HEAT RECOVERY PLANT HARMONY TSEPONG MINE WELKOM

INSTALLATION JUNE 2018

The old boiler system consisted of 2 x 25000 L steel vessels connected to 8 x 100Kw constant temperature heat pumps, which was installed in series to the main water line.

EMS supplied a 25000L low pressure fiberglass heat accumulator heat exchange tank to replace the steel vessels.

OLD PLANT WAS NOT PRODUCING ENOUGH HOT WATER

The hot water demand during winter exceeded the ability of the steel vessels and heat pumps to keep up with a flow rate of over 15000L per hour during peak time.

ems heatpump

NEW PLANT WAS INSTALLED WITHIN A WEEK

The new fiber glass tank has zero standing heat losses and are both UV stable and acid resistant.

New 25 000L fiber glass heat exchange boiler fitted with a double heat exchange coils system totaling over 880 meters of stainless-steel coils.

The tank was delivered to site in components, and assembled by hand within 4 days

The inner coil system is used to draw heat from the compressor plant, which in return heats the body of water inside the tank. The second outer coil system then heats water from rand water to 60 degrees and supplies the change house of hot water at a rate of 15000L per hour.

The heated water from the compressor enters the coils at 80 degrees Celsius. Transferring its energy to the tank which in return heats the water for the change house to over 65 degrees. The 8 x 100Kwatt heat pumps are not switching on and serves merely as a backup at this stage.

Return temperature to the compressor plant!