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Core Lab

Pressurized Fluid Imaging System Datasheet

Fluid Characteristics

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Pressurized Fluid Imaging System



Core Laboratories has developed the Pressurized Fluid Imaging System for viewing reservoir fluids with a solids deposition potential under high pressure and temperature conditions.

This system was designed in consultation with and on the request of major oil producing companies, and will be used to determine conditions under which asphaltenes or organic solids become visible under a range of light conditions.

The PFI System is capable of viewing flowing or static fluids under varying pressure and temperature conditions. The depressurization component is automated to reduce pressure in the system over a period of 1 -100 hours over a pressure range of 0 - 20,000 psig. During depressurization, the pumps are continually circulating the sample through the flow cell. The imaging system is computer-controlled to allow image capture from < 0.2 seconds upwards. The entire depressurization process is digitally recorded and reported on video. The magnification allows viewing of deposits down to a range of 1.2 mm, or smaller, in size depending on the intensity of the light source. It is estimated the smallest viewed image would be ~0.6 mm. Particle size analysis software allows the evaluation of particle distribution by approximately 50 parameters.