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RENTECH CASE STUDY: HANSA HOTEL, SWAKOPMUND

Entrance to the luxurious Hansa Hotel, Swakopmund.

Hansa Hotel turns to *Rentech* to solve hot water problem.

The Hansa Hotel were struggling to meet peak demand for hot water in the mornings for the 50 room hotel, despite 10 large 500 litre geysers, each with 12,000W elements and an escalating electricity bill. The Swakopmund Municipality hard water also 'furred' up the electrical heating elements, reducing efficiency, causing regular failure and costly replacement. To replace a single element, necessitated that the complete system be drained, flushing 5,000 litres of hot water down the drain, customers without hot water and a full day to bring the system back up to temperature again.

Mark Renecle of ***Rentech,*** Namibia's Industrial, Commercial and Domestic Heating experts proposed the installation of two 220kW diesel fired hot water boilers complete with heat exchangers and 1500 litres of hot water storage. This system gave a hot water capacity of 8,500 litres per hour at a constant 60 °C.

Before: 10 x 500l Electric Geysers

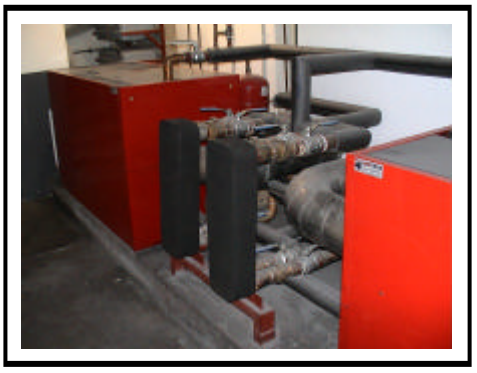
The previous system of geysers, although having a huge storage capacity of 5,000 litres, could not maintain a constant 60 °C. As hot water was drawn off, the remaining 60°C hot water was diluted with 15°C cold water. After only 250L are used the average temperature of a single 500l tank drops to 37 °C which begins to feel cool to the human body.

The geysers use thermostatic switches to keep the water hot, so energy is consumed 24 hours per day keeping 5000 litres of water at 60 °C. However this maximum demand is only required for an hour or two in the morning. ***The result is a huge waste of electrical energy.***

The new system uses high heat output boilers and low water storage capacity to supply heat on demand! For the remaining 22 hours of the day, the boilers come on as required for short periods, ***saving energy and ultimately money.***

2 x 220 kW diesel fired boilers

After: 1500l hot water storage and space for an in house laundry.



Heat exchangers to ensure constant 60°C hot water

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