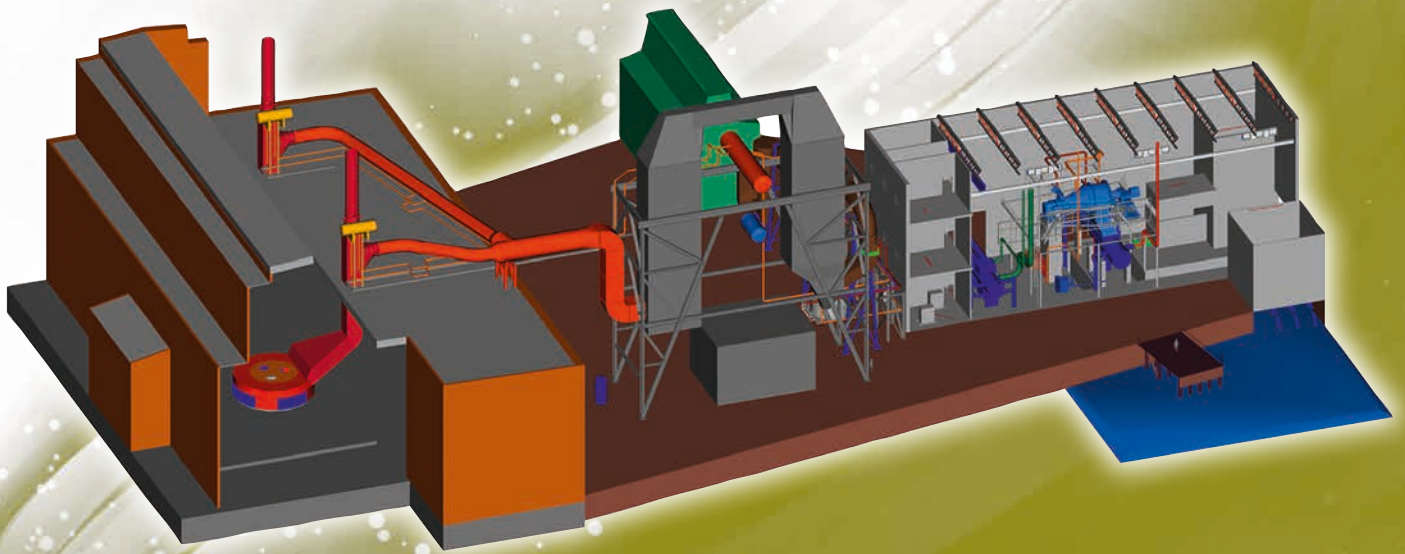


Energy Recovery in Metallurgical Industry



NORSK  ENERGI

Energy Recovery in Metallurgical Industry

Norsk Energi is a leading Norwegian centre of competence in the fields of energy, environment and safety. Our company is primarily linked to projects that reduce energy consumption and harmful emissions, by other energy efficient industrial processes. Norsk Energi conducts energy audits and studies, develops and implements energy management strategies and projects for private companies.

Recovery of thermal energy from flue gas is the largest potential source of energy efficiency in a melting plant. Hot flue gas, combustion gas and waste heat from the process industry contain large amounts of energy that can be used

in energy production instead of being released directly into the atmosphere.

As much as 80-90 % of the recovery potential is through installation of a waste heat recovery boiler plant.

Experts in Energy Recovery

- Flue gas utilization
- Hot water and steam production
- Feed water system
- Water tube boilers
- Shell boilers
- Steam generators

Norsk Energi participates in all project stages:

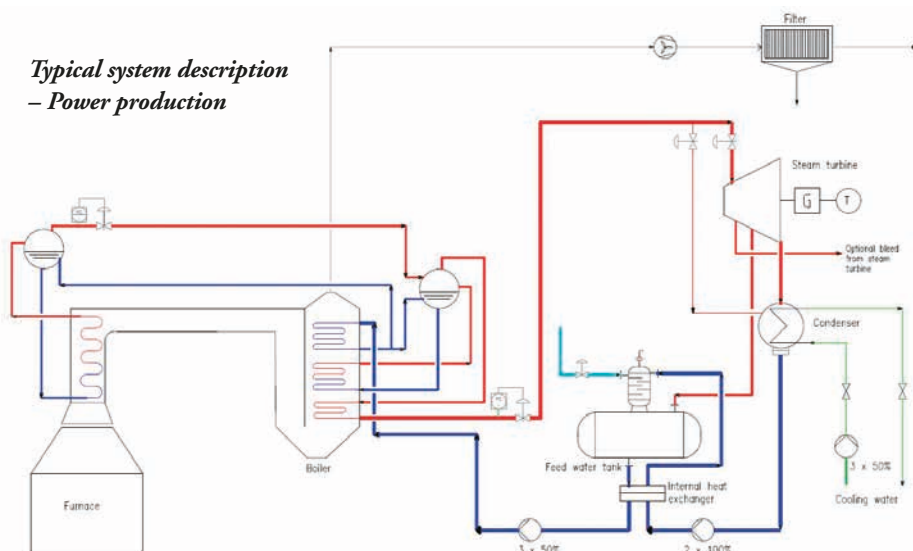
- Troubleshooting
- Possibility study
- Concept study
- Main study and design
- Detail engineering
- Construction and follow-ups

Projects that do so contribute to significant reductions in CO₂ emissions.

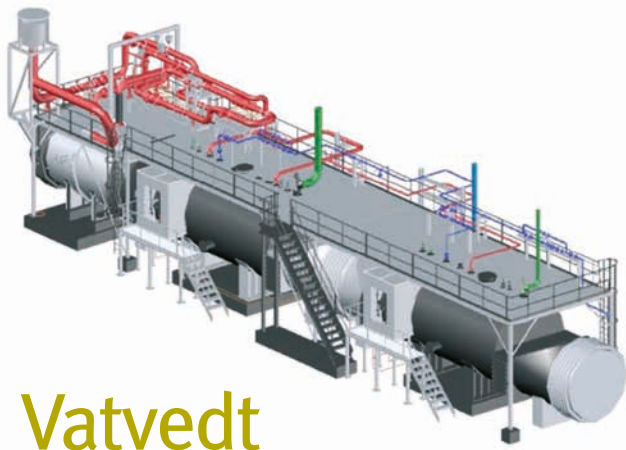
In recent years various projects and studies have been carried out on possibilities to clean flue gases and producing thermal energy and electricity on-site through installation of waste heat recovery boilers connected to steam turbines.

Norsk Energi possesses detailed information about smelting plant technology and can advise on how to improve smelting plant efficiency and how to reduce the amount of waste heat.

*Typical system description
– Power production*



Reference projects



Vatvedt Technology/ Chemk, Russia

- Heat recovery from 1 FeSi-furnace
- Shell boiler
- Total heat recovery approximate: 12 MW
- Supply superheated steam to consumers
- Finish engineering of the plant Q4 2012

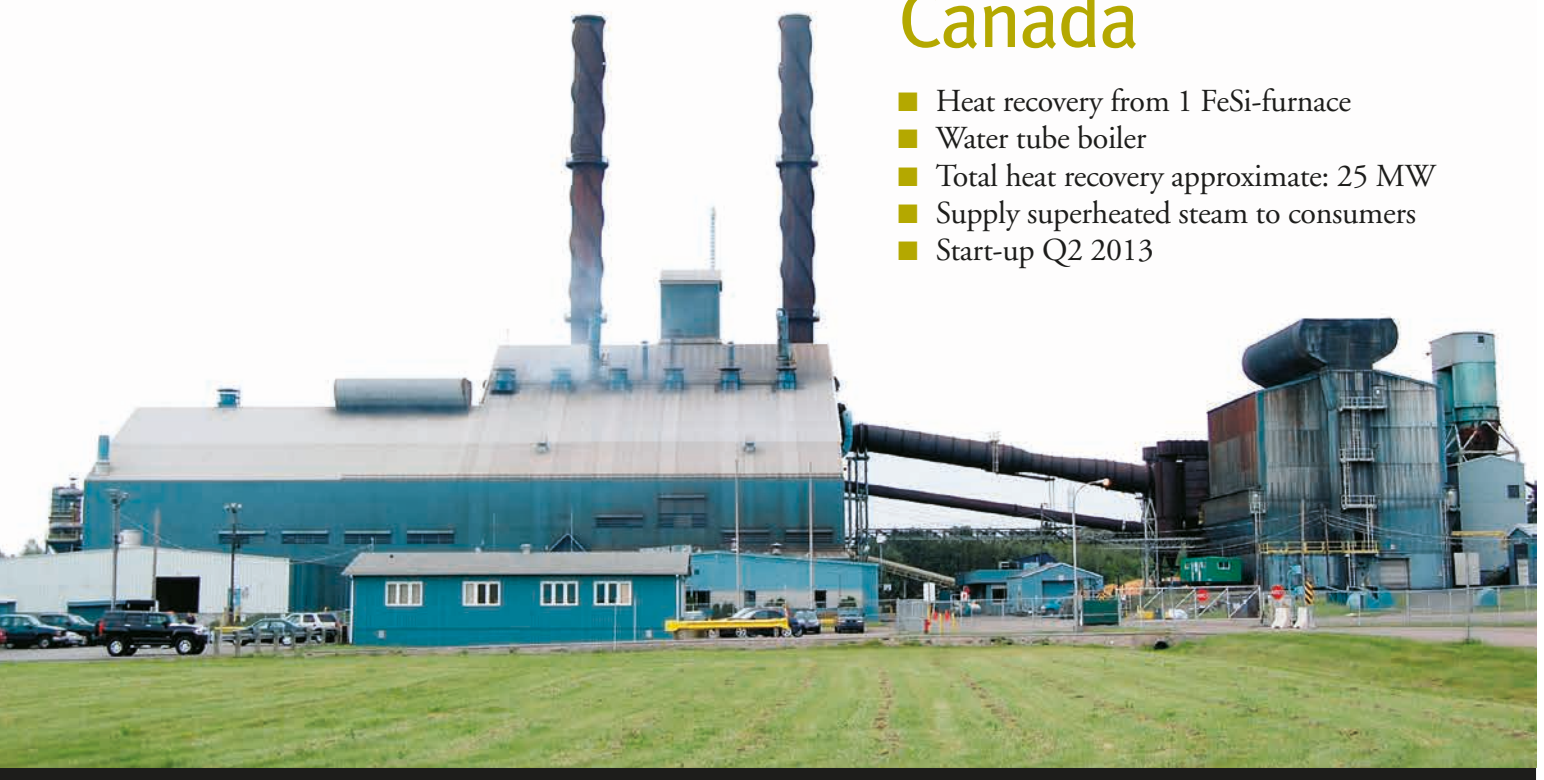
Finnfjord, Norway

- Heat recovery from 3 FeSi-furnace
- Use of steam production cooled canals close to the furnace
- 2 water tube boilers for heat recovery of the flue gas
- Total heat recovery approximate: 115 MW
- Steam turbine size: 40 MW
- Start-up October 2012



Elkem Chicoutimi, Canada

- Heat recovery from 1 FeSi-furnace
- Water tube boiler
- Total heat recovery approximate: 25 MW
- Supply superheated steam to consumers
- Start-up Q2 2013



Reference projects



Elkem Thamshavn, Norway

- Upgrades of existing steam boiler
- Upgrades of steam turbine
- Generate 120 GWH electricity per year

Mo Fjernvarme, Norway

- 2 Heat recovery from 2 FeSi-furnace
- Shell boiler, producing saturated steam
- Total heat recovery approximate:
10 and 12 MW
- Supply heat to district heat

Contact

Don't hesitate to contact us!

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