Question 66: What desalter instrumentation issues do you experience when switching from a light gravity feed to a heavy gravity feed?

Chris Claesen (NALCO Champion)

The main influence is on level controllers, the most sensitive are the float type controllers but other instruments are also somewhat influenced by the crude Sulphur content.

Glenn Scattergood (NALCO Champion)

Increase in Amps, decrease in Voltage due to:

1.Heavy crude is more conductive, higher in metals content.

2.Heavy crude provides less naphtha used to preheat raw crude, desalter temperature is decreased, and dehydration efficiency may be decreased.

To determine which or both is occurring good monitoring of water in desalted crude along with chloride in both atmospheric and vacuum tower overheads is required.

Phil Thornthwait (NALCO Champion)

Float and differential level controllers are sensitive to changes in feed densities; operating in block modes between fuels and bitumen crudes for example can introduce difficulties in controlling the level. Heavier crudes also increase contaminants in the crude such as solids and metals and these can interfere with other types of level control. Also, these contaminants can influence the conductivity of crude, increasing amps and reducing volts.

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