

# Experience delivered



**One Source**

**Cement profile**

**From plant design and project management to equipment supply and commissioning, you can depend on FLSmidth for a single source of solutions**



# A tradition of leadership



### Productive and profitable plants

FLSmidth is the world's leading supplier of cement plants and technology. With well over a century of experience to draw upon, we are consistently able to design, deliver, operate, and maintain the industry's best-running plants, both large and small. Plants that give you a competitive edge through increased productivity and profitability. With an annual capacity of four million metric tonnes, Holcim's US cement plant in Ste. Genevieve, Missouri, has one of the world's largest clinker production lines. Its equipment and technology are the world's most advanced. Its operating costs and emission limits are among the world's lowest. And it was entirely designed, built and supplied by FLSmidth.

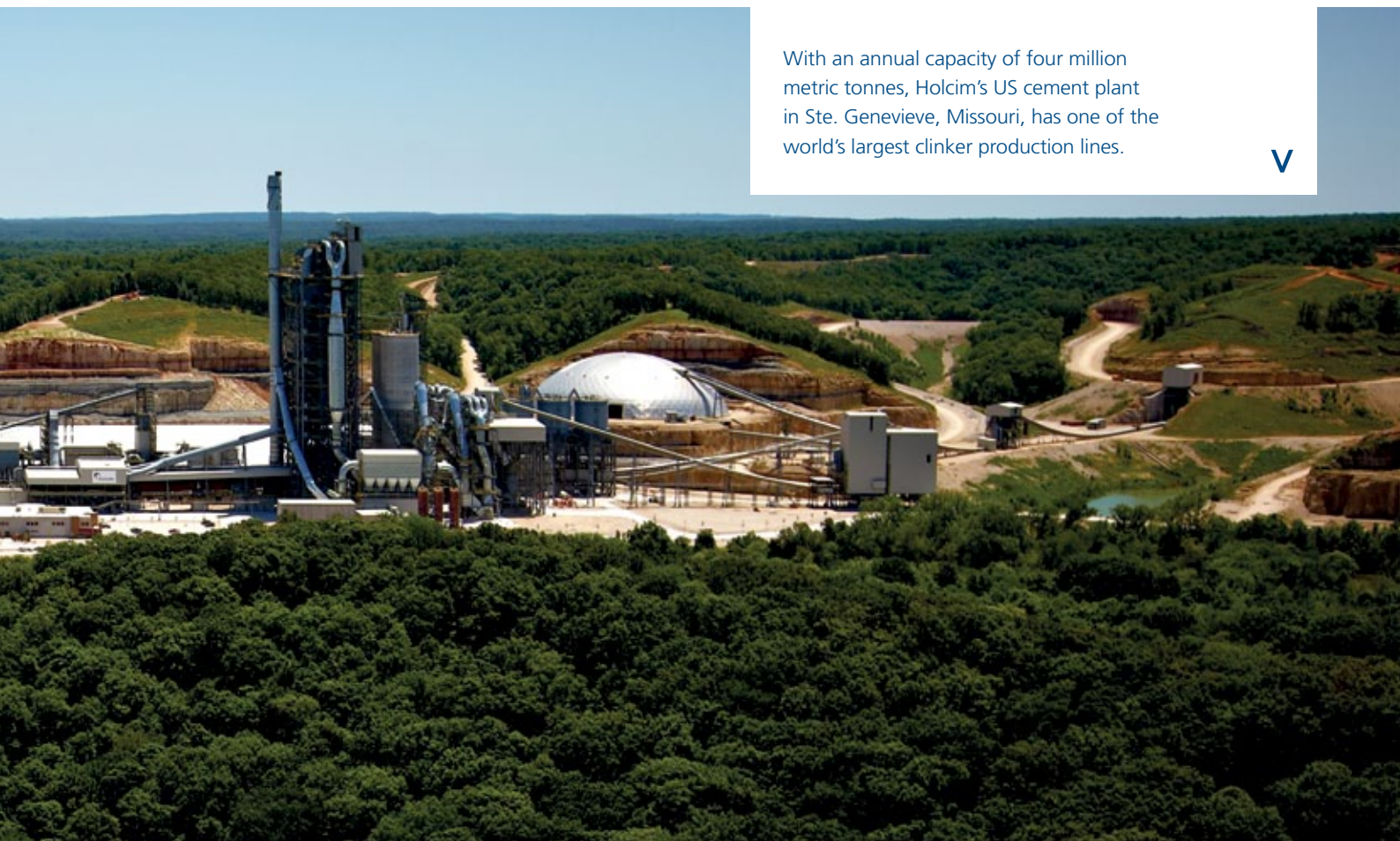
### The resources you need

The fact is, that when a big investment is on the line no other company in the cement industry offers the security we do. Because no other company can call upon and co-ordinate such a broad array of engineering resources and commercial experience. From plant design and project management to equipment supply, installation and commissioning, we offer you one source for everything it takes to design, build and operate profitable plants. And we have a long list of satisfied references to confirm our expertise – many of them the result of decades-long relationships.

### Fulfilling your ambitions

With an established reputation as a technology leader, we apply and increase our know-how every day. For well over a century, FLSmidth has been blazing new trails in the world of cement, helping the industry become leaner, greener and more profitable. At the same time, we support more than 500 plants around the world on a daily basis. With offices in 40+ countries, we're on the spot to help our customers with everything from strategic planning to overcoming everyday challenges throughout the lifetime of their plants.

What are your ambitions? Whether you want to design, supply and commission a new greenfield plant; upgrade your existing facility; or simply secure a dependable source of service and spare parts, FLSmidth has the experience you're looking for – and the ability to deliver.



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**We can also help you look far beyond startup to focus on controlling total cost of ownership through the best possible integration of all your production resources**

#### **Up and running in record time**

Time plus production resources equals success. FLSmidth can help you balance that equation by reducing time to market and lowering production costs, while still maintaining world-class quality standards. With the industry's most complete product portfolio, extensive process knowledge and proven technology, we can get your plant up and running in record time – and help you keep it running reliably and profitably. Which is exactly why FLSmidth was selected to manage, engineer and supply Grupo Cementos de Chihuahua's (GCC) US cement plant in Pueblo, Colorado. We took the plant from startup to full production in just seventy-two hours. It turns out 2,900 tonnes per day, minimises power consumption and meets Colorado's stringent emission requirements – an excellent formula for bottom-line results.

#### **Lower operating costs**

We can also help you look far beyond startup to focus on controlling total cost of ownership through the best possible integration of all your production resources. Our full range of maintenance services supports the high kiln availability your plant needs to be competitive and profitable by helping

# **A reputation for results**



you identify, prioritise and correct problems before they become a threat to production. Conversion, optimisation and expansion projects can make the difference between profit and loss for existing facilities by providing more stable production and higher availability as well as lower energy, operating and maintenance costs.

### Return on investment

FLSmidth can help you increase capacity even under challenging conditions, such as limited space, production stoppage, old and outdated equipment or new emissions requirements. Our knowledge of pyroprocessing systems, for example, enables us to provide upgrades and retrofits – with minimum disruption to existing plant operation – that lead to significant improvement in overall efficiency and economy. Whether you're seeking guidance on the economies of alternative fuels, looking to improve the performance of an individual process or want to undertake a broad upgrade of your plant, FLSmidth can help you maximise your return on investment.

### The ideal O&M partner

A comprehensive portfolio of products and services that extends from quarry management to recruitment and training also makes FLSmidth the ideal O&M (operation and maintenance) partner. With in-depth experience of all aspects of cement production, we can help plant owners raise performance in virtually every department. A fact that was recognised by Arab Union Contracting Company (AUCC) when the company decided to outsource a complex mix of O&M support for its cement plant in Zliten, Libya. The choice was not surprising, as we had designed and supplied the plant's main production equipment. Who better to keep the plant operating at peak performance? And by turning fixed costs into performance-linked variable costs, FLSmidth's O&M services present a compelling business case. Moreover – as shown in Angola where we are training 700 workers – supporting the local workforce and economy is a central principle of our O&M projects.



◀ InterCement's Ijaci plant was designed and built by FLSmidth. It has the largest kiln line in Brazil and today regularly produces more than 100% of projected capacity.



**With three global support centres and a strong local presence in more than 40 countries, we ensure that you're never far away from qualified timely assistance**

### **Research & development for your needs**

For more than a century, FLSmidth has been an incubator of new ideas for the cement industry. A steady stream of new products keeps us firmly in place as the global technology leader, and we have the industry's most robust pipeline of innovations under development. These include products and services to help you reduce energy consumption; increase plant efficiency, capacity and availability; and make it simpler to operate complex cement plants. We maintain the largest R&D operation in the business, and with centres in Denmark, the US and India we are able to develop and test new solutions where they count most – close to the markets that are important to you. In fact, our R&D centres will work directly with you to develop solutions to address your specific needs.

### **Less energy, lower emissions**

Our innovations in areas as diverse as materials handling and milling technology have a significant impact on the everyday realities of running a cement plant. Among the most important of these are new solutions to reducing energy consumption and lowering emissions. Due to rising energy

# A stream of ideas

## **Capabilities delivered**

- ▾ Plant design
- ▾ Greenfield plants
- ▾ Brownfield plants
- ▾ Project management
- ▾ Commissioning
- ▾ Process departments/machines
- ▾ Upgrades
- ▾ Retrofits
- ▾ Training
- ▾ Support
- ▾ Equipment supply
- ▾ O&M (operation and maintenance)



costs and ever stricter energy and environmental regulations, alternative fuel technology is becoming an important factor in controlling costs for many cement producers. Our Alternative Fuels department is pioneering new ways of doing exactly that – and setting new standards for alternative fuel use.

### Flexible financing assistance

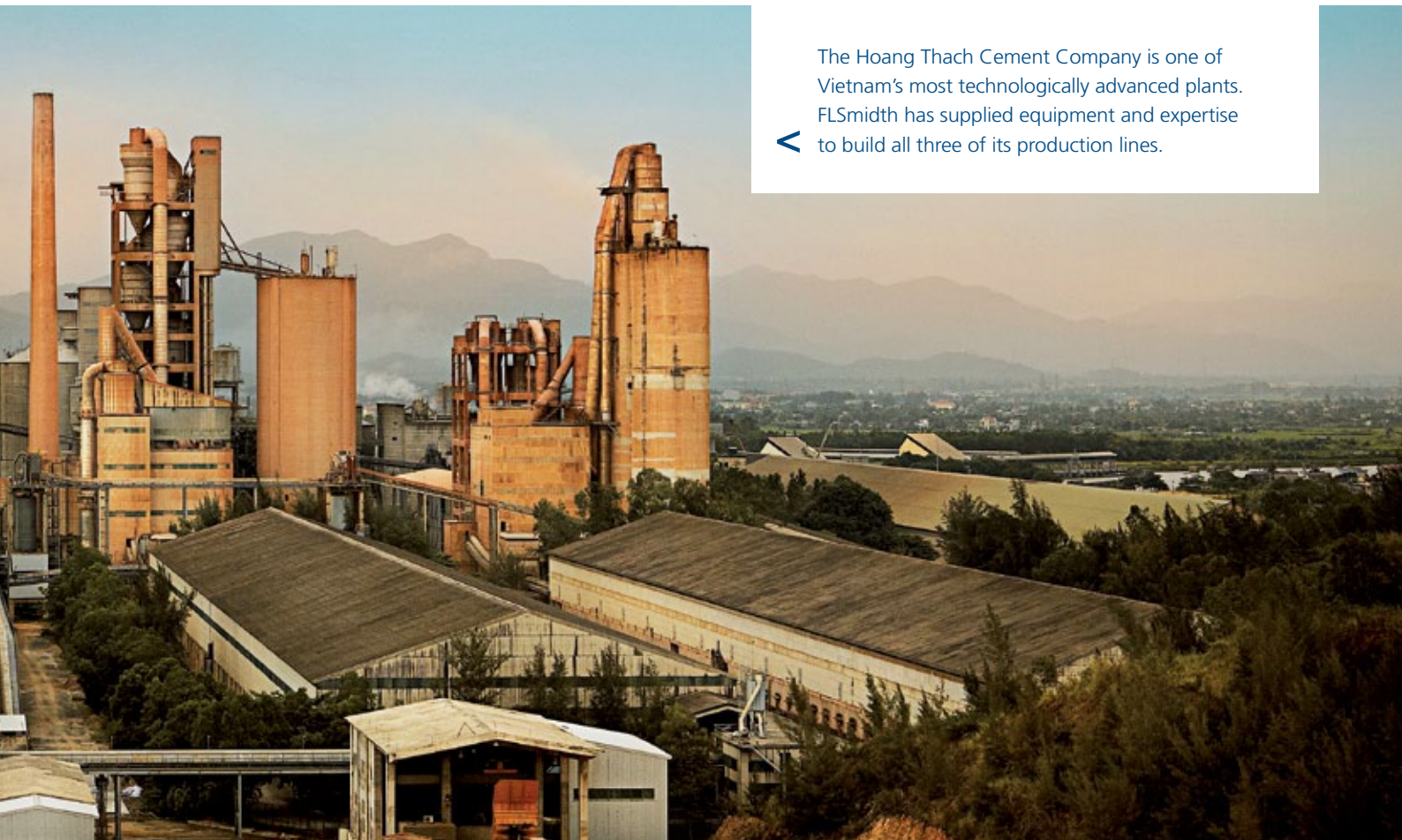
New ideas take many shapes. At the same time that we maintain the industry's most forward-looking R&D programme, FLSmidth also concentrates on innovative ways of helping you with all phases of the business of building and operating cement plants. Need financing assistance to get a new plant off the ground? We have a widespread network of contacts with banks and multi- and bilateral financial institutions. Need a reliable supply of spares, or expert advice about reaching long-term business goals? With three global support centres and a strong local presence in more than 40 countries, we have more people on the ground in more places than any other supplier. All there to ensure that you're never far away from qualified timely assistance.

### One reliable source

All of which makes it easy to look to FLSmidth as a single source for all of your cement plant requirements – from startup to aftermarket. From a fast, dependable supply of parts to management outsourcing to world-class training and seminars, we have the expertise to help you build, maintain and operate your plant more efficiently and more safely. In the end, our experience and know-how add up to something you simply cannot find anywhere else – an unmatched level of security and reliability. No small thing in an increasingly challenging world.



The Hoang Thach Cement Company is one of Vietnam's most technologically advanced plants. FLSmidth has supplied equipment and expertise to build all three of its production lines.



## One Source

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