



by Glynnis Koch

Comment

The end of the year is nigh ...

No doubt many of you will be in holiday mode when this reaches you and I would like to take this opportunity to wish you all the very best for the festive season. Let us hope that 2010 is going to be a better year for us all, economically speaking. South Africans are certainly looking ahead to the soccer to come during the year. Let's hope the event also brings a much needed boost to our country's economy.

Our first feature in this issue is about processing equipment and the changes that are going to take place, or indeed, that are already happening in plants around the world. Diederick Mols (business manager/industrial wireless solutions, Honeywell Process Solutions) looks towards the fully wireless plant. He comments that new technology promises to see sensors in future play an even greater role in the processing plant. At the same time he points out that operators must bear in mind that for this promise to bear fruit, sensors must be applied as part of a wider solution.

"Savings in steam systems – A case study" is the title of our Pumps, valves and actuators feature and comes to us from Armstrong Service Inc in the United States. The article is based on an engineered evaluation at an ammonium nitrate manufacturing facility manufacturing nitric acid and high and low density ammonia nitrate. The purpose of this evaluation was to identify energy losses and system improvements in the steam and condensate systems and identifies six steam savings proposals with an average simple payback of 2.9 years. It details the individual findings and outlines the corrections needed showing that the savings generated from these improvements will more than pay for themselves in short order.

Thirdly, we look at solutions to solvent extraction in our Separation feature. The article is by Jacques Steyn, Environmental Engineer at Procon Environmental Technologies in South Africa and deals with hydrocyclone technology in contamination management. In general hydrocyclone separation, the water/oil effluent enters the cyclone and begins to spin under a centrifugal force which is in the order of 800 to 1 000 times the force of gravity. This force causes the two immiscible liquids (oil and water) to separate. With no moving parts, the process described in this article is low maintenance, simple and effective with separation occurring during the 2-3 seconds it takes for the water/oil mix to pass through the cyclone.

Finally, "Review of biofuels policies" by Elly M Obwaka and David Arnold, at the School of Chemical Engineering at the University of KwaZulu-Natal, in Durban, South Africa, considers the various biofuels policies in Africa by first analysing biofuels policies and practices in the United States, Brazil and China. The authors make an important observation: to reap dividends from the biofuels industry, a nation should be in it for the long haul. It is also beneficial if the industry enjoys political will. They also point out that biofuels should preferably be derived from non-food crops. The evolution of biofuels technologies is presented and a case is made that nations that joined the 'bandwagon' late can skip some stages and benefit from technologies in current use.

I hope you enjoy this, the last issue of 2009 and look forward to bringing you another selection of interesting topics in the new year.