

**WORLD CEMENT INTERVIEW -**  
**A CENTURY**  
**IN CEMENT**





David Bizley, Editor of *World Cement*, sat down with Daniel Julien, CEO of Fives Pillard, to discuss the company's 100<sup>th</sup> anniversary and the secrets to success in today's cement industry.

***World Cement:* What would you say were the most important moments in Fives Pillard's history?**

**Daniel Julien:** Over a century of designing and manufacturing burners and combustion systems for players in the mineral and energy markets, Fives Pillard has reached many important milestones regarding both its business development and product evolution.

Starting with our history: We are proud to celebrate the company's 100<sup>th</sup> anniversary this year. Indeed, Fives Pillard was founded in 1920 by the brothers André and Marcel Pillard and started out by manufacturing coal burners for steam locomotives. Very early on, the company opened itself to the international market with the creation of Fives Pillard Deutschland in 1957.





**Daniel Julien, CEO of Fives Pillard.**

In 1969, Marcel sold his shares in the company to Fives. This acquisition by a major industrial player gave a boost to the company development. Indeed, in 1983 Fives Pillard was able to acquire its main French competitor, Foyer Turbine, which was an opportunity to gain new technology and expertise in HRSG and oil & gas applications.

The company also continued to grow internationally with the opening of Fives Pillard España in 1988 in Spain and set foot in the Chinese market at beginning of the 1990s. Fives Pillard is strongly active in China as part of Shanghai Fives Automation & Processing Equipment Co Ltd in Beijing. In 2012, Fives Pillard extended its development in India through its subsidiary Fives Combustion Systems which is now a major player in the Indian market.

The most recent milestone in Fives Pillard's history is the launch of a brand new R&D centre in 2018. Located in Piacenza, northern Italy, Fives European Combustion Centre is an essential tool for the development of Fives' range of burners.

Additionally, Fives Pillard's history cannot be separated from its product evolution.

The company's product offer for the cement industry started during the 1950s when it began to supply its first cement kiln burners. At this time, the burners ran on oil only. On this occasion, the MY atomising system was

developed and is still the reference for oil applications in the cement industry today.

Then a gas firing kiln burner was launched. It included an adjustable nozzle system, which allowed the flame shape to be adapted to the kiln. An important step and a significant innovation at the time.

To answer the 1<sup>st</sup> oil crisis, the next evolution came with the development of a three circuit burner designed to fire pulverised coal. With this technology, which is still used today by a few burner manufacturers, the air repartition between the axial and radial circuits allows for flame shape adjustment.

Our first best seller, the Pillard ROTAFLAM® was developed at the end of the 1980s with the goal of decreasing NOx emissions from the kiln. This burner has been a market leader for 20 years and has accumulated more than 1000 references worldwide, not only in cement, but for other mineral processing applications as well.

The Pillard NOVAFLAM® arrived on the market in 2009. This burner was specifically designed for cement applications, with the aim to maximise clinker quality while allowing high alternative fuel substitution rates and limiting emissions levels. This was another huge success for Fives Pillard, with more than 600 units sold around the world since its launch.

This year, as a centennial anniversary marker, we are proud to introduce the avant-garde Pillard NOVAFLAM® Evolution to the cement industry. This is a new milestone on our ambition to provide the best products to our customers.

Customer needs are changing and new priorities are emerging – it is important for us to offer equipment and services adapted to their new demands. This new product, which combines multiple breakthrough innovations, will provide customers with increased performance in all aspects, including emissions, clinker quality, etc. It will also offer enhanced adaptability to kiln conditions with unrivalled ease of adjustment for the operators.

### **WCT: What has led to the company's success over the last 100 years?**

**DJ:** There are many conditions that have to be met for a company like ours to be successful.

The first condition is quality and durability of products.

Success comes from customer satisfaction: this is the basis – cement is a small world and company reputation is key. We are still providing services to customers who operate Fives Pillard burners that are 50 years old!

Our reliability in delivering what has been promised is recognised by our customers.

Customer proximity is also very important. If you want to market the best product, you must understand your customer's constraints and needs. With our international footprint, agent network, subsidiaries and other Fives entities, we remain close to all of our customers and are able to get regular information and feedback from their plants and operating teams.

Once you know what your customers are looking for, you need to have a large capacity for innovation. This means having experts, testing facilities and, of course, cash to finance the R&D process. This is important for remaining ahead of the market, and not just in cement, but across all the industries that Fives Pillard serves. Having a strong team of experts with significant experience in combustion and cement applications has enabled us to always quickly adapt our equipment to customer needs and cement market challenges. Fives Pillard has shown the way forward in many aspects and has often been copied by competitors as a result.

Another quality, that I personally feel is very important, is the deep sense of values. Fives Pillard is a 100-year-old company belonging to a 200-year-old group. This is a long history and there is a very strong corporate culture inside Fives, which gathers people around values, including commitment, business ethics, family spirit, and customer satisfaction.

The final aspect behind the company's success is the synergies inside Fives in the combustion business, which includes two strong and well-known combustion companies, Fives ITAS and Fives North American Combustion and in the cement

industry with Fives FCB. The ability to communicate, innovate and share applications with these companies gives our team a broader perspective.

### **WCT: What do you see as the main challenges facing the cement industry today?**

**DJ:** The cement industry of today faces multiple challenges, but there are three primary concerns.

The first is environmental compliance. Pressure to reduce emissions continues to increase around the world and cement industry players will have no choice but to reduce CO<sub>2</sub> and pollutant emissions.

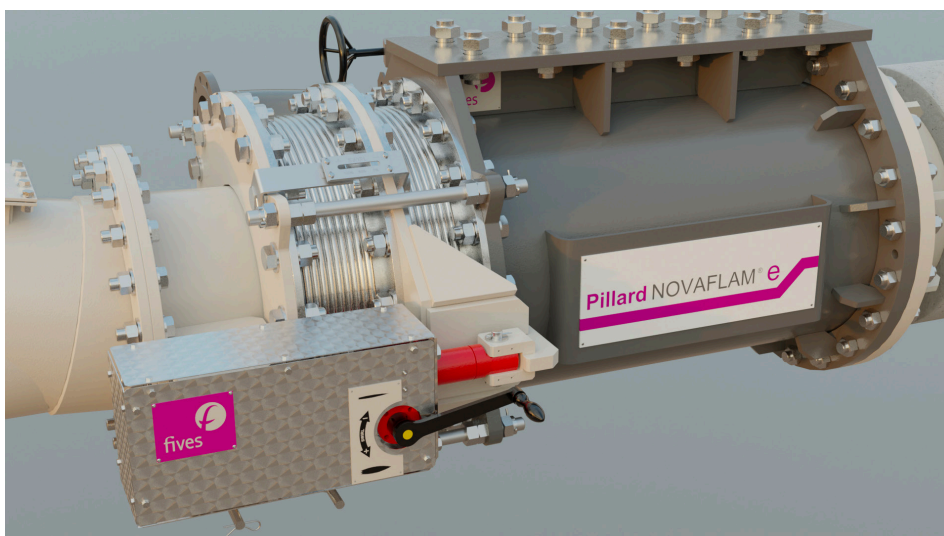
The second is global overcapacity and depressed cement demand. This has driven customers to lower the production capacity of their plants. Many are also dealing with mergers and restructuring processes. Additionally, debt repayments are taking up most of their cash supplies, which results in reduced investment capacity. This is a big challenge for the industry.

The third challenge is the reduction of skilled manpower in the plants. When we speak with customers, we find that many of them have undergone restructuring to decrease their overheads, which has resulted in the numbers of technical staff being reduced drastically. This, in turn, means that they become more dependent on outside assistance to ensure the local operating team is achieving the best possible performance.

### **WCT: How does Fives Pillard plan to deal with these challenges?**

**DJ:** We have actually been working on these challenges over the last few years and are focusing on burner performance as well as reducing the Total Cost of Ownership (TCO) of our equipment for clients.

Regarding burner performance, we are constantly working to improve our technology, so as to increase combustion efficiency, allow higher ASF rates and push down NO<sub>x</sub> emissions, while ensuring high clinker quality.



**Pillard NOVAFLAM® Evolution, the latest innovation for the cement industry.**



Higher clinker quality equals better grindability and lower energy demands. This also means that the clinker ratio can be reduced without compromising on cement quality. All these improvements, made possible by the Pillard NOVAFLAM® Evolution, will lead to a global reduction of specific consumption and result in reduced CO<sub>2</sub> emissions.

We also want our new generation of burners to be modular and give more flexibility to end users. Market conditions are changing very quickly and they can be completely different from one country to the next. It is, therefore, important to provide a high level of burner adaptability to fit changing kiln conditions and fuel mix while maintaining outstanding levels of efficiency.

We have also innovated with the development of a smart technology package, which monitors the performance of our burners, and provides assistance regarding adjustments and preventive maintenance so as to ensure that optimal efficiency is maintained throughout the burner lifetime.

Much of our efforts have also been directed towards improving burner design. We have made breakthroughs in sustainable engineering (meeting ISO 140001 standards), 3D printing components and other innovative production methods, weight reduction and the use of environmentally friendly materials. All of these elements combined make for eco-friendly burners. Throughout this development process, we have been able to count on the assistance of Fives Group specialists – our new Pillard NOVAFLAM® Evolution has received the EU Ecolabel.

We have also established a systematic 'design-to-cost' programme for our products, so as to lower both the initial CAPEX and OPEX for customers. On the financial side, we have been studying a leasing solution, including maintenance and spare parts, that would turn CAPEX into OPEX. This would allow customers to avoid initial costs, enabling them to pay back the cost of the burner as it works for them. Many customers are facing difficult financial situations, which limit their investment capability, so these kinds of solutions can bring them great value.

Lastly, we work continuously to ensure the optimal performance of our products throughout their operational lives. This is an important point for us as it is one thing to demonstrate performance immediately after commissioning, but maintaining performance throughout production and the product's lifecycle is key. With this in mind, we offer



**The Pillard NOVAFLAM® Evolution.**

significant assistance service to customers, including in-house and remote training. We have begun to use new digital tools, such as smart technology package for burners and smart glasses, in order to be closer to our customers anywhere in the world and help them develop their expertise. I think these kinds of devices will have even greater use in the future.

Indeed, the COVID-19 pandemic has proven how such technologies can be of significant benefit. We are already testing and using them to keep in touch with customers who need our expertise or assistance when it is not possible to physically send our teams.

### **WCT: What is your vision for the future?**

**DJ:** Preserving the environment has become the top priority for all of us. It is our responsibility to help our customers to reduce their carbon footprint and pollutant emissions. With this in mind, we have developed a range of solutions that include new fuel possibilities (hydrogen, syngas from biomass), oxygen combustion, and continue to investigate new paths for the future of the cement industry. We are preparing tomorrow's technology, which has to be environmentally friendly.

Additionally, global players like us must maintain worldwide coverage in order to stay close to customers. To reach this goal, we benefit from Fives' structure, which consists of more than 100 companies around the world in various industrial fields: cement, minerals, aluminium, steel, glass, intralogistics. This is a key advantage for us. We will also continue to invest in and take the lead on the kinds of technologies I mentioned earlier, in order to maintain links with customer plants and remain present among their teams.

Staying close to our customers and bringing them environmentally-friendly solutions – this is the route we are taking for the future. ■