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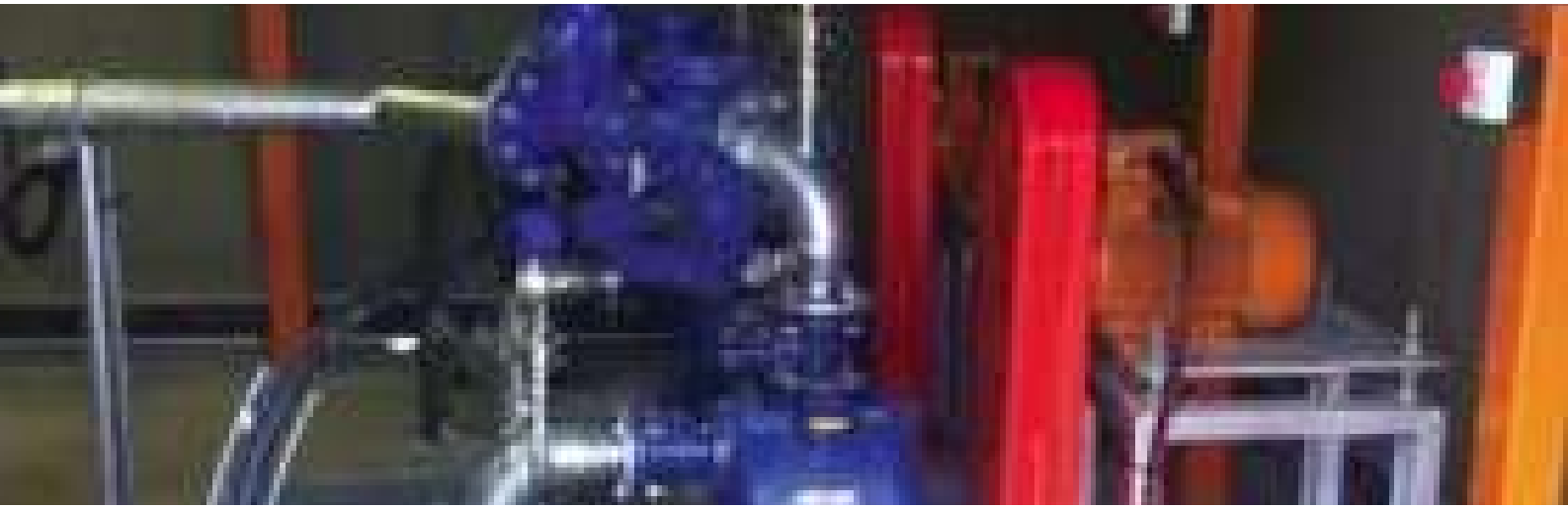
Case Study: Boiketlo Sewage Pump Station Security Upgrade



Customer's Query

After repeated vandalism incidents at the Boiketlo sewage pump station on the outskirts of the West Rand of Johannesburg, resulting in significant financial losses and operational disruptions, the municipality sought a highly secure solution to prevent future thefts and damages.

Our Approach

Design and Construction Phases

The project commenced with a thorough documentation of client requirements, followed by the development of a preliminary design approved by Mogale City. The construction phase included mechanical design aspects and the integration of patented technology from Dams for Africa.

Challenges and Solutions

- Security: Ensuring site security during construction was crucial. The secure design of the pump station mitigated future risks.
- Ventilation: Implementing 100-mm ventilation holes in the walls facilitated effective air circulation, essential for a sewage pump station.

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Our Solution

Tecroveer was chosen to design and construct a secure pump station. The new design featured a highly secure structure, incorporating advanced security measures and patented technology. Key features included:
A sliding concrete platform door made from 60 MPa concrete, supported by wheels guided on tracks.
Reinforced concrete doors, immune to oxy-acetylene and angle grinder attacks, with 5% (vol/vol) steel reinforcement.
Ventilation holes for effective air circulation, ensuring optimal operating conditions.

> It was necessary to move away from the traditional pump station approach, because of the remote location of the site, and the requirements were that the pump station had to be vandal/thief-proof to protect the assets of the local municipality.

The Results

- Enhanced protection of municipal assets.
- Prevention of further operational disruptions and financial losses.
- Improved design incorporating advanced security features and efficient ventilation.