SITE VISIT HEERLEN (THE NETHERLANDS) ON MARCH 17TH 2008
REMINING-LOWEX
Highlights for the Monthly CONCERTO e-mail

District heating and cooling grid

The old cold mines in Heerlen are closed since 1976. Since the closure the mines have been filled with ground water, which has a different temperature at different depths and can therefore be used for both heating and cooling of the buildings. The buildings will be connected to a new district heating grid, which is now under construction. The grids will connect various complexes of buildings situated side by side and supply warm and cold water to hold a constant temperature of 22°C, the used water is then pumped back to the mine. The mine water will be used for heating buildings at this temperature, therefore no further increase of the temperature (by other heating means) is needed.


construction of the grid

Heerlerheide Centrum

Heerlerheide Centrum is a new multifunctional complex situated near Heerlen. The building is designed mainly for residential use; however a library, supermarket, big conference room and a café will also be included. Up to four heat pumps will supply the building and in the future also other buildings, planned in the neighbourhood, with hot and cold water. This water is used for heating and cooling by an embedded hydraulic piping system, which activates the thermal mass of the floor. Even the heat produced by the chilled cabinets in the supermarket will be delivered back to the energy station. The construction of the building allows for a natural heat air flow whilst ensuring maximum comfort conditions. The building shell is well insulated to avoid thermal bridges and ensure the overall energy efficiency. An important aspect at the planning of the complex was the use of daylight, especially in the partly underground garage and the conference centre. A particular feature is the innovative use of shading at the glazed shell: A shading element will move with the changing position of the sun and will thus perfectly shade the interior at every time of the day. In addition the direct radiation will be absorbed by solar cells installed in the moveable shading device.

Heerlerheide Centrum