



Introduction To THEISEN GMBH – PROCESS GAS CLEANING PLANTS

We, THEISEN GMBH, are a family owned and independent company, located in Munich (Germany). For almost 100 years we are active in the waste air and gas cleaning of industrial production processes. With this vast experience we have successfully engineered and delivered complete process gas cleaning plants (GCPs) and individual components world-wide.

This experience of treatment of off-gasses from various production processes largely - but not exclusively - for metallurgical melters, smelters and reduction furnaces is used in our engineering offices during the execution of projects – starting from the begin up to the commissioning. Followed up by the establishment of the status-quo and the specific requirements as well as the thorough pre-investigations, THEISEN GMBH compiles reports and studies for the client. Initially suggestions to optimise the emitting process are investigated, before the possible process technologies to eliminate harmful emissions are evaluated in detail.

In the relevant industry THEISEN GMBH, is acclaimed for its pragmatic and practical approach to problem solving. A significant contributor to the success of the projects is that during the project execution the specific technological requirements of the emitting process as well as those of the clients are addressed. THEISEN GMBH “looking behind the scenes” tries to get to the bottom of the problems to be solved. Local resources are utilised for the manufacture and the supply of certain components, so that Theisen GmbH can focus on the basic and detailed plant engineering and supply of critical components required for the performance guarantees. These components are imported from Germany and include the heart of the “wet” (scrubbing) gas cleaning plant plant:

the THEISEN DESINTEGRATOR

or the key component of the “dry” gas cleaning plant:

the THEISEN HOT GAS FILTER

Custom engineered for the specific application and agreed concepts that replace inflexible “standard off the shelf” solutions that do not meet the current requirements.

THEISEN GMBH has relevant experience in the treatment and cleaning of process gasses e.g. of:

- Zinc- und Lead Works (off-gas cleaning of IS-furnaces)
- Foundries and Steel Works (top-gas cleaning of cupola and blast furnaces)
- FeCr, FeMn, CaC₂ reduction furnaces (DC und AC furnace gas cleaning)
- Pyrolysis Processes (combined tar and dust removal)
- Chemical Basic Industry (syngas- und generator gas cleaning)
- Waste Recycling (metallurgical sewage sludge conversion)
- Titanium Slag Furnaces (Ilmenite smelter gas cleaning)
-and other processes that emit harmful gasses
- Polishing of high calorific fuel gasses to be utilised for energy recovery and power generation in e.g. combined heat and power plants, gas motors/turbines, combustion chambers with recuperator)
- Rehabilitation of contaminated sites (removal of halogenated hydrocarbons from soil and ground water)

Co-operation with relevant partner firms in the energy and environmental technologies ensure a comprehensive order fulfilment – to date and guarantee future successes.

Below is an overview of engineered and delivered gas cleaning plants (GCPs) in various fields of application :



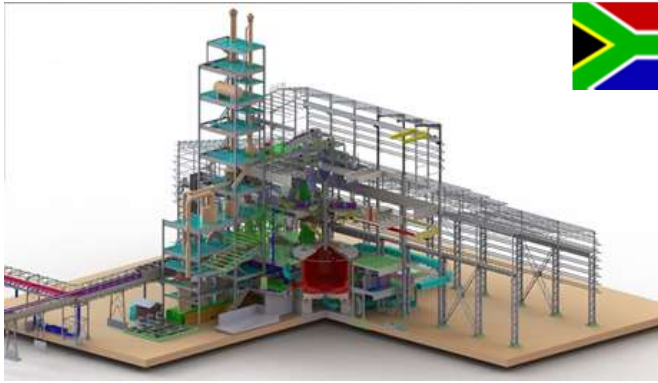
Ilmenite DC-Smelter GCP in Wuding (China)



GCPs for 4 off fully enclosed FeCr DC-Smelting in Aktobe (Kazakhstan)



Shaft Furnace GCP (processing residues from stainless steel production) in Taiyuan (China)



GCP for a fully enclosed FeCr DC-Smelter in Middelburg (South Africa)



Coupola Gas-Cleaning
(Germany)



Grey Iron Foundry
Gas-Cleaning Plant
(Turkey)

Hot-Blast Cupola GCPs (Germany and Turkey)



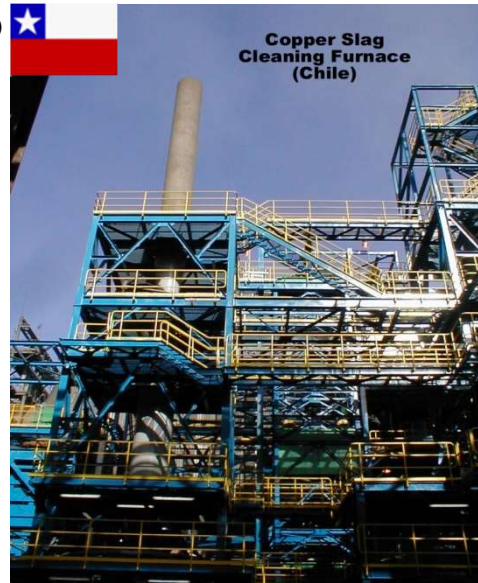
Carbide SAF
Furnace Off-Gas Plant
(Austria)



Carbide Furnace GCP (fully enclosed AC-SAF) in Landeck (Austria)



Graphite Elektrode Baking Furnace GCP
in Steeg (Austria) –



Off-Gas Cleaning Plant of a Copper-Slag Cleaning Furnace
in Chuquicamata (Chile)

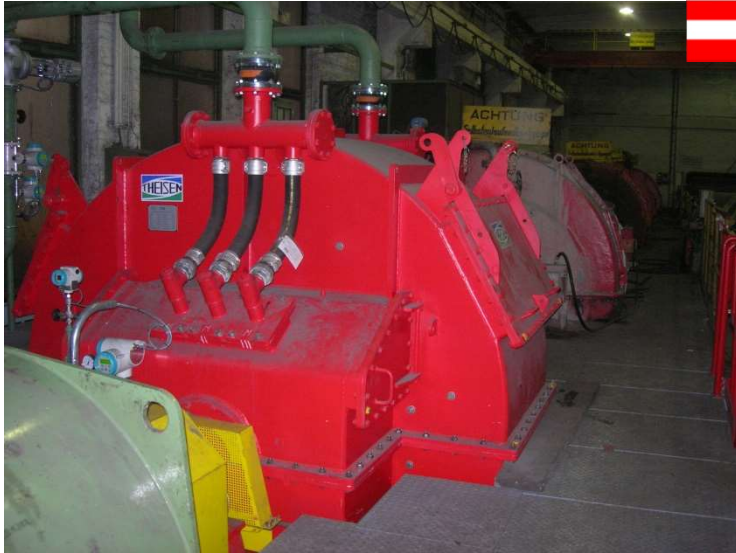


Shaft Furnace GCP
(processing residues from steel production) in Nagoya (Japan)



GCP of a fully enclosed AC-SAF
(FeMn/SiMn Furnace) in Dunkerque (France)

Including process water treatment plant
(clarifier, sludge conditioning, filter presses,
pH-adjustment, return water cooling and complete closed
process water system including the treatment
of blow-down water)



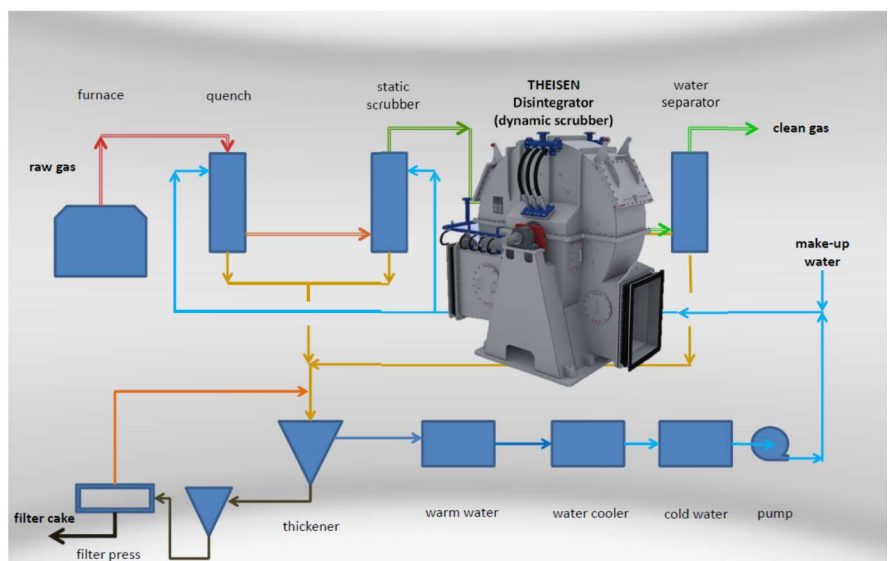
Top-Gas Cleaning Plants of Blast Furnaces in Donawitz (Austria)



Solve your Emission Problems

Decide for the proven THEISEN GCP-TECHNOLOGY)

The Key-Component of the Theisen GCP Technology in „wet scrubber applications“:
THE DESINTEGRATOR-THEISEN







A unique rotating gas scrubber – not only for the high effective de-dusting and acid-gas reduction but also acting as self-cleaning ID-fan to overcome all GCP-internal pressure losses and generation of the supply pressure required for the further utilisation of the cooled and cleaned process gasses.



**THEISEN GMBH PROCESS GAS CLEANING PLANTS
ENGINEERED IN GERMANY**



For further information please do not hesitate to contact one of our process-engineers:

		
		
<u>THEISEN GMBH</u> <u>GAS-CLEANING-SYSTEMS</u>	<u>ASVOTEC</u>	<u>THEISEN ENGINEERING (PTY) LTD.</u> <u>OFF-GAS CLEANING PLANTS</u>
FRIEDRICH-HERSCHEL-STR. 25 D-81679 MUNICH / (GERMANY)	ROD. CÔNEGO CYRÍACO SCARANELLO PIRES, KM 01 JD. CHAPADÃO / MONTE MOR- SP / (BRAZIL)	VERONA OFFICE PARK, UNIT 3 CNR. MACARTHUR & MALIBONGWE ROBINDALE 2194, JOHANNESBURG / (SOUTH AFRICA)
PHONE: +49(0)89/998432-0 MAIL: R.GOTTSCHLING@THEISEN-MUC.DE	PHONE: +55 (19) 3879 8721 MAIL: VENDAS@ASVOTEC.COM.BR	PHONE: +27 (0) 11 880 0568 CELL: +27 (0) 82 054 8099 FAX: +27 (0) 11 880 9775 MAIL: E.SCHUBERT@THEISEN-MUC.COM
<u>Homepage</u> www.theisen-muc.de	<u>Homepage</u> www.asvotec.com.br	<u>Homepage</u> www.theisen.co.za

Copyright (2017):

THEISEN GmbH Munich
Process Gas Cleaning Systems
Friedrich Herschel Strasse 25
D-81679 Munich (Germany)

Author: Rudi Gottschling
Fon: +49-89-998432-20
Fax: +49-89-998432-99
E-Mail: R.Gottschling@Theisen-MUC.de
Web: www.theisen-muc.de