To whom it concerns,

We were introduced to HydroFLOW Technology last year, and as all engineering minded persons, we were skeptical about the process, not well known in Hungary up till now.

We initially tested a small unit (HS-38) in the Experimental Facility at our MOL refinery plant, where our co-workers had a lot of problem with a vacuum pump in the past. The pump was so scaled up in 2-3 months that it could not be started up if it stopped. In the past it was dismantled and treated with acid to remove the encrusted scale.

The same pump operates without any problem since last march, when the HS-38 unit was fitted. Another unit was recently fitted for similar purposes.

An industrial unit (type C120Ex) was fitted at the end of last summer (2004) to serve a titanium plate heat exchanger in a hazardous environment (combustion hazard). In the past, the heat exchanger was dismantled every 4-5 months as it became dysfunctional due to excessive scaling. During servicing the plant did not have access to the heat exchanger leading to energy related problems. In addition the seals needed to be replaced after each servicing and this presented extra operating costs for the plant.

Since the HydroFLOW unit was fitted, there was no need to dismantle the heat exchanger. The consistency of the precipitate is powder-like, and in comparison with the encrusted scale that formed earlier, this powder can be removed from the plate heat exchanger with addition of 2-3% HCl (hydrochloric acid). If the heat exchanger was a different design (stacked pipes) the powder would be washed out of the heat exchanger with the flow, however in the plate heat exchanger, there are small spaces where the powder settles and accumulates. Nevertheless, it is no longer necessary to transport the heat exchanger for servicing, the seals need not be replaced, there is no down time, so this is still a more cost efficient solution than the one used before. A further HydroFLOW unit (type C100Ex) is being installed (2005) in another plant that will treat water for 3 stacked pipe heat exchangers.

On the basis of our experience, I highly recommend the application, which should be initially tested and then following approval, installed to selected final locations.

Please feel free to contact me if you have further questions.

Dr. Peter Olár

MOL Magyar Olaj- és Gázipari Rt.