

Fives Group

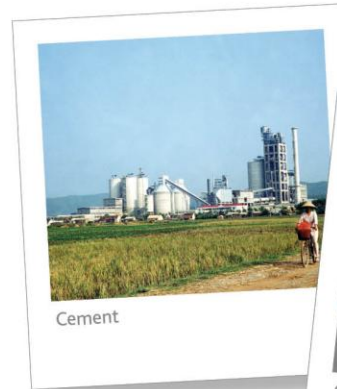
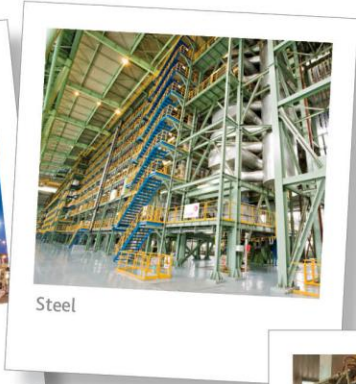
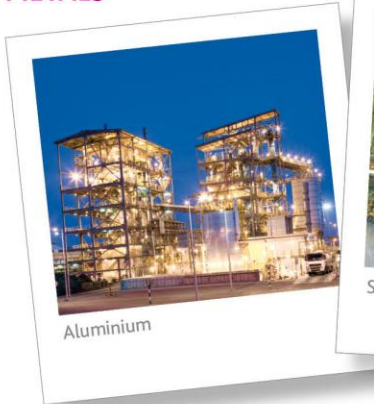
Industrial waste heat recovery capabilities

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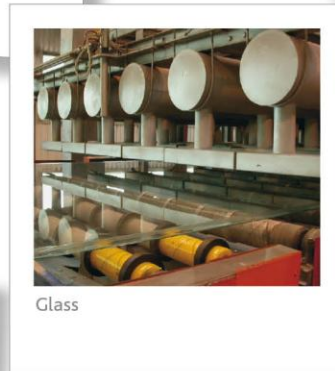
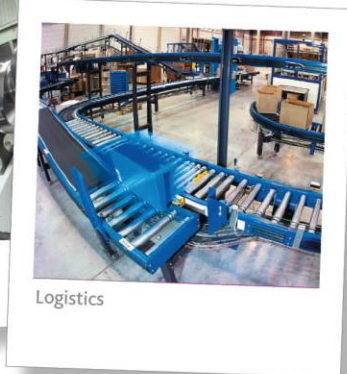
METALS



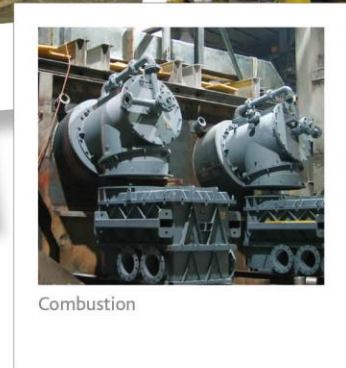
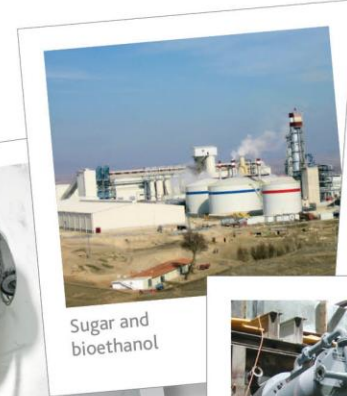
CEMENT



AUTOMOTIVE & LOGISTICS



ENERGY



→ Fives designs and supplies process equipment, production lines and plant facilities



Hermosillo plant, Mexico
(Fives FCB for Holcim)

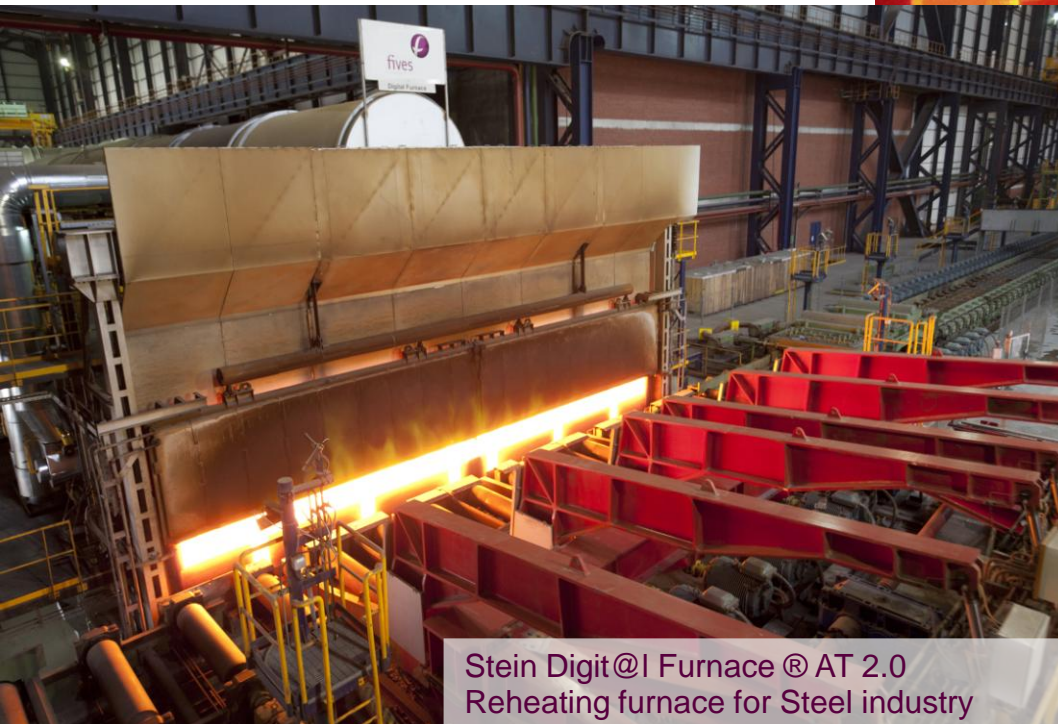
Sohar aluminium plant, Oman
(Fives Solios for Rio Tinto Alcan)



Furnaces and process lines



Glass industry – tin bath

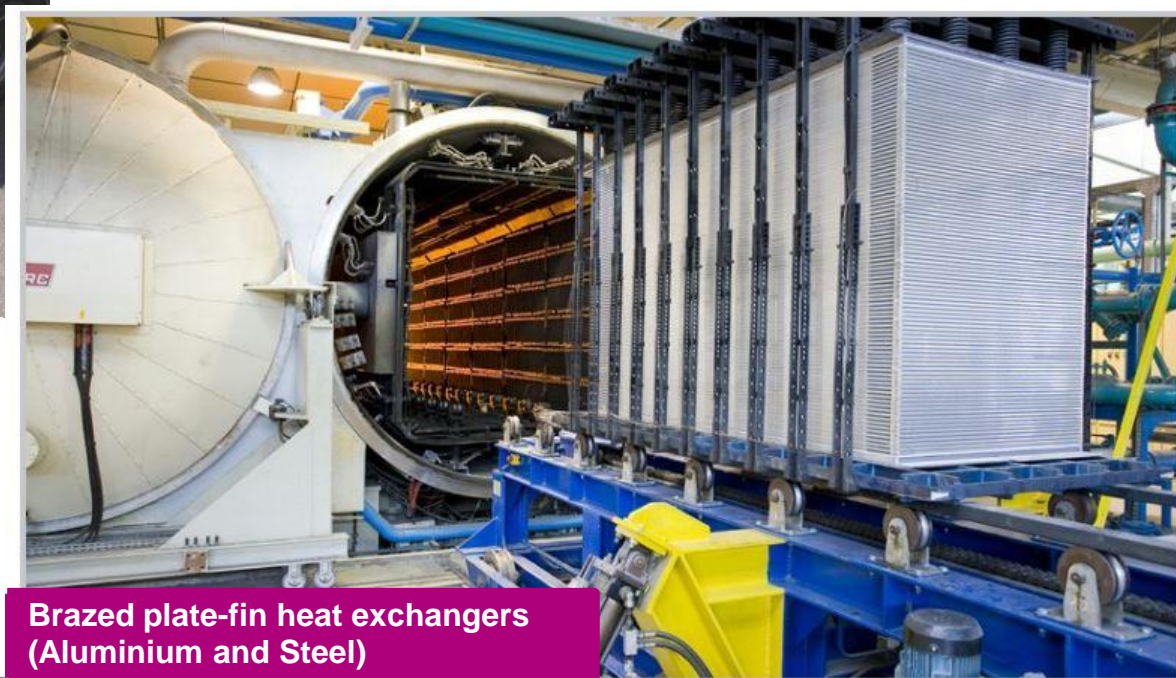


Stein Digit@I Furnace ® AT 2.0
Reheating furnace for Steel industry

Equipment



**Pillard NovaFlam
– burner for cement plants**

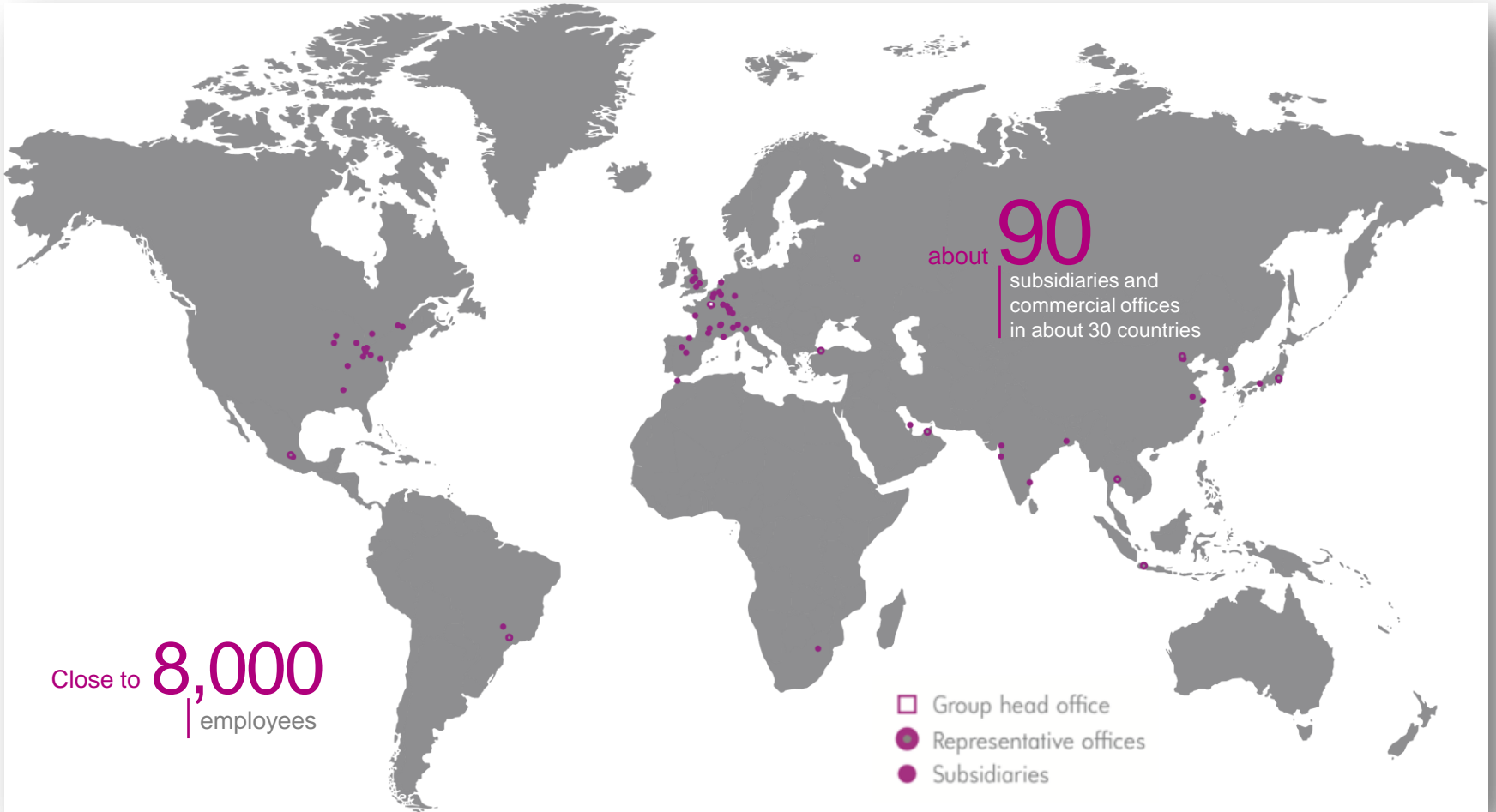


**Braided plate-fin heat exchangers
(Aluminium and Steel)**

Fives,



an international organization based on a worldwide network of subsidiaries



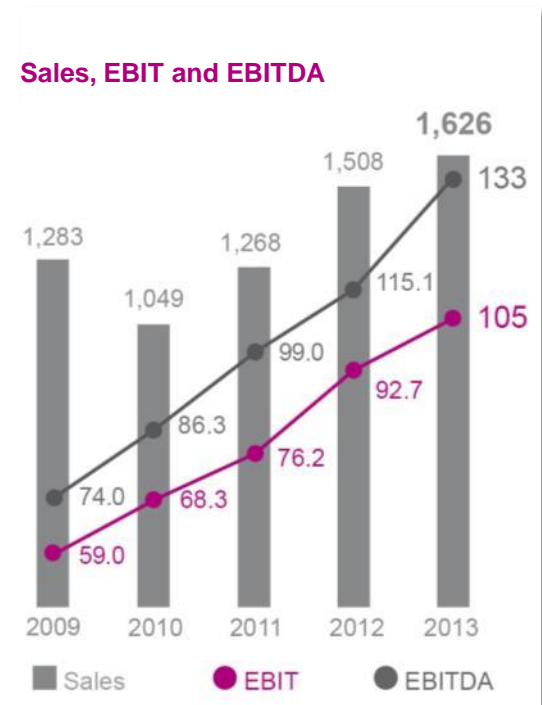
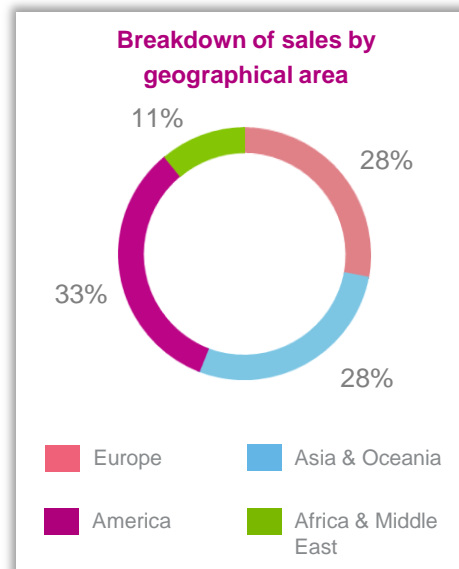
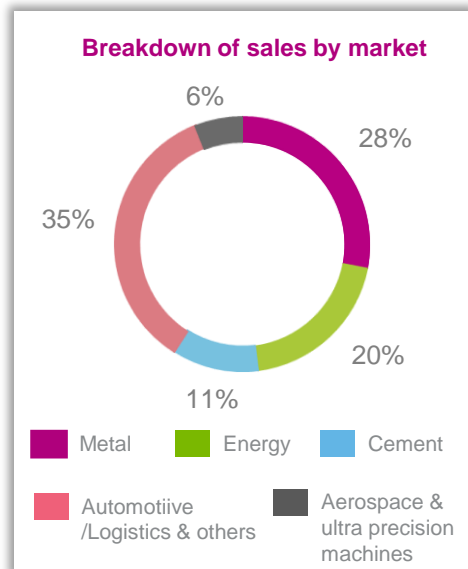
Key figures



€133 million
of EBITDA

€1,626 million
of sales

€242 million
closing net cash position



- **Best-in-class environmental technologies**

- **Company-wide eco-design program**



- **R&D:**

- Energy storage
- Energy flexibility / demand response
- Waste Heat Recovery (WHR)

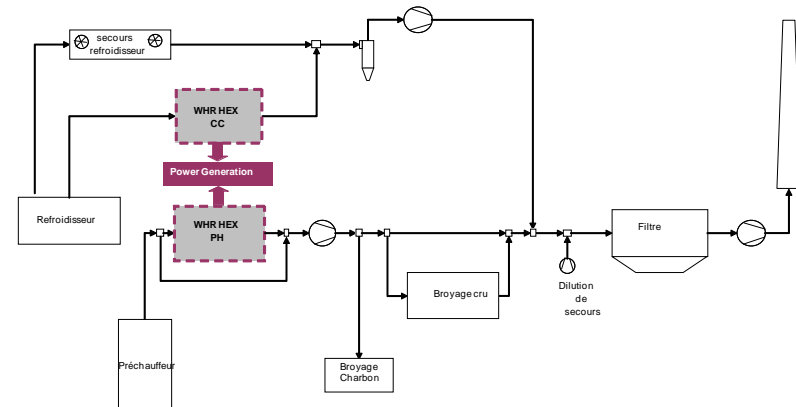
Current waste heat recovery (WHR) activities

Industrial projects:

- Energy recovery unit for liquefied natural gas vaporization
- Heat exchanger for aluminium pot gases validated in Bahrein and Norway

R&D:

- 3 patents in Cement industry
- Partnership with CEA



Fives' added value = process modifications to integrate WHR:

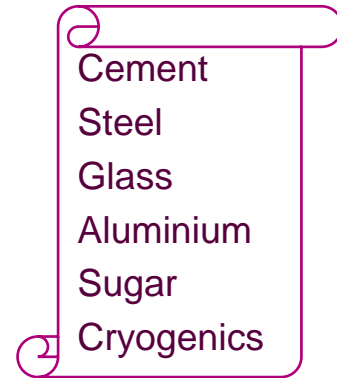
- optimize WHR cycle → optimize the whole plant
- maintain quality of production and plant availability

Fives' contribution in a Waste Heat Recovery project under EE18



• **Multi-industries:** cross-sectorial in essence

• **Unbiased** towards WHR technology choice



• **Process integration expertise**, as the original equipment manufacturer and plant designer

• **Committed to eco-design and overall optimisation** (process + WHR system as a whole)



Fives is interested to join waste heat recovery consortiums, especially those addressing process variability/flexibility issues



fives ultimate machines
ultimate factory

Contact:

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