

GRP COOLING TOWERS CRUCIAL IN AGGRESSIVE CHEMICAL PROCESSING

July 2015 - Glass-reinforced plastic (GRP) is prevailing over traditional concrete, steel and wood as the most suitable primary cooling tower material in mining processes involving aggressive chemical solutions.

Says Roger Rusch, CEO of IWC, *"Over the past 30 years, [GRP materials](#) have been utilised as secondary components in cooling towers, such as pipes and fan stacks, with the primary structure constructed out of concrete, steel or wood. However, in chemical extraction processes, GRP's inherent corrosion, moisture and temperature resistance significantly increases the durability and service life of the cooling tower structure, as well as reducing the need for maintenance; making it the primary material of choice today."*

Concrete [cooling towers](#) are reinforced with steel or other metals that, over time, corrode from constant exposure to aggressive chemicals. When the embedded metal corrodes, the resulting rust occupies a greater volume than the metal, creating tensile stresses and eventually causing cracking, delamination, and spalling.

Another reason for the corrosion of the cooling tower reinforcement in a chemical refinery is the existence of chlorides, which penetrate the passive layer of oxides and cause corrosion in the form of acupuncture.

Says Rusch, *"In contrast, [GRP cooling towers](#) are resistant to galvanic and electrolytic corrosion and can withstand continuous contact with aggressive chemicals. This makes them an obvious choice in refineries where highly aggressive cell electrolyte and hot, purified chemical sulphates need to be cooled at a constant operating temperature."*

About IWC

IWC, originally founded in 1986 as Industrial Water Cooling, are the leaders in industrial cooling tower systems in Africa, offering fully integrated solutions, from industrial cooling towers to GRP.

IWC has developed an industrial cooling tower specifically designed to handle slurries, zinc solutions as well as highly abrasive and/or corrosive solutions.

IWC undertake custom fabrications related to the cooling tower industry e.g. fan rings, slurry cooling towers, distribution launders and troughs, inlet louvers, etc.



IWC has expanded its GRP manufacturing capability to include the design, manufacture, installation and maintenance of cooling towers, storage tanks, process vessels, pressure vessels, corrosion resistant linings, ducting, scrubbing plants, piping and fittings.

For more information visit: <http://www.iwc.co.za> or contact IWC on +27 (0) 11 466 0699