



sustainabilitySuite

Problem:

Steel production, from EAF or BF route, further to raw materials (ores or scraps) makes large use of energy, generates wastes and by-products, discharges gaseous and liquid emissions. The correct treatment of emissions and the recovery of energy and valuable materials from wastes and by-products help steel production to become one of the most sustainable industry.

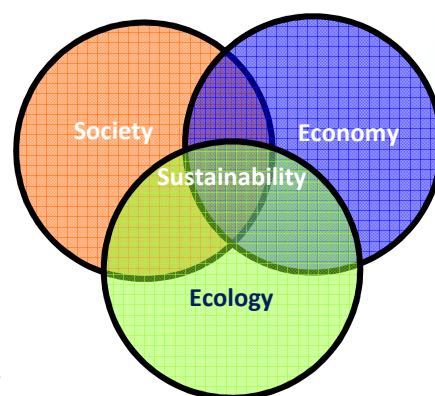
Solution:

CSM offers different kind of services and solutions to steelmakers and engineering companies:

- Surveys, to identify the interventions needed
- Characterisation of wastes, by-products, gaseous and liquid emissions
- Feasibility studies, to quantify the process and engineering solutions, relevant CAPEX
- Process optimisation, to reduce the ecological burden
- Pilot plant design, erection and processing

Slag treatment and valorisation, iron unit recovery from scale and sludges, off gas duct design, dioxins reduction, water management etc. are some example.

The **sustainabilitySuite** comprises:
eCo²SMelt, **recoflexTM**, **residual**, **offgasView**,
knowater, **combustion**.

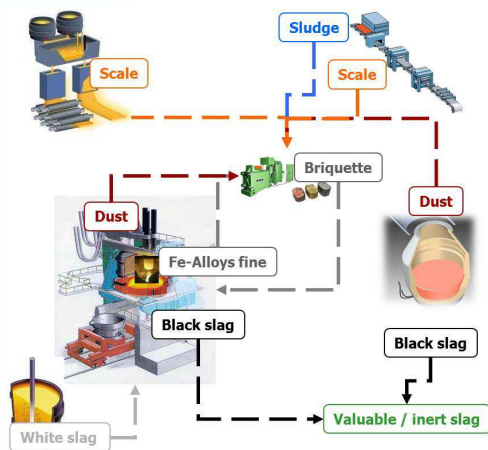


Benefits:

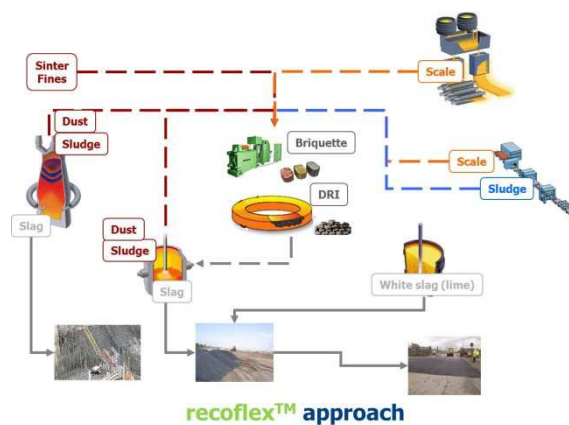
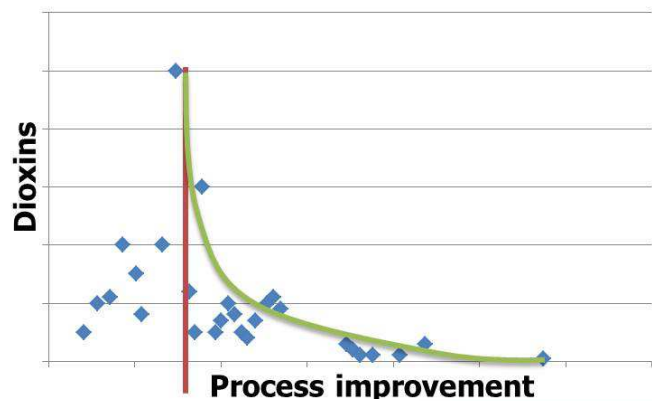
- Cost reduction due to minimised waste damp
- Cost reduction due to internal re-use of wastes and by-products
- Optimisation of processes to reduce emissions and water consumption
- Fully flexible solutions

Input & Output:

- Slag, scale, sludge, gaseous emissions, water consumption etc. specific data and chemical and physical characteristics
- Operating practices for the involved processes
- Available treatment plants (briquetting, RHF, etc.)
- Fully flexible roadmap to economical and ecological sustainability
- Cash-flow driven scalable solutions
- Feasibility study with scalable solutions
- eCo²SMelt: stainless steel specific solution
- Pilot plants design, construction and operation
- Chemical, physical, mechanical characterisation of wastes, by-products, off-gases, water etc.



Full eCo²SMelt material recovery flow diagram



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