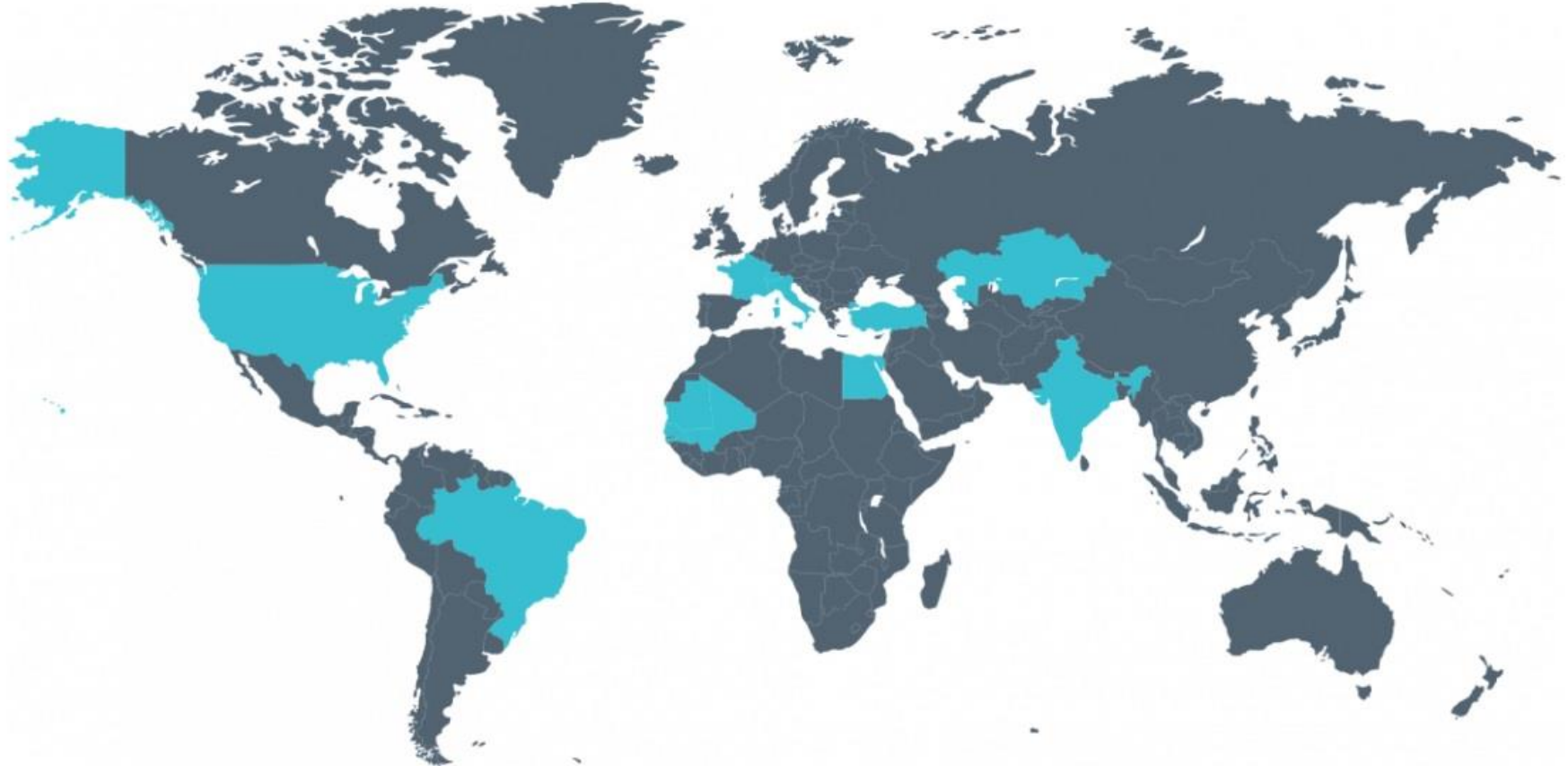


ÇÖZÜM
Endüstriyel Atık İşleme
Sanayi ve Ticaret A.Ş.

VICAT IN THE WORLD



France (4.6 Mt), Switzerland (0.9 Mt), Turkey (4.8 Mt), India (8.5 Mt), Italy (0.5 Mt), United States (2.6 Mt), Brazil (3.2 Mt), Kazakhstan (1.5 Mt), Egypt (3.6 Mt), Senegal (3.4 Mt), Mali (0.8 Mt), Mauritania (0.5 Mt).

VICAT IN THE WORLD



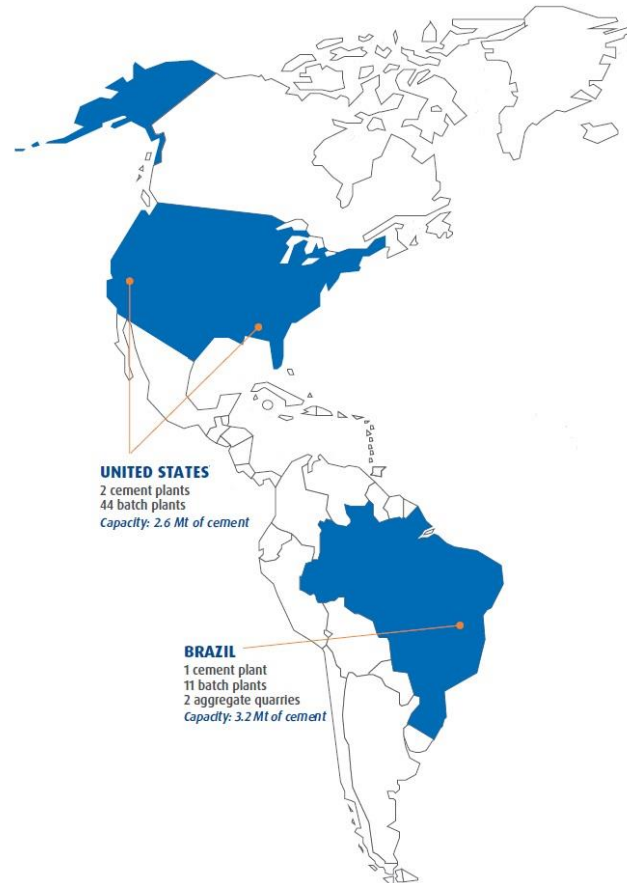
16
cement plants

5
grinding plants

35
million tonnes
of cement capacity

259
concrete
batching plants

70
aggregate quarries



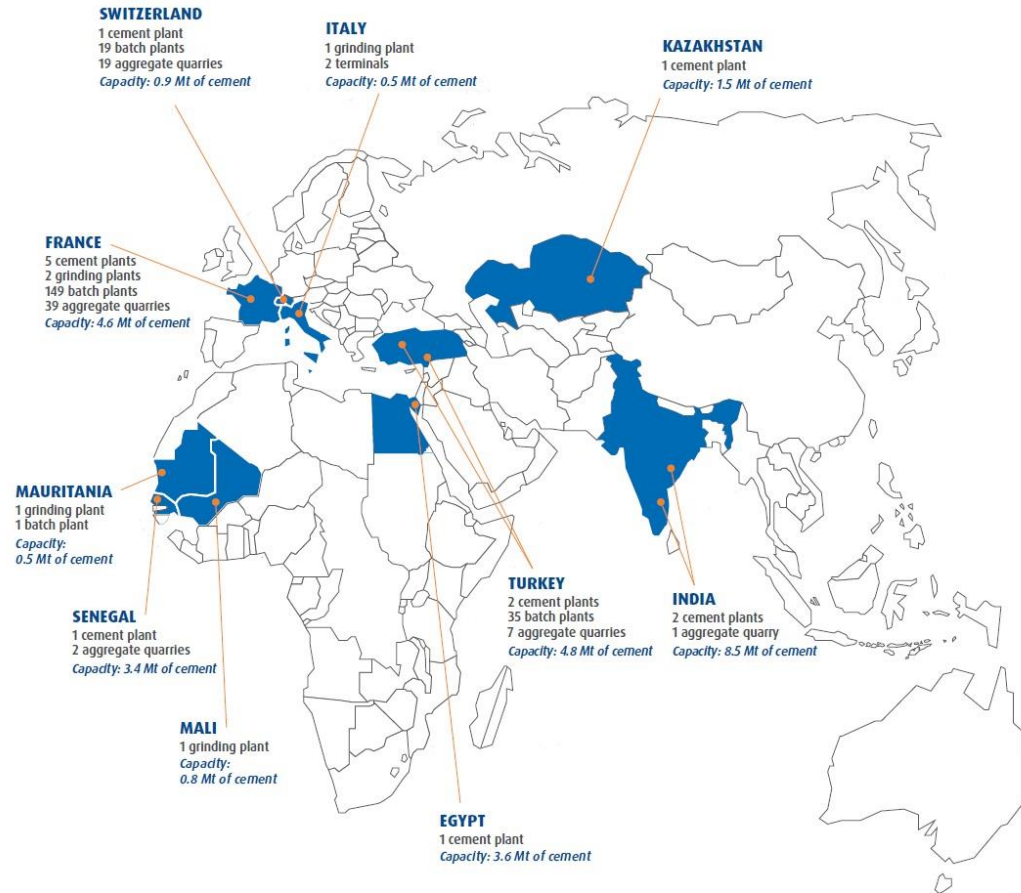
€2,740 M
sales revenues

9,947
employees

3 business
segments
Cement,
Concrete & Aggregates,
Other Products & Services



VICAT IN THE WORLD



12 countries
where Vicat
operates

22.4
million tonnes
of cement

9.1
million m³
of concrete

23.0
million tonnes
of aggregates

VICAT IN THE WORLD



Country	Cement	Concrete & Aggregates	Other Products and Services
France	▼	▼	▼
Switzerland	▼	▼	▼
Italy	▼		
United States	▼	▼	
Brazil	▼	▼	
India	▼	▼	▼
Kazakhstan	▼		
Turkey	▼	▼	▼
Egypt	▼		
Senegal	▼	▼	
Mali	▼		
Mauritana	▼	▼	

VICAT IN THE WORLD



- ▼ **1817, Louis Vicat** invented **artificial cement** and his invention was **authenticated** by the *Académie des Sciences* in 1818.
- ▼ **1853**, Construction of the Group's **first cement factory** at *Le Genevrey*.
- ▼ **1974**, The Group began to **expand abroad**, focusing initially on the United States.
- ▼ **1991-1994**, Acquisitions of **Konya Cement** in Konya and **Bastas Cement** in Ankara Turkey.
- ▼ Vicat Group has **16 cement** plants, **5 grinding** plants, **259 concrete batching** plants in the world.
- ▼ **Growing** with new facilities and investments amongst the World.

VICAT'S ENVIRONMENT PERSPECTIVE



- ▼ Vicat **reduced its CO2 emissions** in France by **15%** per tonne in **2019** compared with 1990.
- ▼ The Group has a **vision** to cut emissions across its whole current consolidation scope by **13%** until **2030** compared with 2019.
- ▼ Within this scope, Vicat gives specific importance on the following subjects:
Energy efficiency, low-carbon electricity production, reduction of fossil fuel use, reduction of clinker rate in cement, circular economy, capture of CO2 emitted in production and digital transition.

VICAT'S R&D&I PERSPECTIVE



- ▼ Vicat's **Research, Development and Innovation** resources housed in the **Louis Vicat Technical Center** in France.
- ▼ **Sigma Béton** as a key unit of Louis Vicat Technical Center, specializing in ready-mixed concrete, aggregates and road products sectors, and certified ISO 9002 for the formulation, analysis and audit of aggregates, cement and concrete.
- ▼ A new **R&D&I Center** is being established in **Vicat Group Turkey** at Bastas Cement Plant.
- ▼ Mainly focused subjects for research, development and innovation:
Material science with modern technologies, development of the **product quality, innovative compounds and techniques** for construction industry, environmental challenges such as **protecting natural resources** and **reducing CO2 footprint, recyclability** of materials, **industrial symbiosis** with zero waste approach, **digitalization of process, sustainability** etc.

VICAT GROUP TURKEY



- ▼ **Turkey** is the **largest** cement manufacturer country in **Europe** and **5th** largest in the **World**.
- ▼ Turkey is the **second largest** cement manufacturer country **among Vicat Group** which has a total production capacity of 34.9 Mt per year.
- ▼ **Bastas Cement** and **Konya Cement** together have a cement production capacity of **4.8 Mt** per year.
- ▼ The Group has supplemented its operations in Turkey with activities in Ready-mixed Concrete & Aggregates by operating **35 concrete batch** plants, **7 aggregate quarries** and **1 lime production plant** (300t/d) which is located near Bastas Cement plant.

VICAT GROUP TURKEY



Distribution of the facilities over Mid-Anatolia.



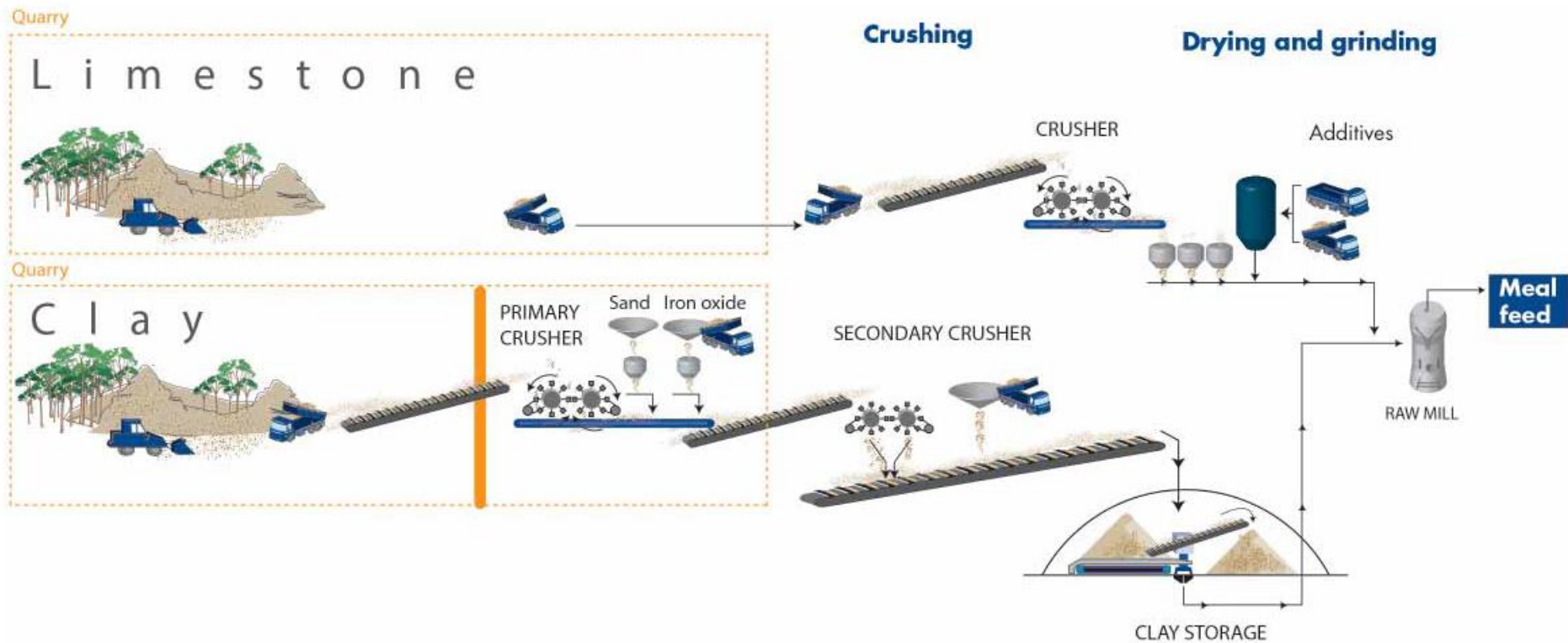
BASTAS CEMENT



BASTAS CEMENT



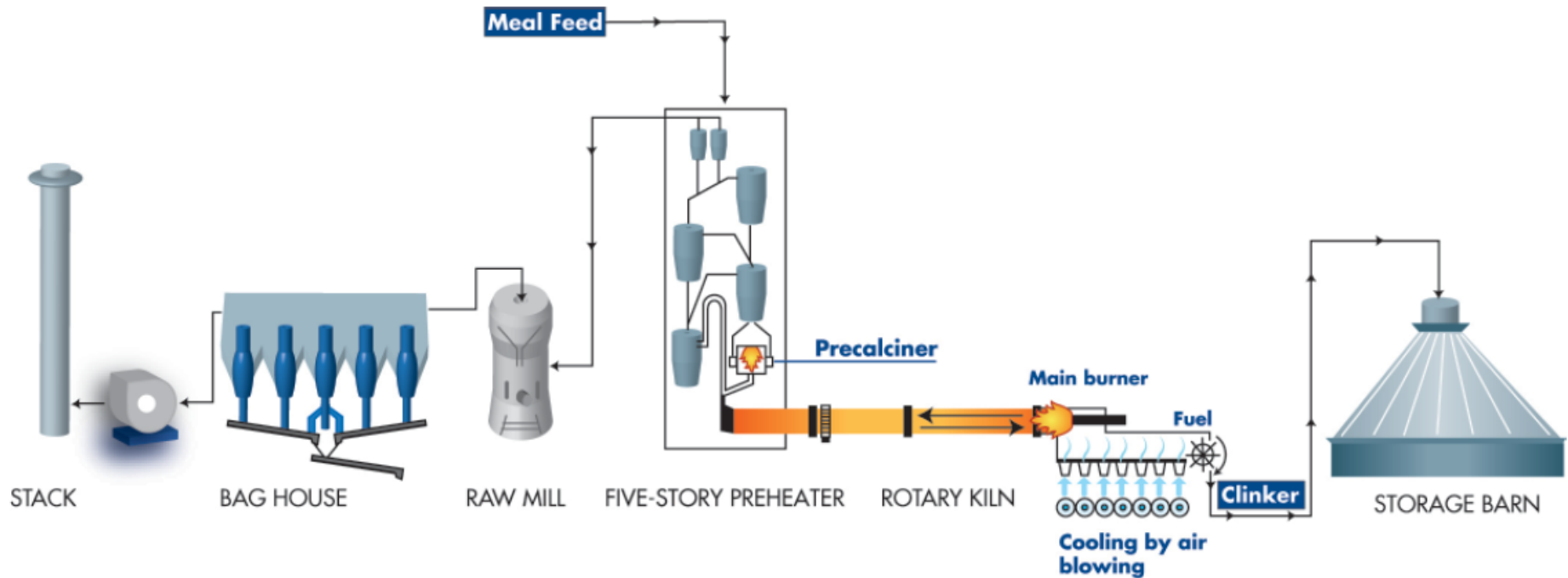
General cement production layout



BASTAS CEMENT



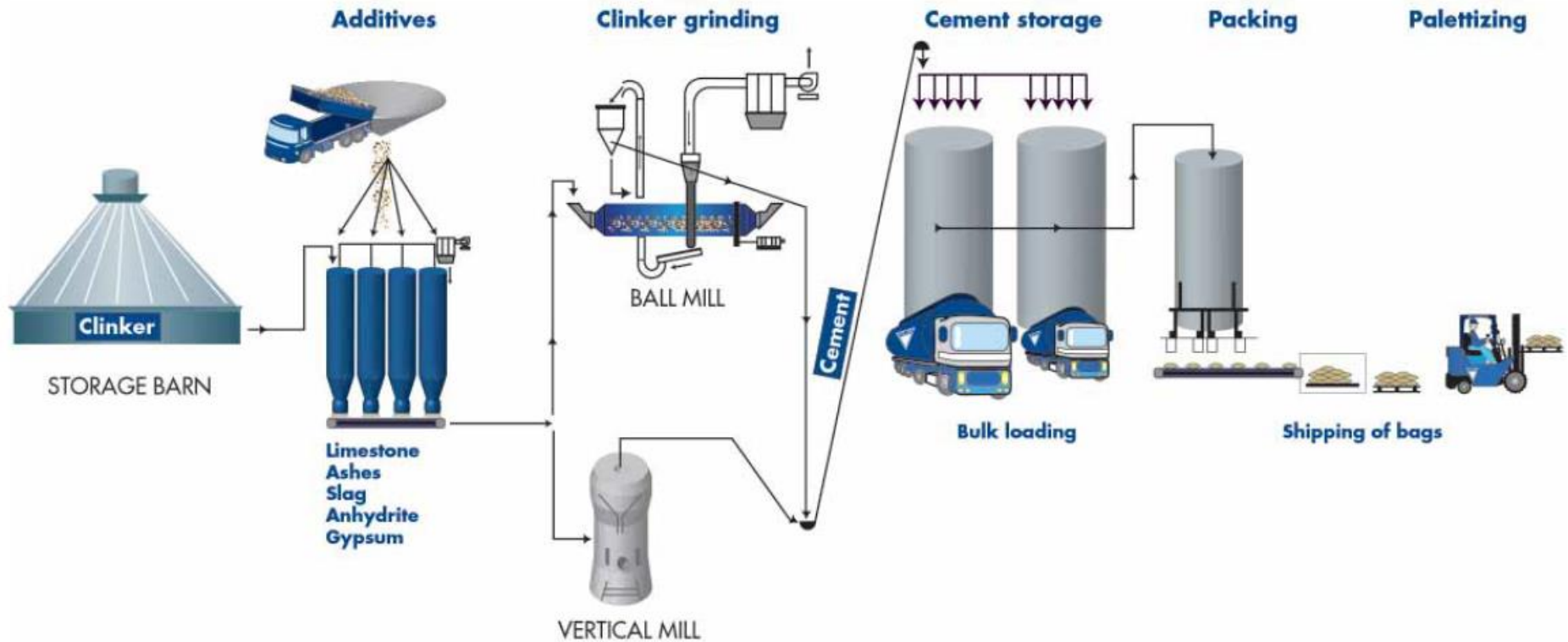
General cement production layout



BASTAS CEMENT



General cement production layout



BASTAS CEMENT



Raw Meal

- ▼ 2 crushers, 1250 t/h
- ▼ Circular preblending, 1000 t/h
- ▼ Ball mill and 2 vertical raw mills, 640 t/h
- ▼ Blending silos,
 - ❖ 2 batch silos 4000 t
 - ❖ 2 stock silos, 7200 t



BASTAS CEMENT



Fuels

Coal

- ▼ Bowl mill, 11t/h
- ▼ Ball mill, 22t/h petcoke and 35t/h lignite

Bastas has an alternative fuel burning capacity of up to **65%** in mass.

RDF

- ▼ 3000 m3 Stockhall
- ▼ 40 t/h Belt feeder

Shredded and whole tyres

- ▼ Tyres shredder, 5t/h



BASTAS CEMENT



- ▼ In the scope of Vicat's vision of **protecting environment** and **natural resources**, Bastas Cement is one of the leading cement manufacturers in Turkey regarding using **alternative fuels** (up to **65%** in mass) such as RDF (Refuse-derived fuel) and shredded/whole tyres.
- ▼ **Cozum** is a dedicated company in Vicat Group Turkey to carry out **laboratory tests** and **waste processing** to be used as secondary fuel at Bastas Cement's operations.
- ▼ Cozum is **licensed** for more than **100 types of wastes**. The wastes are mainly **impregnated packaging materials**, **automotive residue** (filters, plastic parts, etc.), **industrial process sub-products** (sludges, textile, rubber, etc.).

BASTAS CEMENT



Clinker Production

Kiln 1

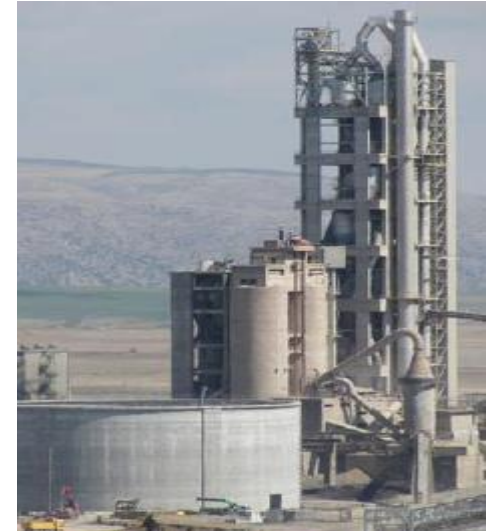
- ▼ 4m diameter, 58m length
- ▼ 2000 t/d production capacity

Kiln 2

- ▼ 4.8m diameter, 68m length
- ▼ 5000 t/d production capacity

Storage

- ▼ Covered storage: 150,000 t capacity



BASTAS CEMENT



Cement Grinding

- ▼ BK1, Roller Press and Ball Mill 180 t/h
- ▼ BK2, Roller Press and Ball Mill 180 t/h
- ▼ BK3, Roller Press integrated Ball Mill 135 t/h



BASTAS CEMENT



Storage and Packing

- ▼ 4 cement storage silos, total capacity of 30,000 t
- ▼ 4 x 16 spouts packing unit, total capacity 400t/h



BASTAS CEMENT



Besides the production capabilities, Bastas Cement and the Group facilities have various **laboratories** capable for the **characterization** and **performance** studies of **cement, concrete, aggregate, raw materials** and **fuels**:

- ▼ Cement and Concrete Tests Lab.
- ▼ Chemical Tests Lab.
- ▼ Mineralogy Lab. (XRD and Polarized Microscope)
- ▼ Waste and Alternative Fuels Lab. (Cozum)
- ▼ Aggregate Tests Lab. (Tamtas)
- ▼ Lime Tests Lab.

KONYA CEMENT



KONYA CEMENT



Raw Meal

- ▼ 2 crushers, 475 t/h
- ▼ Dryer crusher, ball mill and vertical raw mill, 340 t/h
- ▼ Blending silos:
 - ❖ 2 batch silos, 2400 t
 - ❖ 2 stock silos, 3200 t
 - ❖ 1 silo, 8000 t



KONYA CEMENT



Fuels

Coal

- ▼ 1 Krupp mill, 7t/h
- ▼ KHD mill, 20t/h

Konya Cement has an alternative fuel burning capacity of up to **55%** in mass.

RDF

- ▼ 2000 t non-shredded storage capacity
- ▼ 3500 t shredded storage capacity
- ▼ Shredding capacity 12 t/h

Shredded and whole tyres

- ▼ Tyres shredder, 11 t/h
- ▼ Conveying system, 5t/h



KONYA CEMENT



- ▼ In the scope of Vicat's vision of **protecting environment** and **natural resources**, Konya Cement is also one of the leading cement manufacturers in Turkey, like Bastas Cement, regarding using **alternative fuels** (up to **55%** in mass) such as RDF (Refuse-derived fuel) and shredded/whole tyres.
- ▼ Cozum also offers its services to Konya Cement.

KONYA CEMENT



Clinker Production

Kiln 1

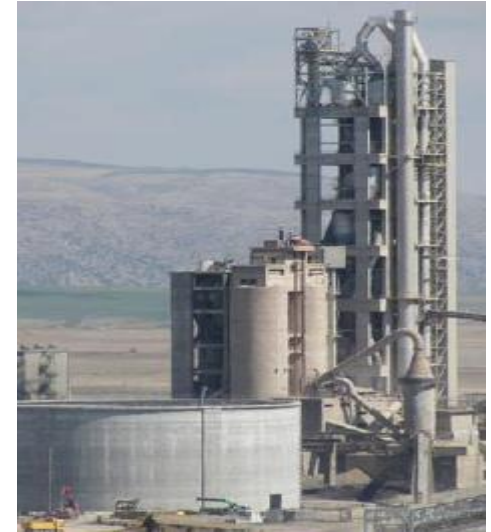
- ▼ 4.2m diameter, 60m length
- ▼ 2,000 t/d production capacity

Kiln 2

- ▼ 4.0m diameter, 58m length
- ▼ 2,600 t/d production capacity

Storage

- ▼ Covered storage: 150,000 t capacity

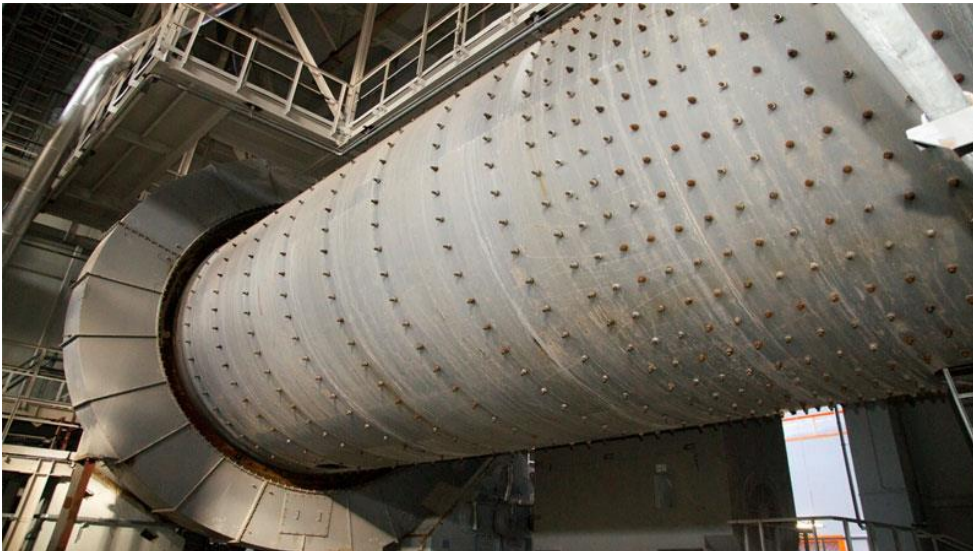


KONYA CEMENT



Cement Grinding

- ▼ Krupp Mill, 20 t/h
- ▼ Roller Press and Ball Mill 115 t/h
- ▼ 2 Horomills, 150 t/h



KONYA CEMENT



Storage and Packing

- ▼ 11 cement storage silos, total capacity of 27,500 t
- ▼ 4 x 12 spouts packing unit, total capacity of 400t/h
- ▼ 2 Big-Bags filling unite, total capacity of 75t/h



KONYA CEMENT



Besides the production capabilities, Konya Cement also has various **laboratories**, like Bastas Cement, capable for the **characterization** and **performance** studies of **cement, concrete, aggregate, raw materials** and **fuels**:

- ▼ Cement and Concrete Tests Lab.
- ▼ Chemical Tests Lab.
- ▼ Mineralogy Lab. at Bastas
- ▼ Waste and Alternative Fuels Lab. (Cozum)
- ▼ Aggregate Tests Lab. (Tamtas)

RESEARCH, DEVELOPMENT AND INNOVATION



- ▼ Bastas and Konya Cement, participated a total of **8** in Project proposals in H2020, Green Deal, ERA-Net and Newton Fund Programs. Besides these, we will continue to take part in **Horizon Europe, Processes4Planet (SPIRE) and Eureka** Programs for research and innovation actions by merging our **industrial** capability and experience, with the **culture** of **R&D** and the **vision** of **Innovation**.
- ▼ For the protection of environment by **reducing CO2 footprint** and **consumption of natural resources**, Bastas and Konya Cement pay special attention on **CCUS** and **Industrial Symbiosis** subjects with **zero carbon footprint** and **zero waste** approaches in a closed loop system.
- ▼ To support these approaches and for modernization of our facilities and technologies, we also focus on **Sustainability, Digitalization** and **Energy** subjects as a current user of **Automation/Tracing Systems** and **Waste Heat Recovery** systems on production process.



RESEARCH, DEVELOPMENT AND INNOVATION



- ▼ Besides the technical studies and demonstrations, Bastas and Konya Cement are capable to strongly support the dissemination activities of the projects.
- ▼ As the part of VICAT Global, Bastas and Konya Cement have a very broad range of communication network can reach hundreds of people, entities and organizations.
 - VICAT Group: 21 Cement plants in 12 countries
 - European associations and research organizations such as Cembureau, ECRA etc. through the membership of Turkish cement and concrete associations
 - Collaboration network in international and national Horizon 2020, SPIRE, ERA-Net projects
 - Commercially collaborated international and national companies.



THANK YOU

Çağatay Alp ARSLAN

VICAT Group Turkey R&D&I Chief

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