

CASE STUDY

GIROSAND: MOVING BED SAND FILTERS

FINAL FILTRATION, TREATED EFFLUENT - BREWERY, SEDIBENG



Client: Heineken / Waterleau
Industry: Industrial Process Water – Brewing & Distilling
Region: Gauteng, South Africa
Product: MBF50D, 4 units, 50m³/h per unit @ 9m/h
Installation Date: 2009

Challenge

- In 2009 Heineken and Diageo completed construction of a new 3 million hectolitre brewery in Sedibeng, South Africa.
- Waterleau has a long track record in brewery wastewater treatment. They have built more than 40 treatment plants for Heineken.
- At Sedibeng, Waterleau was again the chosen technology partner for wastewater treatment.
- The main train plant consists of two LUCAS[®] anaerobic UASB reactors followed by a LUCAS[®] cyclic activated sludge system.
- The effluent from the treatment plants need to pass through a final filtration process to ensure compliance with discharge standards.

Application

- **Final Filtration / Treated effluent discharge (brewery).**

Solution

- Moving Bed Sand Filters are ideally suited to the filtration of treated effluent from industrial production plants.
- In Superior Filtration, Waterleau found a local OEM with an international footprint and (at the time) a 25-year track record. GiroSand filters fulfilled the requirements set by plant design engineers.

- **Easy Installation:**
 - Minimum civil works on site.
 - Fabrication under tightly controlled factory conditions.
 - Limited on-site mechanical assembly required.
- **High efficiency:**
 - Continuous, up-flow filtration ensure that the filter bed provides optimal filtration at all times.
 - Continuous reject stream is easy to manage.
 - No shut-down for backwash.
 - No external source of wash-/rinse water required.
- **Low Maintenance Costs:**
 - No moving or rotating components.
- **Easy Maintenance:**
 - Easy access to airlift assembly.
- **Low Energy Consumption.**
- **High reliability:**
 - No moving or rotating components.
 - Filters operate consistently over long periods of time.
- They installed 4 x **MBF50D GiroSand Moving Bed Sand Filters** processing +/- 200m³/h @ 9m/h.

Results

- Since commissioning the MBF50D filters have consistently produced high quality filtrate - reducing the suspended solids load and turbidity in the treated effluent and ensuring compliance with discharge standards.