COKE OVEN GAS INJECTION INTO BLAST FURNACE

What keeps you from saving 17 kg of Coke right now?

Lower your OPEX while reducing your CO₂ footprint!

Up to now, you might use your Coke Oven Gas (COG) for the generation of heat and/or electricity, with the associated problem of NOₓ emissions through firing.

Composed of the reducing gases H₂, CH₄ and CO and thanks to its high calorific value of 16−18 MJ/m³, COG can substitute considerable amount of coke in your blast furnace operation.

Depending on injection rate, CO₂ emission reductions of up to 6% can be achieved in your integrated steel plant.

Benefits of coke oven gas injection:

• Savings on operational costs due to:
  – Coke savings in BF
  – Reduced CO₂ emissions at BF and auxiliary plants
• Optimised combustion of the injected pulverised coal
• Reduced energy consumption of your integrated steel plant by maximising the metallurgical utilisation of off-gases
• Low CAPEX solution; easy to retrofit
• Financially supported (country-specific provisions)

COG injection in the tuyeres of the blast furnace.
Our tailor-made services for your COG injection project...

- Analysis on COG quality, cleanliness, composition and pressure
- Re-evaluation of your BF operation by considering the use of COG. Focus is put on coke rate reduction, permeability, additional oxygen demand and raceway conditions
- Conditioning and transport of COG for blast furnace usage
- Collision-free integration of COG injection systems near the blast furnace and at the tuyere platform with aid of 3D Laser scan technology
- Lance & blowpipe design. Example: CFD modelling for optimising the combustion
- Short installation times, while taking greatest care on health and safety
- Technological assistance during start-up and operation
- Training: technical, process, production

... and beyond

- Recommendations for potential CO₂ emission reductions by assessing the carbon energy balance of your installed technology
- Analysis on the metallurgical reutilisation of the off-gases in your BF operation

Example for coke savings at a medium size BF. Coke replacement ratio is about 0.69 kg/kg.