

Commercial Solar Thermal Case study

Water Treatment Plant Kumba Iron Ore - Kolemela Mine



Situated in Postmasburg in South Africa's Northern Cape Province, Kolemela mine is one of Anglo American's Big Four projects.

The pump house moves 400 000 litres of water daily at 660 litres per minute from the ground level reservoir to the high level reservoir.

The hard water in this area can contain total dissolved solids (TDS) of up to 545 parts per million (ppm).

Facts and figures

Two resin based ion-exchanger water softeners were installed.

Needs

Prolong the working lifetime, reduce maintenance costs and improve the efficiency of the mines hot water system by reducing the amount of calcium carbonate (CaCO_3) and magnesium carbonate (MgCO_3) in the water.

Contribute to the health of the community and workforce.

Solution

Solahart designed a water softening solution with two AquaThin ion-exchangers.

The CaCO_3 and MgCO_3 count of between 350 – 500 ppm was reduced to 20 – 30 ppm making the water safe for human consumption and improving the efficiency of the water network and heating system.

