

**Energy recovery on the Exhaust gas from the boiler
of the 99MW CAD Lignon production Unit**

Geneva - Switzerland



Client:	Services Industriels de Genève (SIG)
Country:	Switzerland
Signature of first contract:	2011
Completion date:	2014

Current project status:

Phase 1	Phase 2	Phase 3	Phase 3
Preliminary studies	Detailed studies	Bidding documents, evaluation of offers and bidder selection	Achievement
Complete	Complete	Complete	In Progress

Description:

The Geneva Industrial Services (SIG) are the owners and operators of the district heating (CAD) of Lignon. This network supplies the neighborhoods with superheated water (120°C): Lignon, Grand Pre, Avanchets, Meyrin and is currently being extended to the CERN, Vieux-Genève and currently being connected to the CADIOM network.

Heat production of this network is ensured by a district heating plant run with natural gas and consisted of four boilers with a total production capacity of 99MW that can operate in parallel.

A first study was performed to recover the available energy in the flue of the boiler CAD Lignon. This study aimed to examine the possibility of heating all the buildings of SIG from the heat recovery. This study has shown that such energy recovery was feasible and economically profitable. Furthermore, this initial study was confirmed by a second study done by PEG. In total the heat recovery will increase the efficiency of the boilers by 6%.

Among the different variants envisaged, the adopted one consists of recovering the heat from the exhaust gas of the 4 boilers and using it:

- To heat the water of the heating of administrative building SIG of Lignon.
- To pre-heating the combustion air of the 4 boilers.