THE PROBLEM

A subsequent inspection after 6 months confirmed that damage was continuing to progress through the wall, and the resulting damage found was slightly greater than predicted but within what was determined as safe. In this case, the client chose to refractory line the part of the vessel that was damaged to avoid having to run at derated conditions. However, the use of this advanced technology allowed them to operate the vessel where “conventional” practice would have resulted in a critical reactor being unavailable for 18 months at a huge lost opportunity cost.

We have also applied this technology on a proactive basis. This not only allows better predictions of expected damage but also enables our clients to optimize inspections by focusing on the most critical equipment and advising when sampling with the Buckeye Sampler™ may be warranted.

QUICK RESPONSE AND TECHNICAL EXPERTISE ADD VALUE TO A CAPITAL IMPROVEMENT PLAN

A refinery client planning major capital expenditures had to quickly decide between three major crude slates. E²G provided expertise to decide which crude slate was optimal from a capital investment plus future corrosion-related maintenance and lost production cost point of view. We had already performed an RBI study and a MOE for the crude unit. Thus, data was immediately available to quickly evaluate the corrosivity of each crude type against the constraints of metallurgy currently in place, as well as the planned upgrades. This major East Coast Refinery was provided with an analysis within two weeks that helped formulate its final capital project plan.

Meanwhile, the same client wanted to assess the feasibility of temporarily running higher naphthenic acid crudes (opportunity crudes). E²G devised an additive injection scheme plus inspection and monitoring plan to detect accelerated corrosion. As a result of this “cold-eye review” of their plan, changes were suggested that would help the refinery safely achieve its goals to take advantage of higher margins while assuring safe and reliable operations.