

IWC Performs Online-Refurbishment of Utility Cooling Towers at Sasol Secunda

Johannesburg 2014: IWC was awarded a massive R200 million contract from Sasol Secunda in May 2009. The contract was to replace all the splash grid fill material and water distribution systems on its four towers, and to simultaneously install new fibreglass walkways between distribution pipes in order to facilitate safe access for future inspection and maintenance.

The utility natural draft cooling towers at Sasol's Secunda petrochemical complex were built during the late 1970s and early 1980s and after nearly 30 years in operation, the plastic internal components had deteriorated with an ever increasing number of splash grids collapsing into the cooling tower basins. This refurbishment extends the operating life of the cooling towers for another 25 plus years improving efficiencies in producing more power for less coal.

IWC needed to replace the plastic internals but Sasol could not take any of the cooling towers out of service in order to affect these repairs leaving IWC no choice but to apply on-line refurbishment of the cooling towers using their patented on-line refurbishment technology to carry out the work.

This meant that only a small area of the cooling tower could be isolated at any given time, around 10%, in order to ensure that there was no significant thermal performance deterioration, which would affect Sasol's production.

The contract took four years to complete finishing in May 2013, during which time the following new components were installed:

- 826 000 polypropylene splash grids sized 1200mm x 600mm
- 894 000 polypropylene grid corner supports
- 894 000 grade 304 stainless steel grid hanging wires
- 1 352 pipe isolation assemblies
- 27 840m of PVC piping
- 23 620 IWC upward sprayer units
- 8 780m² of FRP walkways

Once the online-refurbishment of each cooling tower was completed, IWC tested its thermal performance to ensure they all achieved the contractual requirements.

IWC invests significantly in research and development, and makes use of local and international facilities for the testing of newly-designed products.

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About IWC

Industrial Water Cooling (Pty) Ltd (IWC) are a specialist water cooling company, with specific strength and focus on evaporative cooling systems and cooling towers in particular.

IWC was founded in 1986, specialises in evaporative water cooling for numerous applications. Some industries in which we are involved are:

- Power Generation
- Mining
- Petrochemical
- Sugar
- Steel & Aluminium
- Food & Beverages
- Air-conditioning, Refrigeration and many other applications

For many years IWC has been a member of the CTI, Cooling Technology Institute, based in the USA. This association has as its member's consultants, designers, constructors as well as end users of cooling towers. With years of expertise and practical knowledge, IWC offers bespoke PHE maintenance solution at cost-effective and competitive pricing.

Due to IWC's extensive experience in the refurbishment of cooling towers it has undertaken in excess of 80% of the Natural Draught refurbishment work conducted in South Africa.

IWC has completed the on-line refurbishment of a Natural Draught Cooling Tower in Australia and also in South Africa & Zimbabwe.

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