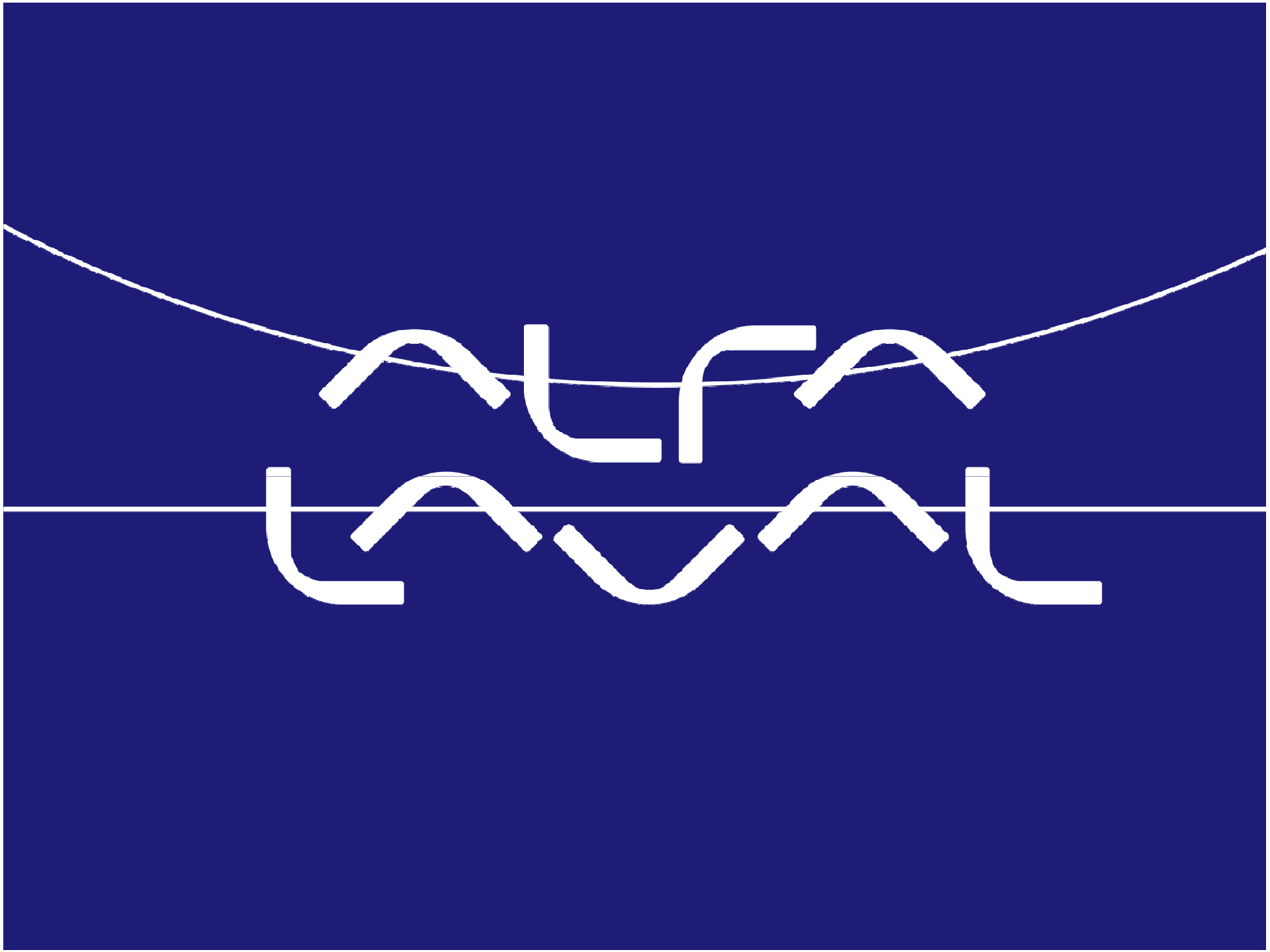

ALFA
LAVAL

Refinery

Mats Skogman
Segment Manager
Process Industry

The hydrocarbon chain

Gas production

75%

Electricity

Petrochemical processing

Consumer products

Oil production

Oil refining

Transport Heating

80%

An oil refinery

Crude oil

Refinery

- Fractionation
- Conversion
- Treatment

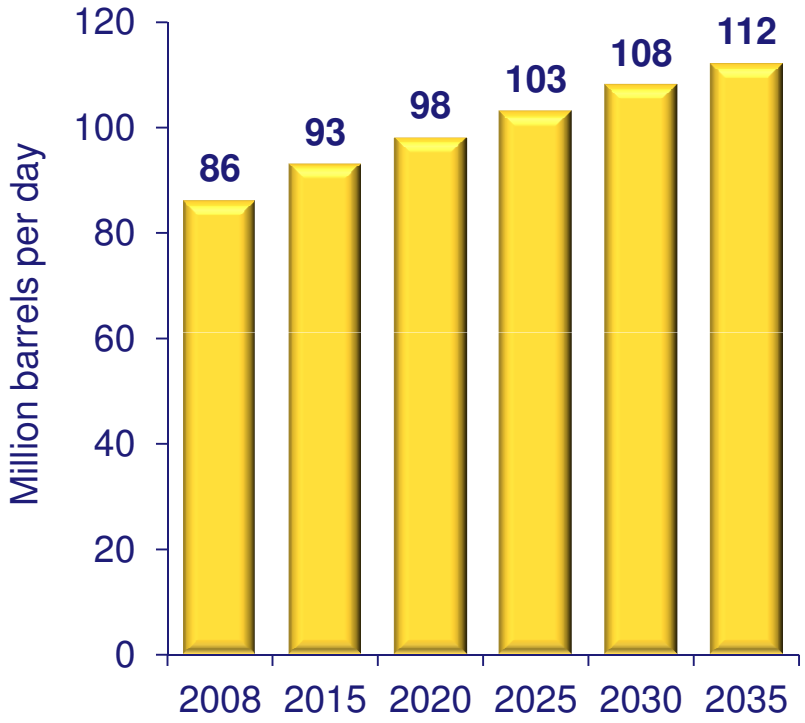
- LPG
- Gasoline
- Jetfuel
- Diesel
- Heavy fuel oil
- Coke & asphalt

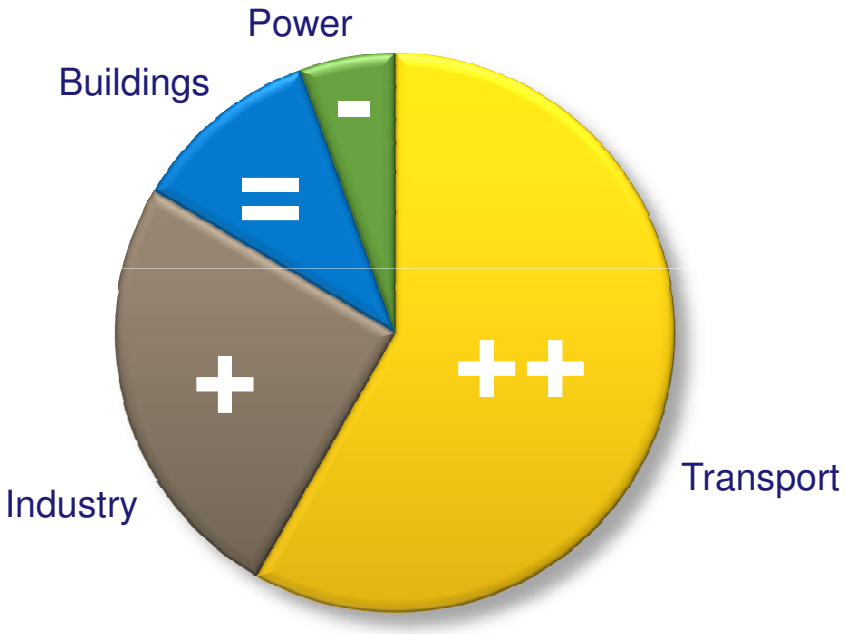
Light products

Heavy products

Investment drivers

The demand for fuels creates long term platform for growth

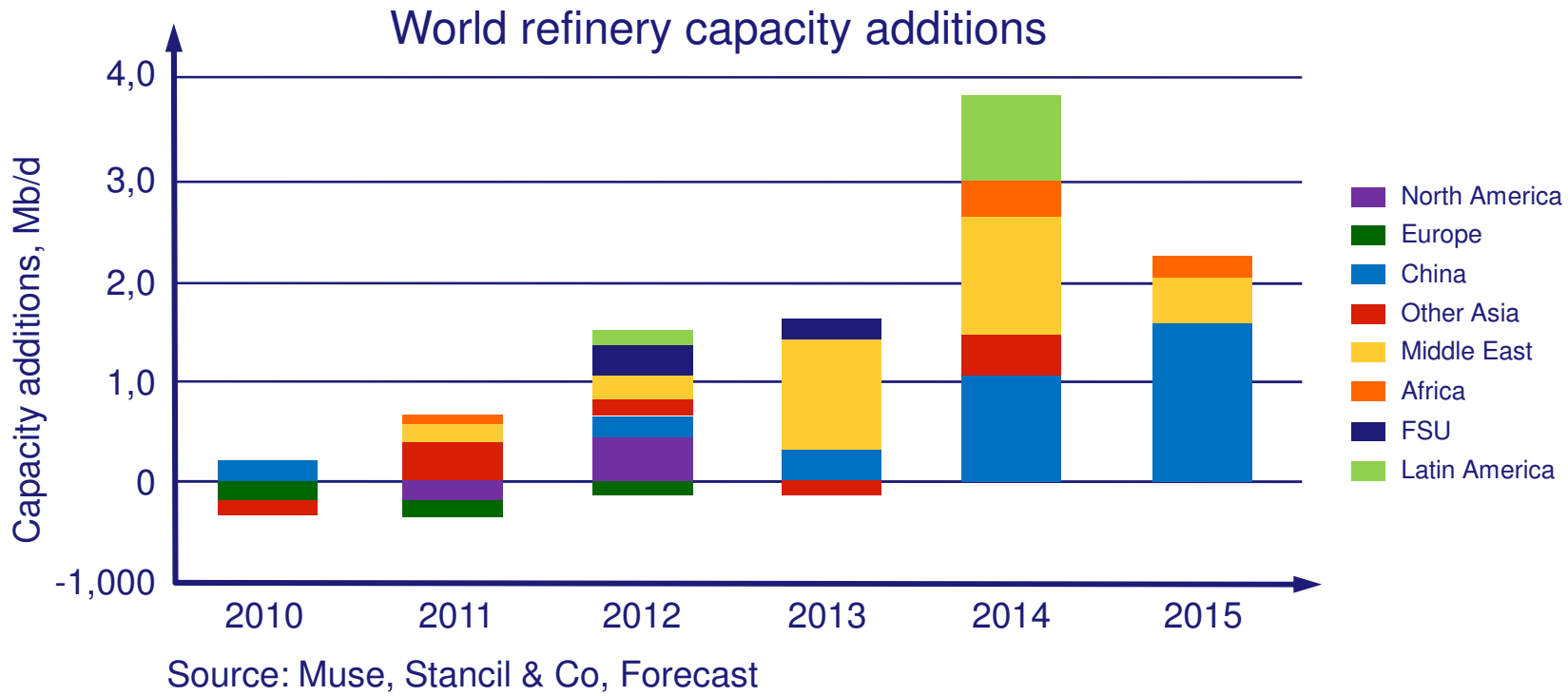




International Energy Outlook 2011. Release date: September 19, 2011.

Investment drivers

New capacities added in China, M.E. and Brazil



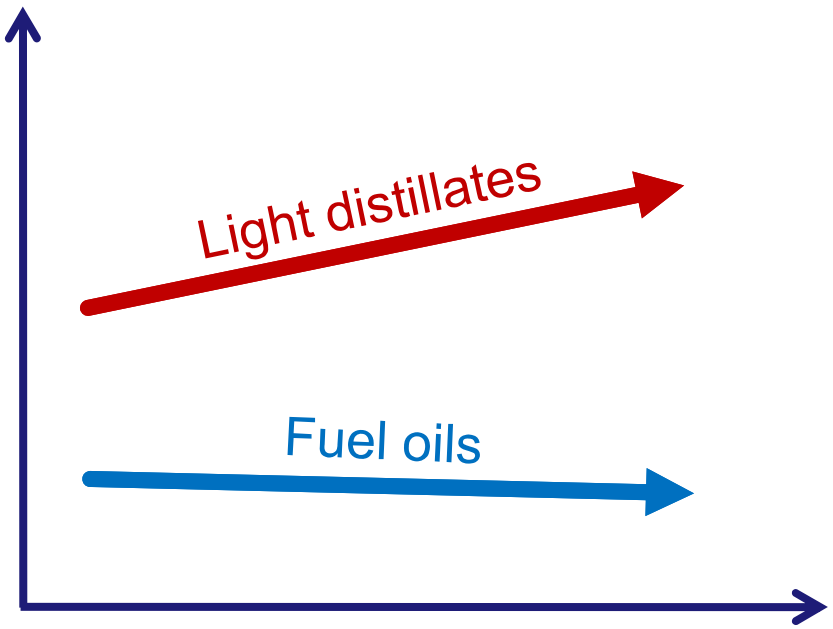
Source: Muse, Stancil & Co, Forecast

Investment drivers

End product demand is shifting

* Flat development in fuel oil demand
* Strong increase in gasoline and diesel demand

* Strong drive for conversion projects



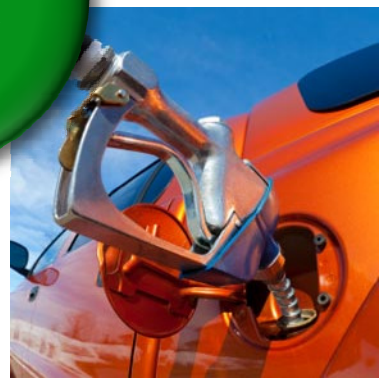
Investment drivers

Operating costs and environmental drivers

-7%
Oil extraction

-2%
Oil transport

-10%
Oil refining



-1%
Fuel distribution

= 80%
Fuel combustion

Summary

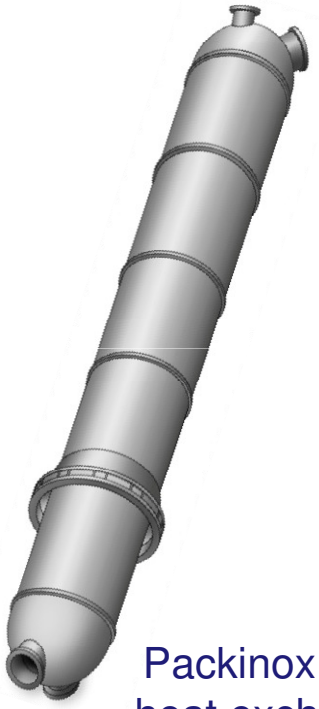
Strong drive for investments

- Capacity increases
- More conversion capacity
- Energy efficiency

…and heat exchangers are what we sell in refineries

Compabloc plate heat exchanger

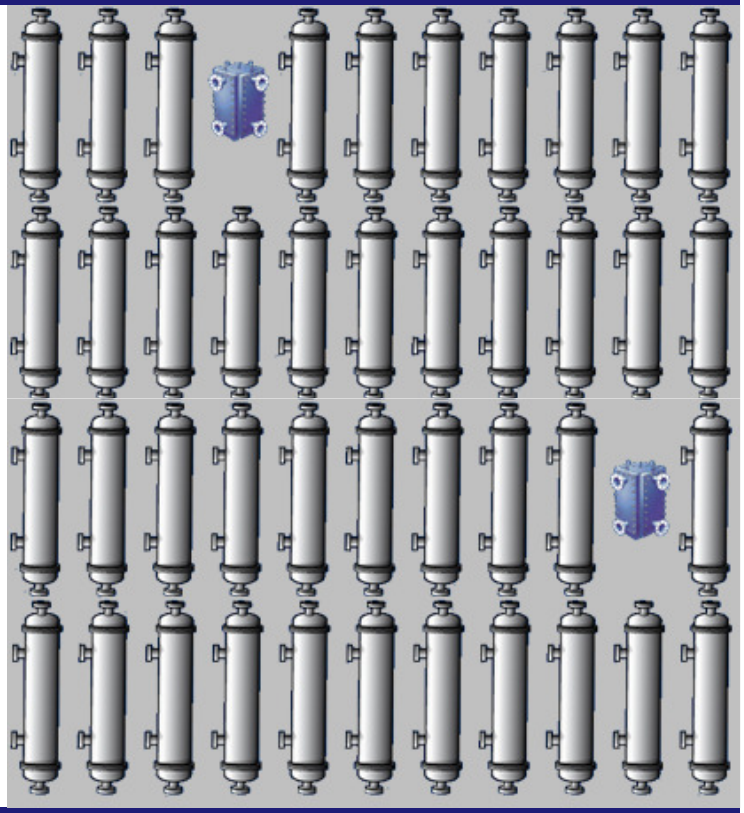
Spiral heat exchanger



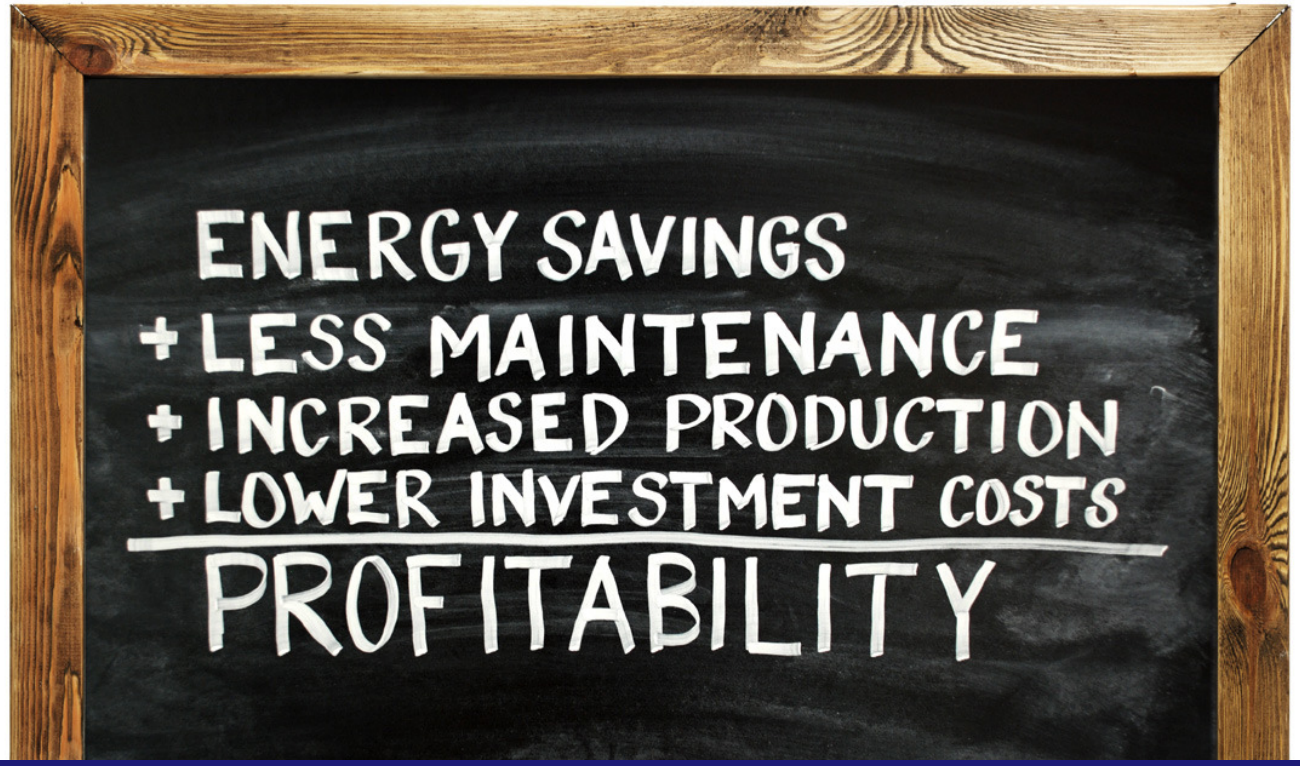
Packinox plate heat exchanger

Technology conversion

- Thermal efficiency
- Small footprint
- Low weight
- Simplified maintenance



Alfa Laval improves profitability



Why not faster?

Safety

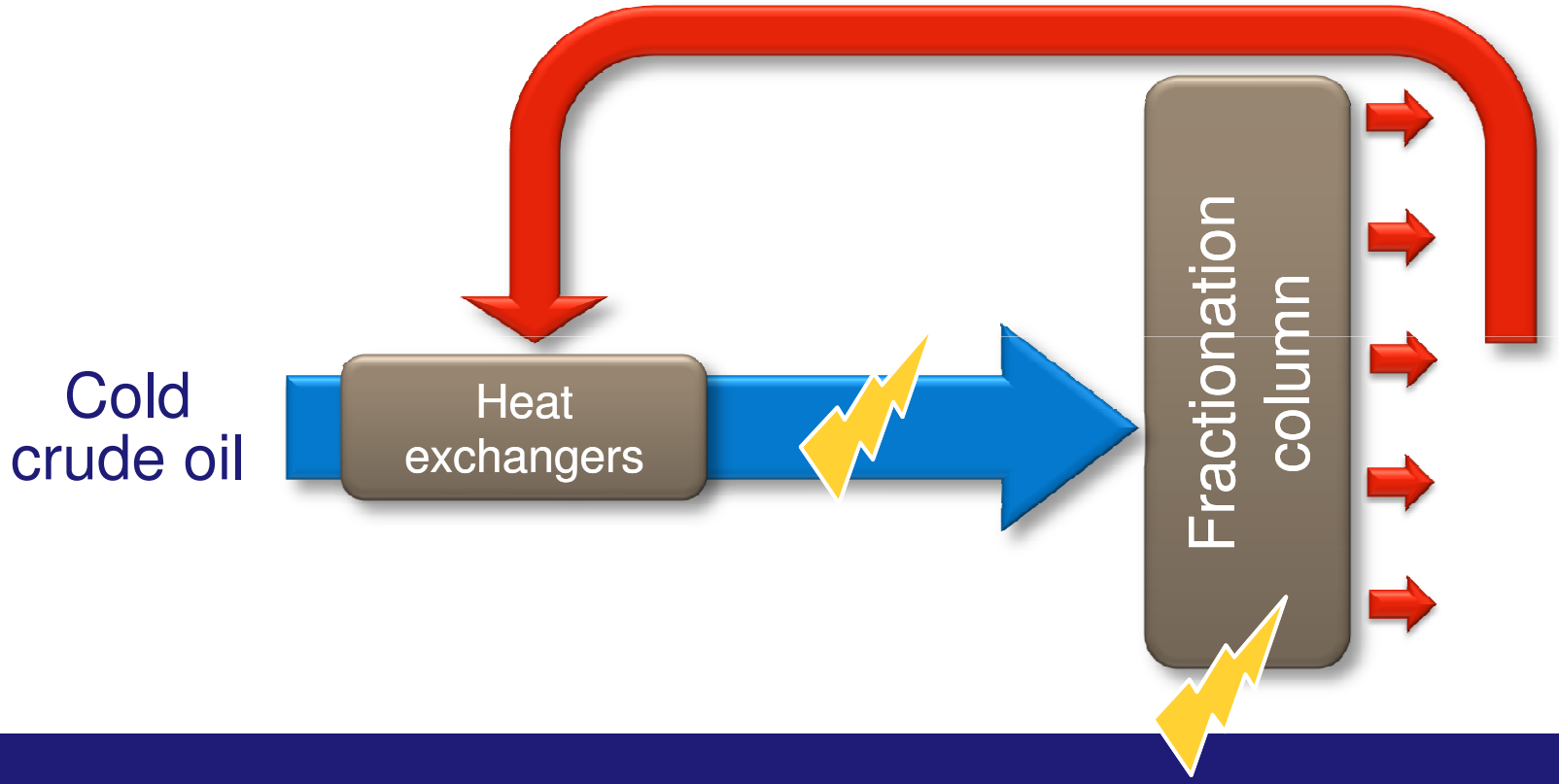
Up-time

* Long decision processes
* Many decision makers
* Facts

Why pick Alfa Laval?

* 1 500 references
* Know-how
* Global relations

Case – Energy savings



Case – Energy savings

Case – Energy savings

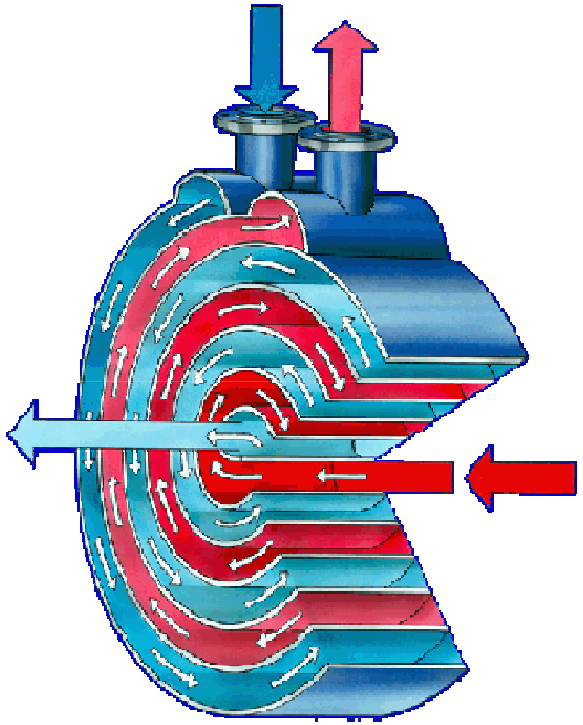
Falconara refinery, Italy

- 12°C increase in furnace inlet temperature
- ~20 tonnes of fuel saved per day
- €3 000 000 annual savings

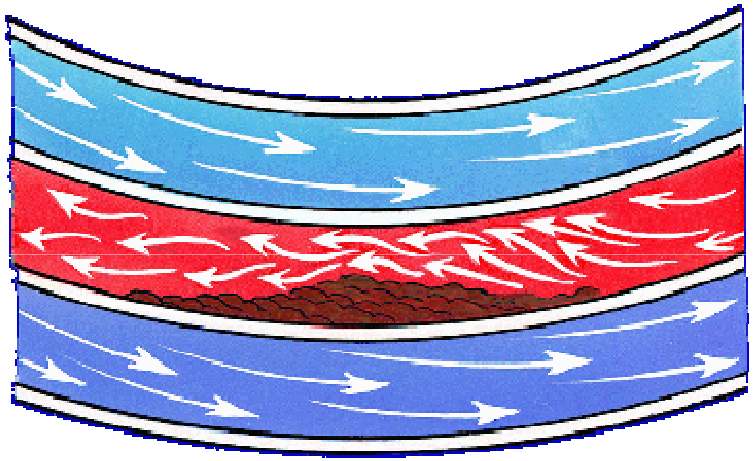
Case – Less maintenance

* Service
* Downtime
* Capacity losses

Case – Less maintenance

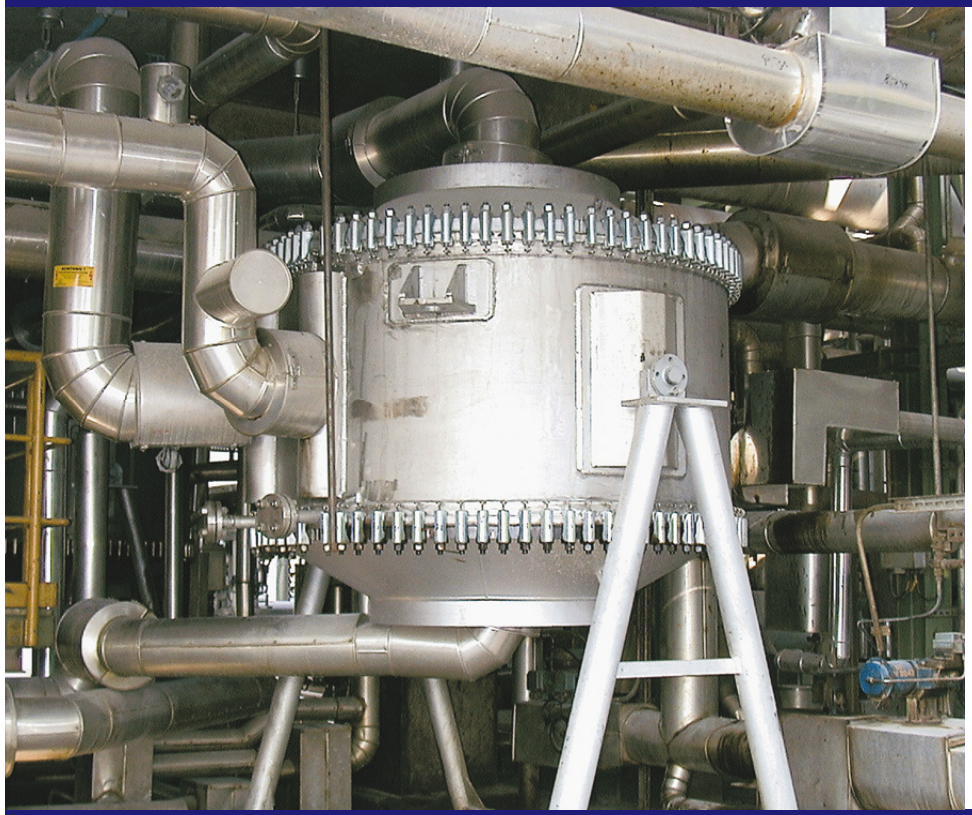


Case – Less maintenance



”Self-cleaning” effect

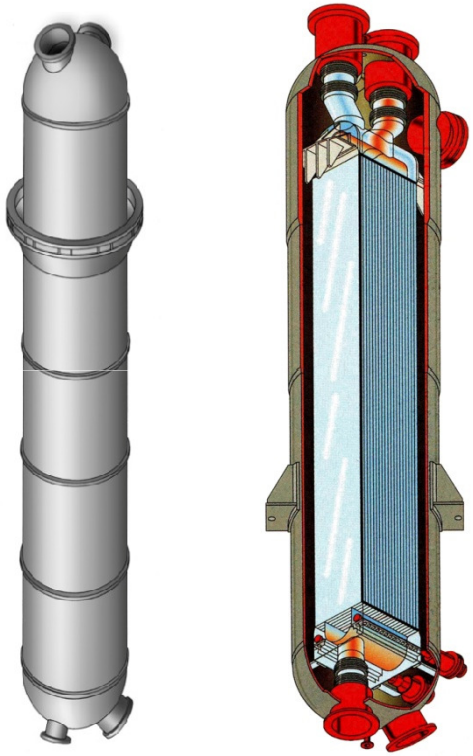
Case – Less maintenance



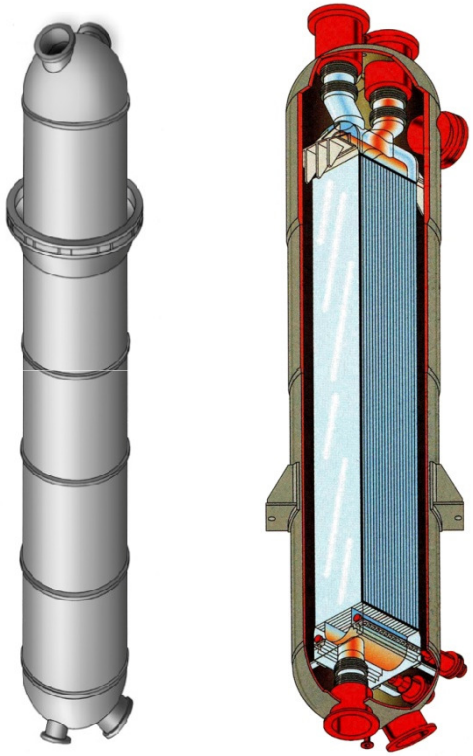
Mider refinery, Germany

- Time between cleaning
  - Shell-and-tubes: 10 days
  - Spiral heat exchangers: 8 yrs
- €180 000 annual savings in cleaning costs

Case – Packinox



Case – Packinox

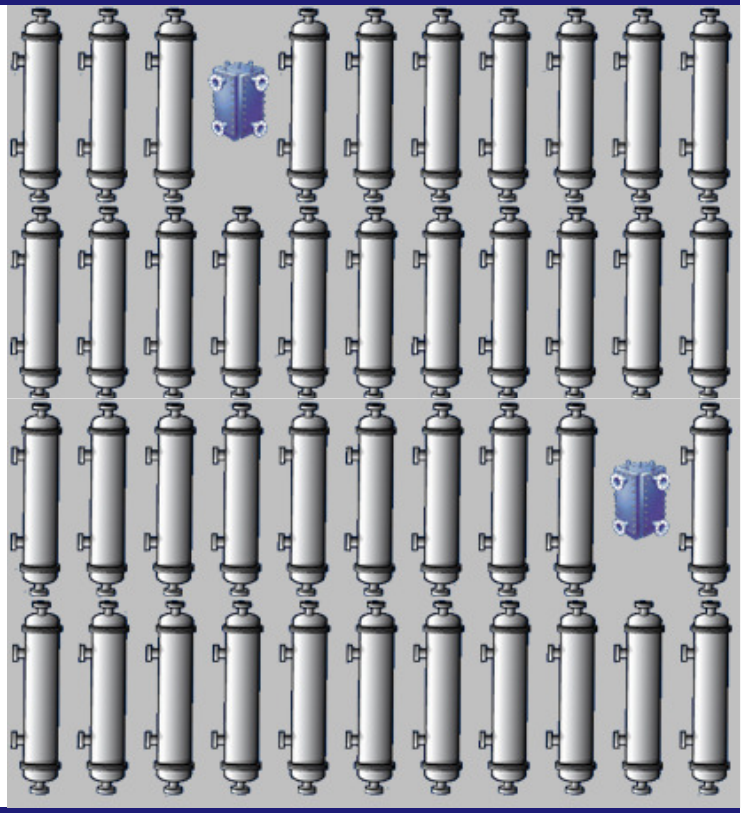


Catalytic reformer

	S&T	Packinox
Units	4	1
Weight (tons)	275	150
Energy and emission savings		7 MW
		~3 M€/yr

Outlook – Growth through

* Continued technology conversion



Outlook – Growth through

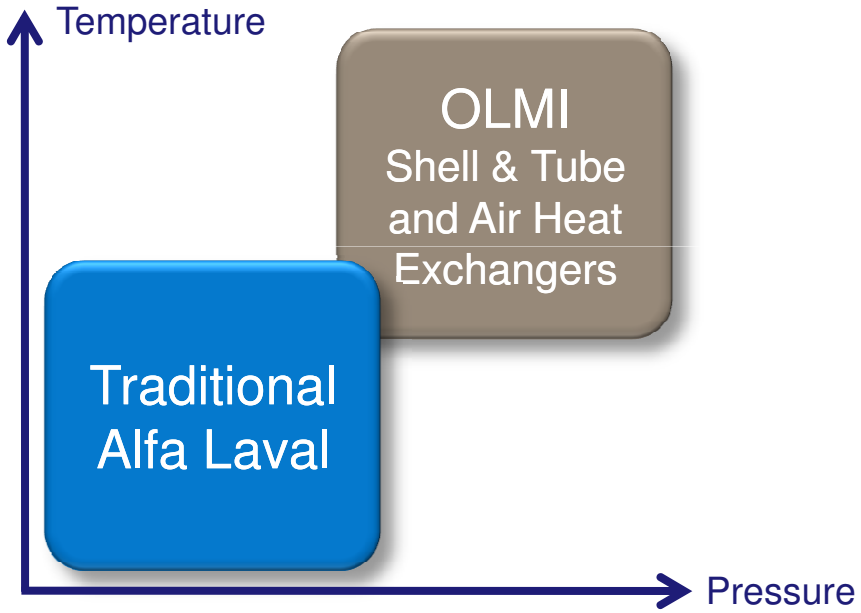
* Continued technology conversion
* Product development

Outlook – Growth through

- Continued technology conversion
- Product development
- Acquired products

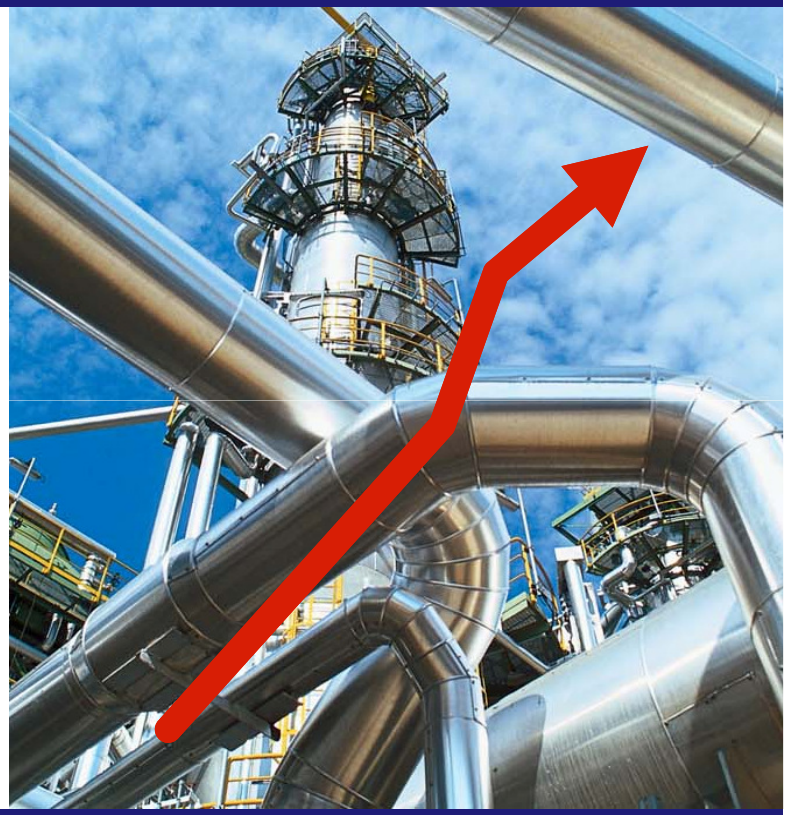
OLMI – Complementary products

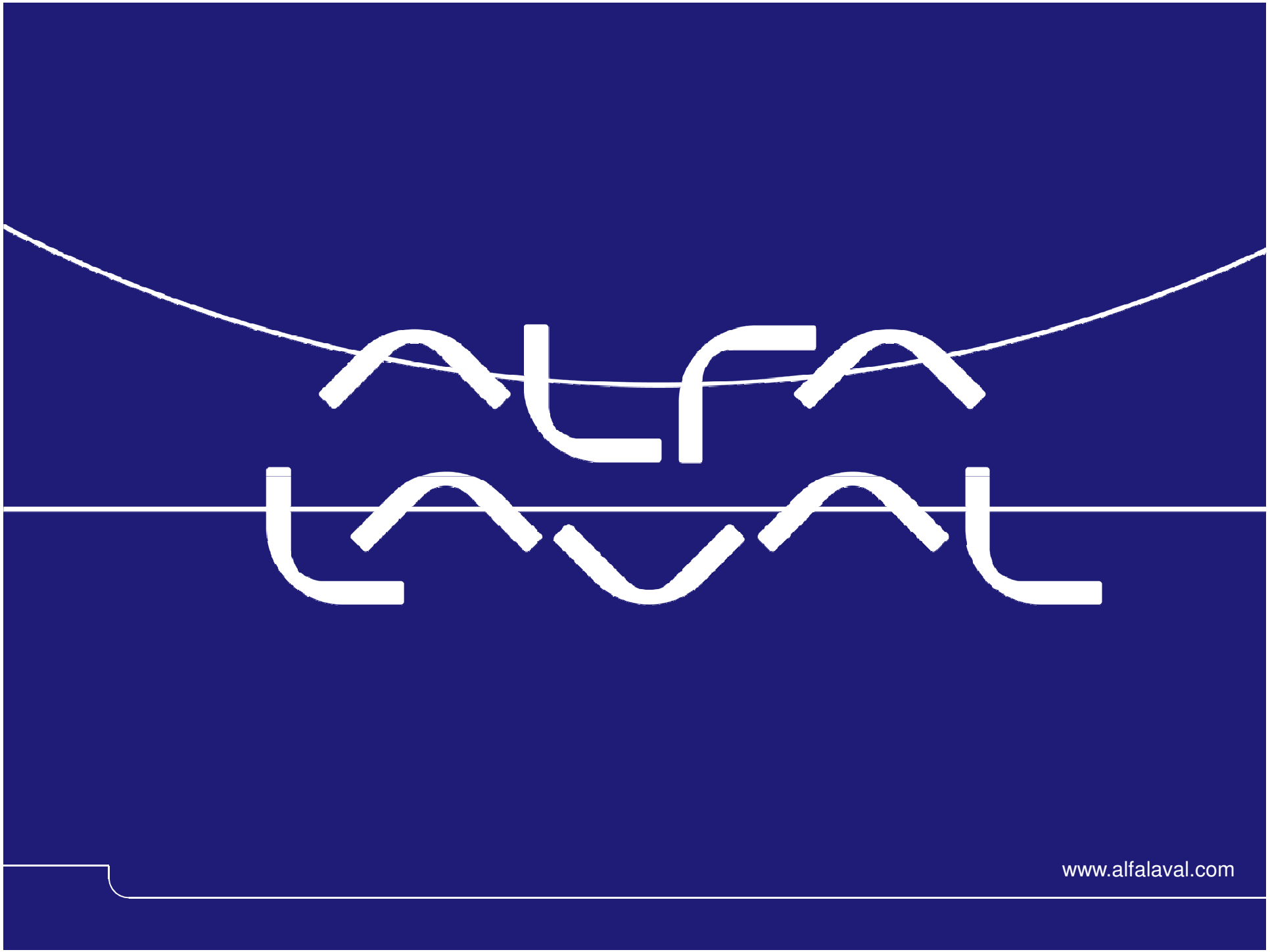
Shell & tube heat exchangers



Summary

- Large drive for investments
- Alfa Laval has established a strong position
- Many drivers for Alfa Laval growth

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