medical industry, particularly for implantable devices, have led to the development of a new type of smart active implants. These implants are more intelligent: they have the ability to transmit and capture data and can also be equipped with optical components, such as optical sensors or cameras. Subsequently, these sensitive components must be safely encapsulated to protect against potentially damaging working environment hazards (such as humidity, extreme temperatures, corrosive chemicals, and bodily fluids) while still delivering high-level electrical performance and smooth transmission of optical and radiofrequency signals.

The innovative glass micro bonding services offered by Finnish pioneer Primoceler Oy allows the manufacture of truly reliable miniature packages for implantable devices made only with glass. By directly laser bonding glass-to-glass or glass-to-silicon, devices can be manufactured without a gap between the layers, leading to ever-smaller wafer and chip scale devices and medical implants.

In addition, the process allows for creation of specified conditions inside the encapsulation cavity, including integration of certain gases or even a complete vacuum. This unique solution for glass micro bonding does not require any heat and can be done at room temperature, creating the possibility for electronics with extreme heat sensitivities to be safely encapsulated. The bonding process also does not require any additive materials, which means less risk for material failure or outgassing, and therefore enhanced reliability of the packaged components.

For the past 40 years, titanium has been the packaging material of choice for medical implants. However, the use of glass wafers has increased rapidly in recent times. The core reasons are the superior properties glass offers as a packaging material, including its biocompatibility. Its excellent transparency to radio frequencies (RF) opens up new possibilities for active and passive medical implants, since glass packages could enable efficient recharging, data transfer, and reprogramming of implants. Furthermore, transparency to visible light makes full-glass micro packages suitable for a wide range of optical applications.

Biocompatible full-glass micro packages offer new possibilities for the next generation of medical implants, such as retinal implants and neuro stimulators, blood pressure sensors, and devices for cardiac rhythm management, including cardiac resynchronization therapy (CRT) and implantable cardioverter defibrillator (ICD) devices.

With this acquisition, SCHOTT will vertically integrate offering Primoceler's hermetic bonding services alongside its longstanding core competence of hermetic packaging components for a variety of high-reliability applications. The transaction is expected to be completed before the end of 2018, subject to certain customary closing conditions. Upon finalization of the acquisition, the company will conduct its business activities under the new name SCHOTT Primoceler Oy based in Tampere, Finland, as part of SCHOTT's Electronic Packaging division.

SCHOTT has an established portfolio of vacuum-tight seals made with only inorganic materials (such as glass, ceramics, and metal) that prevent the intrusion of moisture and harmful gases. The portfolio includes hermetically sealed packages and feedthroughs based on glass-to-metal sealing (GTMS) and ceramic-to-metal sealing (CerTMS®) technologies, full ceramic packages, as well as Hermes® glass wafer substrates with hermetically sealed "through glass vias" (TGV), enabling wafer level chip size packaging.

21385/Press Release – 2018.07.12

## **2. SCHOTT LuminaLine wins two notable awards**

The new aesthetic lighting concept has won the Red Dot: Best of the Best award as well as the German Innovation Award.

SCHOTT's latest lighting innovation "LuminaLine" has not yet been on the market for three months and has already earned two prestigious international awards. Following the German Innovation Award 2018, LuminaLine has now also received the Red Dot: Best of the Best Award 2018.

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The Red Dot Award is one of the most important design competitions in the world. A 40-member jury of international design experts individually evaluates original products. Evaluation criteria include degree of innovation, functionality, aesthetic quality and emotional impact.

The German Innovation Award was initiated by the German Design Council (Rat für Formgebung) and distinguishes products and solutions across all industries that differ from previous solutions above all in terms of user centring and added value. The nomination procedure is unique: only companies proposed by the expert committees and scouts of the German Design Council can participate.



### **reddot award 2018** **best of the best**

SCHOTT LuminaLine came away the winner in the Materials category despite competition from 5,600 entries out of 55 countries, winning over a jury of 40 internationally recognized design experts. LuminaLine is also one of the final three nominees for the Red Dot: Luminary, the highest award presented in the Red Dot Design Award for design concepts.

LuminaLine had previously prevailed as the German Innovation Award Winner 2018. According to Stephan Schabacker, Director of Sales Automotive at SCHOTT Lighting and Imaging, it is no coincidence that SCHOTT LuminaLine received both an innovation and design award. "LuminaLine is a particularly strong concept because this component can be used in so many ways, both as a versatile design element and as a resilient component for particularly harsh environments. LuminaLine has its own aesthetics in both the illuminated and non-illuminated state and is easy to recycle as a glass component."

LuminaLine is technically based on a glass composite whose luminance is bundled by a fibre optic – the soul. This creates an interplay of light and transparency that makes new designs possible. From a functional perspective, LuminaLine is also suitable for using concentrated homogeneous light for industrial and medical applications. However, the lighting technology is strengthened by the thermally toughened clad glass that surrounds the soul. The clad is resistant to physical and chemical loads and withstands UV radiation and temperatures up to 400°C without any problems.

LuminaLine shows its particular strength when it comes to the lighting concept's versatility, which opens up creative applications for demanding markets. In interior design, for example, LuminaLine makes completely new concepts possible: light guides can be used as illuminated room dividers or be integrated into furniture, floors and aquariums. As contour and functional lighting, LuminaLine can illuminate day and night designs in various ways and integrates seamlessly into its surroundings.

In the household appliance industry, it enables ovens that communicate with users using light colours, shining green light when the pizza is ready, for instance. Thanks to heat resistance up to 400°C, the new light guides handle such tasks with ease. This strength in conjunction with chemical resistance also facilitates its use in medicine, where materials are exposed to extreme stresses during sterilization.

The automotive and traffic industries also offer many application possibilities. Reliable, aesthetic contour and functional lighting is playing an increasingly important role in making the car an oasis of well-being. LuminaLine is ideally suited, for instance, for vehicle exterior lighting and enables aesthetic and reliable functional or contour lighting – as an illuminated entry aid or for accentuating exterior doors. “Where visibility used to be the focus, lighting is now used as a form of user experience,” Schabacker explains.

However, the future of mobility must not only apply to vehicles. SCHOTT LuminaLine also turns traffic signal lighting into a design element. The light guides could indicate with a green light on the platform or in transit that trains or buses will soon be arriving, or signal with a yellow light that it will be another five minutes.

21386/Press Release – 2018.07.23

### **3. SCHOTT BOROFLOAT® in automotive glass**

SCHOTT BOROFLOAT® is not only extremely durable, but also has an expansion coefficient matched for the semiconductor, therefore suited as a basis for high-tech systems more than any other material.

A revolution is on the horizon: Cars of the future will contain more glass parts than you may think – a Hamburg company conquers new fields with special technical glass. The display screen, the touchscreen GPS and the panoramic sunroof all have one thing in common - they are made of glass.

But when it comes to building cars, glass isn't just important in the obvious areas, but also where most would probably least expect it – ‘under the hood’: It helps regulate the engine's fuel injection pump, monitor tire pressure and activate ABS and the airbag at the right time. After all, the acceleration and pressure sensors controlling these processes, so-called MEMS sensors (micro-electro-mechanical systems), are made from silicon and glass. A type of glass needs to be used that can withstand the extreme temperature fluctuations and mechanical stress in the engine compartment: Solution BOROFLOAT®.

This special float glass by SCHOTT is not only extremely durable, but also has an expansion coefficient matched for the semiconductor – to ensure that the sensor is also reliable in extreme heat or cold. A piece of glass just a few millimetres in size is more suited as a basis for these high-tech systems than any other material and that's just the beginning.

In autonomous cars of the future, glass will help guarantee higher safety. Is the road ahead clear? Is a pedestrian crossing the street? How far away is the next car in front? Lidar systems continuously scan the surroundings at 360 degrees to answer these questions, putting high demands on the glass being used. The extreme optical purity, high durability and permeability of infrared rays makes BOROFLOAT® predestined for these types of systems. Thanks to the good dielectric properties, BOROFLOAT® is also the perfect substrate for antenna systems, which will be used by the 'connected cars' of the future to communicate with each other and traffic management systems. Even at GHz frequencies, transmission and reception are not impaired.

“Glass is the perfect material whenever shape accuracy, compatibility with semiconductors and high transparency are key,” says Ulrich Schuster, CEO at Schröder Spezialglas in Ellerau near Hamburg. His company cuts, bores, mills, bends and shapes high precision technical glass for virtually any conceivable application. That’s where BOROFLOAT® is the perfect basis: High chemical and mechanical resistance, unmatched durability and ideal recyclability – the special float glass by SCHOTT is the leader when it comes to breaking new ground and tapping new applications. The revolution, according to the expert Ulrich Schuster, is already under way: “Glass will be replacing plastic more and more.”

This also applies to lighting in the automotive industry: New concepts in this area are – again – using glass: LED, matrix LED or laser headlights use special filters to improve night vision, making it easier to detect obstacles in the road without blinding oncoming traffic. Without a tough, super-transparent glass like BOROFLOAT® these systems can’t be implemented to withstand the heat a laser generates and guarantee the great headlight range.

BOROFLOAT® also opens up entirely new shapes for holographic head-up displays, which show turns or warnings about obstacles directly on the windshield within the driver’s view ('augmented reality') – this is where the light weight and extremely high transparency of this unique flat glass will help to implement future projection systems in very small areas.

Minimal bend radii, bores in the microscopic range, sophisticated cut-outs: Can glass actually stand up to these requirements?

“With the right tool we can turn special float glass into virtually anything”, says Ulrich Schuster. “BOROFLOAT® is excellent for laser machining. It’s virtually challenging us to come up with new projects.”

BOROFLOAT® is made using a micro-float process, 'floated' at temperatures that are up to 200°C (392°F) higher with variances under half a degree. This process, which also precisely controls the thickness of the glass, guarantees perfect homogeneity, outstanding flatness and the mirror-like surface of the special float glass by SCHOTT. It is also the basis for the high optical quality.

Ulrich Schuster explains “soda lime lenses develop a whitish-grey build-up after a year or two and they become blind. However, by using BOROFLOAT® lasting brightness can be achieved as this hydrolysis or glass corrosion does not occur.”

The extreme transparency and colourlessness is especially important in areas where light is key.

21387/Press Release – 2018.07.31

## Corning

### 1. Corning to invest in manufacturing facility for automotive glass solutions

Corning will invest in its third manufacturing site in China for its Automotive Glass Solutions business.



With the support of the Hefei government, Corning Incorporated will invest in an existing production facility in the Hefei Xinzhan Hi-Tech Industrial Development Zone in the Anhui Province, China, for its Automotive Glass Solutions business.

This facility, which Corning expects to be fully operational in 2019, will produce Corning Gorilla Glass for Automotive Interiors, a durable and optically advantaged cover glass solution specially designed for automotive interior applications. Retrofitting an existing facility will help Corning bring on new capacity quickly and efficiently in advancing the growth of its automotive glass solutions business.

"Corning's investment will deliver the capability, quality and capacity the auto industry needs to drive innovation and supply drivers with the connectivity and user experience they desire." said Michael Kunigonis, vice president and general manager, Corning Automotive Glass Solutions.

This manufacturing facility demonstrates Corning's continued commitment to China and marks the company's third investment in Hefei within the past three years. Corning Environmental Technologies announced a new facility focused on its gasoline particulate filter product line and Corning Display Technologies recently opened the world's largest LCD glass substrate facility to supply BOE, China's leading panel maker.

21388/Press Release – 2018.07.18

**CORNING**

## 2. Corning showcases Gorilla Glass and Gorilla Glass DX+



Corning has introduced its new Gorilla Glass DX and DX+, protective glass substrates designed for wearables and with scratch resistance and durability as well as antireflective and contrast-improving properties.

Corning's Gorilla Glass DX and Gorilla Glass DX+ are a refinement of Gorilla Glass SR+ protective composites for wearables and other devices featuring small screens. In a bid to better address applications like smartwatches, the new substrates feature an antireflective property that is said to be 75 percent better than that of standard glass as well as a special structure that improves contrast ratio of a display by 50 percent at the same brightness level versus standard glass. Both features are important for wearables because they reduce the need to increase brightness outdoors and prolong battery life.

As far as the differences between Gorilla Glass DX and Gorilla Glass DX+ are concerned, Corning claims the optical properties are the same, but the latter features better scratch resistance that approaches the level of "alternative luxury cover materials."

Gorilla Glass DX and DX+ are not meant to replace Gorilla Glass 5 or 6 on smartphones, possibly because their properties do not work as well on larger screens that are used differently than wearables. Corning has claimed that the DX and DX+ substrates could be used for devices with screens larger than LCDs of smart watches, but did not elaborate on possible alternate applications.

Corning also did not indicate when it expects its customers to start adoption of their new substrates.

21389/Press Release – 2018.07.25

## 3. Corning Gorilla Glass sixth generation

Corning's specialized toughened glass Gorilla Glass is now in its sixth generation and is designed to be thin and damage-resistant. Corning claims that Gorilla Glass has been installed on 6 billion devices worldwide since its debut in 2007 and more than 45 brands use the glass on their device.

Gorilla Glass is a brand of specialized toughened glass developed and manufactured by Corning. This glass is now in its sixth generation and is designed to be thin and damage-resistant.

Gorilla Glass is unique to Corning, but its close equivalents do exist including Asahi Glass Company, Dragontrail and Schott AG Xensation. However, what makes Gorilla Glass special is the fact that every time a new smartphone is being launched and especially a flagship, the smartphone makers literally brag about the fact that there is a Corning Gorilla Glass used in their device.

21390/Press Release – 2018.08.01

### Samsung

Samsung has filed patent for self-healing glass laminate. According to patent documents published by the World Intellectual property Organization, Samsung is working to develop a new variety of glass laminate for smartphones that would self-repair scratches as well self-clean fingerprints. This oleophobic coating would be composed of polyrotaxane, polyhedral silsesquioxane and fluorinated (meth) acryl, and could be applied to Corning's Gorilla Glass. The result would be a smartphone screen capable or regenerating itself.

The details of the patent are broad in spectrum, suggesting that practical applications could still be years away, and the laminate probably won't be able to heal cracks in the glass layer due to impacts. But the technology could reduce surface damage caused by contact with other objects in a user's pockets, such as keys or coins.

When used in tandem with the current and future iterations of Gorilla Glass, the laminate layer could result in smartphones that maintain a crystal-clear screen for the full life of the phone, and Corning's durable glass products can withstand all but the most violent of drop and impacts. Within the next few years, Samsung could possibly create a near perfect phone screen; self-cleaning, scratch resistant and water-proof.

To view the details of the patent visit :

<https://patentscope.wipo.int/search/en/detail.jsf?docId=US224376770>

21391/Press Release – 2018.08.20

### Carl Zeiss and Carl Zeiss Meditec

Effective 1 October 2018, Dr. Christian Müller, current CFO of Carl Zeiss Meditec AG, is to become CFO of Carl Zeiss AG; Justus Felix Wehmer will assume the role of CFO at Carl Zeiss Meditec AG and the Management Board at Carl Zeiss Meditec AG will be extended with the appointment of Jan Willem de Cler.

21392/Press Release – 2018.07.16



### **Osram**

The glassmaker Osram has initiated the sale of its Lighting Solutions (LS) in Munich, Germany.

The management board has decided to divest its LS business unit to focus on high-growth future markets.

Olaf Berlien, CEO of Osram Licht, said: “Thanks to numerous measures, the earnings position of the LS business unit has stabilised significantly, therefore allowing us to initiate an organised sales process.

“This will result in a more strategic focus with regards to applications with high growth potential.”

Talks will be held with interested parties about the sale of the LS. The management board will provide an update on the progress of strategic plans for the company at the Capital Markets Day in November.

As part of its strategic realignment, Osram is refining its positioning with an increased focus on growth markets in high-tech fields.

21393/Press Release – 2018.08.03

### **Panasonic**

Panasonic Corp has partnered an affiliate of Japan Display Inc to license out a low-cost organic light-emitting diode (OLED) panel-making process, a possible alternative to the conventional method used by dominant South Korean manufacturers.

Organic materials are deposited onto glass, a method expected to be 20 to 30 percent cheaper than current process.



The affiliate, JOLED Inc, is in talks with several global panel producers to license its printing process for OLED panels, where organic colour materials are deposited onto glass substrates in a manner similar to ink-jet printing.

The method can produce OLED screens 20 to 30 percent cheaper than the current evaporation process as it does not need equipment such as vacuum chambers or metal masks to deposit the colour materials.

Panasonic will design and develop printing equipment, while a unit of panel and chip making equipment manufacturer Screen Holdings Co Ltd will be responsible for actual production of the equipment and maintenance.

JOLED, created in 2015 by merging the OLED divisions of Panasonic and Sony Corp, also plans to start mass production of smaller panels on its own in 2020.

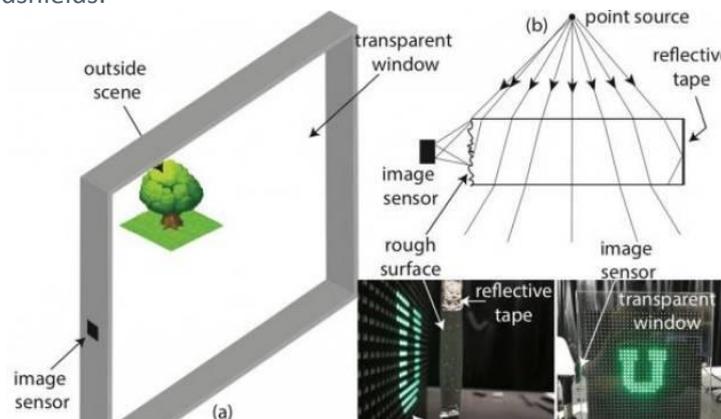
To finance the production plan, JOLED raised 47 billion JPY (425 million USD) from the sale of new shares to auto parts maker Denso Corp and three other Japanese firms.

21394/Press Release – 2018.08.27

## Miscellaneous

### Researchers Turn Pane of Glass into See-Through Lens-less Camera

Researchers anticipate the technology could find its way into augmented-reality glasses or in car windshields.



Using computational imaging for reverse image reconstruction, researchers at the University of Utah were able to record readable images from objects as seen through a pane of glass, merely from collecting the scattered light rays at one rough edge of the panel fitted with a lens-less CMOS image sensor.

Unlike conventional cameras that block the view from the scene they are recording (with their sensor facing the object), here the sensor is turned 90 degrees away from the scene, directly facing the rough edge of a transparent window. But since all other edges of the window were designed smooth and covered with reflective tape, the window pane acts as a scattering medium, allowing light rays from a scene to reach the sensor within its acceptance angle.

In their paper "Computational imaging enables a "see-through" lens-less camera" published in the Optics Express journal, the researchers detail how they first had to experimentally measure the scattered image for all the individual emitting points of a LED array to determine the point-spread function (PSF) of the system, that is, the optical transformation from a light source coming from outside the window and eventually reaching the sensor pixels).

Once the point-spread function was determined, they were able to capture images of arbitrary objects (displaying simple patterns with their 32 by 32 LED test array) and reconstruct the images by solving the linear inverse of that function.

Because very few scattered light rays end up reaching the sensor, the distance between the object and the transparent window plays a pivotal role in the quality of the image reconstruction.

For their demonstration, the researchers empirically found they would get the best results when placing the LED array 150 millimetres away from the 200 by 225 millimetres plexiglass acrylic pane they used as the window pane. With this set up and a 640 by 480 pixels, 8-bit CMOS image sensor placed on one rough edge, they achieved a spatial resolution of about 0.1 line-pairs/mm, with depth-of-focus of at least 10 millimetres. The paper also reports colour and video imaging.

The researchers anticipate such a see-through imaging technique could find its way in eye tracking applications for augmented-reality glasses or in car windshields (for gaze tracking). Next, to compensate for the absence of lens and the lack of optical focusing capability, they want to explore the possibility of computational refocusing.

21395/Press Release – 2018.08.27

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## DIVERSE

### GLASS & SUPPLIERS

#### Şişecam Group's First Half 2018 Results



Şişecam Group's net sales increase by 24 percent in first half of 2018. Consolidated net sales reached 6.8 billion TRY in the first half of 2018, while the net profit rose to 1.6 billion TRY, with an increase of 93% for the same period in 2017.

In the first half, Şişecam, a group with manufacturing activities in 13 countries in three continents and sales all over the world, produced 2.4 million tonnes of glass, 1.2 million tonnes of soda ash and 1.8 million tonnes of industrial raw materials.

In a statement on the half-year financial results, Şişecam Group Vice Chairman and CEO Prof. Ahmet Kırman said, "Our consolidated net sales have reached 6.8 billion TRY. The share of our international sales representing the total amount of exports from Turkey and sales from overseas production has been 59 percent in our consolidated sales. Thanks to ongoing efforts to optimize the cost structure and the geographical distribution of production activities, consolidated EBITDA has reached 2.2 billion TRY in the same period."

Şişecam Group reported total investments of 1.2 billion TRY in the first half of 2018.

“While boosting our revenue and profitability in the first half, we have made significant investments supporting our long-term sustainable growth,” Kirman said. “During this period, we concluded two acquisitions, one in Italy and the other in India, with a view to improve our effectiveness in existing markets. We have taken the position to be the principal shareholder in our flat glass subsidiary in India, which is one of the most attractive emerging markets in the world. We are committed to increase our investments in parallel to the growth opportunities in India, a country offering significant potential in terms of the increasing demand for glass. Upon the completion of the acquisition process of Manfredonia facility in Italy, we have doubled our flat glass production capacity in this country. With this facility’s production capacity of 190,000 tonnes per year, we have further strengthened our flat glass leadership in Europe.”

He continued, “In Turkey, our investments aiming at automation, modernization and capacity improvement in line with the Industry 4.0 approach have continued in addition to our new investments, we completed our fourth furnace investment in our Eskisehir Glass Packaging Plant. With this new furnace with an annual production capacity of 150,000 tonnes, our annual glass packaging production capacity in Turkey has reached 1.2 million tonnes. Our efforts to put our new glass fibre plant offering an initial annual production capacity of 70,000 tonnes in Balıkesir into operation in the last quarter of the year are going on at full speed.”

Şişecam Group continued to contribute the national economy with an export volume of 391 million USD in the first half of the year.

“We keep on creating values for all of our stakeholders, with successful financial results,” Kirman noted. “Our goal is to further strengthen our financial structure to maintain the continuity of the Group's steady growth line and to support our growth in the upcoming periods. While continuing to increase the speed of our efforts to optimize our production facilities, we will continue to optimize our costs using all efficient methods, including increased use of automated systems. We continue our efforts in line with our objectives of becoming one of top three global producers in all-main business fields, sustainable profitable growth and operational excellence.”

21396/Press Release – 2018.08.28

### **Knauf Insulation**

Knauf Insulation is to build a €120 million plant in Malaysia to meet demand for its mineral wool insulation solutions in the Asia Pacific region.

The plant will be located in Johor Bahru in the southern part of the country and have a capacity of 75,000 tonnes a year. The plant is scheduled to be completed in early 2020 and will create 180 jobs in Malaysia as well as a further 60 new positions across the region.

“We have seen record sales due to increasing energy costs across Asia and more stringent energy-saving building regulations in countries such as Australia, Japan and Korea,” said Stuart Dunbar, Regional General Manager for the Asia Pacific Region at Knauf Insulation.



“This is a reflection of the growing preference our customers have for the exceptional quality, performance, ease of handling and sustainability of our solutions.”

The facility will build on this success providing a competitive edge for the company as well as advantages for customers. It will feature new technology and control equipment making it one of the most efficient and sustainable insulation plants in the Asia Pacific region.

The plant will use up to 80% post-consumer recycled glass in the manufacturing process and feature Knauf’s high compression packaging. All products will be made using Knauf’s bio-based binder, ECOSE Technology.

The facility will offer customers services and a wider product range for residential and non-residential buildings specifically tailored for the Asia Pacific market, as well as solutions for HVAC systems and domestic appliances such as ovens, cars and fridges. Shipping logistics from Malaysia will also enable Knauf to develop new distribution partnerships in South-East Asian countries and strengthen its presence in the major insulation markets of Japan, Australia, Korea, New Zealand and Singapore.

21397/Press Release – 2018.08.13

## SEMINARS / CONFERENCES / WORKSHOPS

### **SGT Annual Meeting**



Energy and its use in glassmaking will be the theme of the SGT (Society of Glass Technology) annual conference in early September.

The SGT conference takes place between Monday September 3 and Wednesday September 5 and is also focused on Science and History and Heritage.

The event takes place at Murray Edwards College, Cambridge, UK.

See more at <http://cambridge2018.sgt.org/>

Speakers from companies such as Volvo, British Glass and Renewable UK will provide presentations in its Industry session.

Other speakers include Chris Sorsby, Commercial Director of GTS, Reinhard Conradt, of RWTH Aachen, who will discuss the Impact of the choice of raw materials on energy consumption and production efficiency, and Rob Ireson of Glass Technology Services (GTS).

SGT President Bill Brookes will provide a welcome speech, while SGT President Designate, Stuart Hakes, of FIC UK, will discuss the Use of Electricity in Glass Melting.

The full programme is available under :

<http://cambridge2018.sgt.org/wp-content/uploads/2018/08/industry.pdf>

21398/Press Release – 2018.08.20

### **ICG Annual Meeting 2018**



**The ICG Annual Meeting 2018 will be taking place 23-26 September in Japan and is organized by the Ceramics Society of Japan (CerSJ).**

The 2018 annual meeting of the International Commission on Glass (ICG) will be held in Yokohama, Japan, 23-26 September 2018. ICG 2018 is organized by the Ceramics Society of Japan (CerSJ), in strong collaboration with the Glass Industry Conference of Japan (GIC).

Preparations are underway regarding the meeting to welcome many glass researchers, engineers and related professionals from all over the world.

A list of topics of papers can be found at:

<http://www.icg2018yokohama.com/program/index.html>

For abstract submission guidelines go to:

<http://www.icg2018yokohama.com/abstract/index.html>

For more information, visit the ICG website at [www.icg2018yokohama.com](http://www.icg2018yokohama.com) .

21399/Press Release – 2018.01.08 & 18

### **BV Glas Partner at Glasstec 2018**



This year's glasstec takes place at Düsseldorf Exhibition Centre from **23rd-26th October in in Düsseldorf, Germany.**

The Bundesverband Glasindustrie (BV Glas) is organising the afternoon conference 'Markets by BV Glas' at the 25th edition of the German trade fair on 23rd October.

The German association's Director General, Dr Johann Overath, will be chairing the afternoon session, which will be held from 2 - 5pm and is free of charge.



Dr Johann Overath, Director General of BV Glas

The central theme will be German and European environmental and climate policy, as well as the latest facts and figures.

Glass manufacturers, supported by experts, will explain the challenges, opportunities and risks that the glass industry faces.

The conference agenda includes post-2020 EU emissions trading, the establishment of energy efficiency networks to save energy, the status quo with REACH, the crystalline silica discussion, the EU's Circular Economy Package and a glass industry best practice example.

21400/Press Release – 2018.07.06

### **Glass Focus Event Set for November 22**



**British Glass**

The British Glass-organised Glass Focus conference and awards event will take place on Thursday **22 November in Sheffield, UK**.

The annual event showcases the excellence and innovation that underpin the industry's contribution to the economy, to society and to customers, staff and stakeholders.

This year's awards dinner will be preceded by an afternoon of presentations, discussion and networking.

The afternoon conference session will focus on 'Driving manufacturing productivity with digital technology'.

The evening's 'Black Tie' awards ceremony will include a drinks reception, dinner, presentation of awards and time to celebrate together. Tickets go on sale on Thursday 19 July 2018.

Everyone with a stake in glass is invited. Each year it's a great opportunity to celebrate and network with decision makers from glass manufacturers, machinery and material suppliers, recyclers, brands and buyers, policy makers and researchers.

The media partner for this event is *Glass International*.

For more information visit [www.britglass.org.uk/glass-focus](http://www.britglass.org.uk/glass-focus)

21401/Press Release – 2018.07.10

### **Italian Glass Day 2018**



A.T.I.V. presents their annual event, which will be held in Parma on **November 23, 2018** at Santa Elisabetta Congress Centre. The 33<sup>rd</sup> Conference under the title "The Italian Glass Day" will focus on technological development in flat and hollow glass furnaces and will deal with the main topics concerning furnaces, such as the use of refractories for various types of glass and for various types of furnace; the design of furnaces intended also as control, sustainability, consumption, energy saving in furnace operation, filtration systems and treatment solutions and pertaining regulations.

The day before the conference, on November 22nd there will be a professional development course on the use of fused cast refractories for the various types of glass and furnaces, held by two experts from A.T.I.V. Board of Directors, with the presentation and support by two of the most well-known companies producing refractories.

This year for the first time since the creation of Associazione dei Tecnici Italiani del Vetro (Association of Italian Glass Technologists), A.T.I.V. have set up an award for the best research presentation in the glass sector by a young technologist or researcher under 35 years of age. To this end, the association is also accepting topics that lie outside the main focus of the conference.

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Fee reductions are being offered when more than two participants from the same company are registered.

For more information visit: <http://www.ativ-online.it/>

21402/Press Release – 2018.06.11

### Call for Abstracts for the 79<sup>th</sup> Conference on Glass Problems



The 79th annual GPC will run **November 5-8, 2018**, once again at the Greater Columbus Convention Centre in Columbus, Ohio.

The 79th Conference on Glass Problems is organized by the Glass Manufacturing Industry Council and Alfred University, and endorsed by The American Ceramic Society. Broad topics of interest include:

- Furnace design and reconstruction
- Physics and chemistry of the melting process
- Thermodynamics and reaction kinetics of oxide systems relevant to industrial glass melting
- Modeling of glass melting and processing
- Combustion and heat transfer
- Refractories
- Safety
- Raw materials: engineered, minerals, and chemicals, batching and recycling
- Forming
- Energy efficiency and management
- Environmental impact of glass
- Advanced process controls and sensors
- New topics (relevant to glass manufacturing)

The conference is the largest glass manufacturing conference in North America, and attracts glass manufacturers and suppliers worldwide to exchange innovations and problem solutions.

Co-organized by the Glass Manufacturing Industry Council and Alfred University, the conference provides expert lectures, panel discussions and focused courses and symposia, along with exhibiting and networking opportunities. True to its tagline, GPC is the conference where glass manufacturers meet. Submit your abstract today to become a part of the technical program.

More info on <http://glassproblemsconference.org>.

21403/Press Release – 2017.09.05

### StekloSoyuz: Glass and Modern Technologies – XXI Forum



The Glass and Modern Technologies – XXI Forum, taking place on **11 December 2018 in Moscow**, will focus on increasing the effectiveness of glass making: machines, equipment, control systems, raw materials, refractories, furnaces, problems and solutions, Industrial processing of sheet glass.

StekloSoyuz of Russia will be hosting the Glass and Modern Technologies at the International Industrial Academy building.

The task of the "Glass and modern technologies – XXI Forum is the analysis of the current state and prospects for the growth of the glass industry until 2025, along with the development of consumption and production, and training issues.

The International Glass Conference will provide scientific dialogue-discussions between consumers and producers, business people, scientists, teachers and practitioners of Russia, the CIS and foreign countries.

The given conference will, alongside overcoming professional difficulties, enable to achieve united efforts on precise technological parameters, successfully develop business contacts, understand technical requirements and react in due time to consumer enquiries.

Those who wish to participate in the Forum, can send their completed application to the Organizing Committee:

by e-mail: [palchikov@steklosouz.ru](mailto:palchikov@steklosouz.ru)

Tel: +7 (495) 963- 67-36, +7 (495) 411-68-40.

21404/Press Release – 2017.08.03

### GPD Finland 2019



Next year's edition of GPD Finland will be taking place **25-28 June 2019**, with the first two days dedicated to workshops, followed by the Conference, Exhibition and Step-Change.



This is the first call for papers for GPD Finland 2019. This time, we take a smarter look on the challenges the industry faces today regarding the ever-changing demands on planning of cities, building design, energy-efficiency and suitability in the environment. The buzzword out there now is smart cities and our eyes will be on how of smart glass will fit in the smart city environment.

There will be three parts – workshops, conference and exhibition.

- 25-26 June 2019 - Workshops.
  - 26-28 June 2019 - The Conference, Exhibition and Step-Change (for start-ups)
- For more information regarding the different sessions, please refer to the following links:

- All info about the 2019 call for papers: <https://gpd.fi/call-for-papers/>
- Speaking Fees: <https://gpd.fi/call-for-papers/#fees>
- Proposed Conference Sessions: <https://gpd.fi/call-for-papers/#sessions>
- Abstract review process: <https://gpd.fi/call-for-papers/#reviewprocess>
- Workshops: <https://gpd.fi/call-for-papers/#workshops>
- Exhibition: <https://gpd.fi/call-for-papers/#exhibition>

The first deadline for submitting abstracts is 21 October 2018. Abstracts received by this date will be reviewed in November. If selected, the early submission fee charged will be EUR 950. For abstracts submitted and selected after 21 October, the fee charged will be EUR 1,150.

More general info at <https://gpd.fi/events/gpd-finland-2019/>.

21405/Press Release – 2018.07.02

## PUBLICATIONS

### Focus on Russia

**Russian Glass industry eyes foreign expansion.** According to Eugene Gerden, the Russian glass industry is planning a significant increase in exports via the construction of several dedicated large-scale factories.

21406/Glass WorldWide – May/June 2018

### Focus on Indonesia

- 1) Interview of Mr. Harris Hendraka, Organising Committee Chairman of the **42nd ASEAN Glass Conference**, to be staged on 24-27 September 2018 in Indonesia.
- 2) AGC subsidiary enhances production options in Indonesia. Takeo Takei, President Director of **PT Asahimas Flat Glass Tbk** since 2016, describes the company's position as a float glass industry pioneer in Indonesia for over 45 years and discusses the company's future prospects.
- 3) The **First National Glassware Ltd. (FNG)** is a glass pioneer in South East Asia for glass tableware. The specialist Indonesian glass tableware producer's continued goal is to be a regional leader by delivering top quality glass product solutions at agreed delivery times and prices.
- 4) Continued challenges for Indonesian glassmakers. Overview of the flat glass market and the country's hollow glass sector, with an assessment of major industry developments in the past three years.

21407/Glass WorldWide – July/August 2018