REFINERY APPLICATION

Hydrogen Measurement in Hydrocracker
Return on Investment in Less than 2 Months

H2scan HY-OPTIMA™ 1700AS

TECHNICAL BACKGROUND

At BP Cherry Point in Blaine, WA the GC previously used for measuring hydrogen purity off of the hydrocracker was approaching obsolescence. The site engineers were tasked with finding the most efficient, state of the art means for hydrogen purity measurement to replace the GC.

THE H2SCAN SOLUTION

Instead of replacing a GC with another GC, H2scan's HY-OPTIMA™ Model 1700AS (Analyzing System) was selected. The system included four hydrogen analyzers and four individual Parker Hannifin NeSSI substrates within a single enclosure. All streams exited to a common vent header which was controlled by the Parker VentMaster. The system has been in operation for two years and has resulted in significantly less maintenance in comparison to a GC.

> *"H2scan participated in a competitive bidding process with gas chromatographs...and was selected based on a series of factors including performance, cost and maintainability."*
> **- Ryan Holgate, Analyzer Engineer, BP**

And in addition, the H2scan analyzers provided real-time hydrogen indication, eliminating the need to pull samples to obtain the hydrogen indication within the process.

PROJECT BENEFITS

A miss on hydrogen purity can cost a refinery millions of dollars per year in diminished hydrocracker rate. H2scan is providing optimized catalyst-life through accurate, 24/7 hydrogen measurement.

H2scan's analyzers do not require sample pulling or a reference gas for operation. This results in simplified, less costly installation. An additional benefit is minimal maintenance required, providing significant cost savings over time.

Cost of Ownership ROI in less than 2 months

Approximate Cost Savings			
	H2scan	GC	Savings
Purchase	<$12k	$50k	$38k
Sample Integration	$15k	$25k	$10k
Installation	$40k	$50k	$10k
Shelter	$0	$350k	$350k
Maintentance per yr	$2k	$12k	$10k
Total Cost of Ownership for 2 year installation	<$71k	$499k	$428k