Kvaerner Power Gas Saves on Carbon Black Plant Expansion with DeltaV™ System and FOUNDATION fieldbus

RESULTS

- 60% saving in multi-pair cabling
- 20% reduction in cable trays
- Reduced control room cabinets, HVAC energy requirements
- 50% reduction in installation and loop checking time
- 25% reduction in terminations
- 30% reduction in I/O cards
- 25% reduction in system/marshalling cabinet space
- 20% reduction in control room area

TASK	REDUCTION	SAVINGS
Terminations	25%	
I/O Cards	30%	
System/Marshalling Cabinet	25%	
Control Room Area	20%	$4,460
Cable		$334,500
Cable Trays		$1,115
Man days for Loop Checking:	60 days	$89,200

APPLICATION

Each of two carbon black plants consists of about 120 control loops, 150 monitoring loops and 500 discrete I/O.

CUSTOMER

ACBC is Egypt's only producer of carbon black. Since its inception, ACBC has expanded twice to increase capacity.

CHALLENGE

For this expansion, the company wanted to: select a control system with tomorrow's technology, take advantage of digital communication with field devices, reduce overall automation costs, and allow for future system expansion and expandability.

SOLUTION

Kvaerner Power Gas (KPG) selected the DeltaV™ digital automation system and PlantWeb™ architecture from Emerson Process Management for Alexandria Carbon Black Co. (ACBC), to control its third carbon black producing unit. KPG and ACBC insisted on a technology that could deliver key benefits like reduced process variability, reduced engineering and installation costs, and reduced maintenance costs.

"If the potential of the system could be exploited in full, further saving could have been achieved."

M.N. Saha
Engineering Manager, KPG India

DELTAV™

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www.EmersonProcess.com/DeltaV

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ACBC selected the DeltaV system, which interoperates not only with FOUNDATION fieldbus devices, but also with H1 bus communication. The system's interoperability test report was available for necessary approval. The DeltaV system is the nucleus of Emerson's PlantWeb digital plant architecture, which leverages the power of intelligent field devices in an integrated suite. In addition to the DeltaV system, Emerson supplied H1 cards, AMSinside package, and over 50 FOUNDATION fieldbus-certified devices for the project.

Engineering and commissioning

KPG was involved in all aspects of engineering of the system and found it user friendly for engineering and commissioning. Loops started functioning as soon as communication was established between controller and field devices. This resulted in large savings in time and worry for loop checking.

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Emerson Process Management
12301 Research Blvd.
Research Park Plaza, Building III
Austin, TX 78759

www.EmersonProcess.com/DeltaV