



Energy efficiency, South Africa

South Africa's mining and metals industry is transforming to save energy and mitigate climate change.

Location



The project has been installed in a large metal working site approximately 90km east of Pretoria.

Project



The plant produces Silicomanganese (SiMn) for the world market, with a production capacity of about 170'000 tonnes of Silicomanganese per annum. SiMn is used, inter alia as a grain refiner and for de-oxidation in the steel manufacturing process.

Emission reductions are achieved through reducing electricity consumption in five submerged arc furnaces at the plant. The original furnaces, which required approximately 5MWh of grid-fed electricity to make one tonne of manganese alloy, were retrofitted with a new design (electrode assemblies and new control and peripheral systems) that saves about 1 MWh of mostly coal-fired grid power per tonne SiMn. Considering low electricity price, high investment cost, increased competition (i.e., uncertainty of silicomanganese and raw material prices), the retrofitting makes for a strong signal to the industry.

Checklist Projekt 301 098

✓ Additionality and permanence:	according to the rules of the UNFCCC
✓ 3 rd party verified:	by ERM CVS
✓ Transparency:	provided by the UNFCCC registry
✓ Annual CO ₂ -reduction:	270,000 tCO ₂ e
✓ Social and environmental benefits:	as documented in our database
✓ Marketing material:	pictures available

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