PETROGRAPHIC ANALYSIS

SGS can provide a full range of coal, coke, and by-product petrographic services.

COAL PETROGRAPHY

Coal petrography is a microscopic technique used to determine a coals rank (degree of coalification) and type (amount and type of macerals) on polished specimens of minus 20 mesh prepared coal. Petrography is used as a tool to evaluate bituminous coals and coal blends in terms of their ability to produce blast furnace coke. Rank is determined by measuring the percent light reflectance of the maceral vitrinite. Type is determined using a point count procedure to obtain the volume percent of the various coal macerals, or fossilized plant remains. Coal petrography can also be used to determine whether contaminants are present in the coal and to detect oxidized coal in the sample.

DIGITAL IMAGING SYSTEM (DIS)

SGS has a Digital Imaging System (DIS) which can be used to determine coal blend percentages or to compare changes in quality of individual coals or blends over time. This system consists of a Zeiss microscope and digital camera, a computer controlled motorized stage, and software to compile and analyze the data. The DIS gathers over 5 million reflectance values for a single coal and over 9 million for multi-seam coals or coal blends to generate a reflectogram. Cursors can be set to isolate the various ranks of coals in a blend and determine their percentages.

COKE AND BY-PRODUCT PETROGRAPHY

SGS provides coal and coke petrographic services to determine parent coal blend percentages, troubleshoot quality problems, and evaluate impacts of coke operations on the resultant product. In addition, we can evaluate by-product quinoline insoluble (QI) samples to determine tar quality.

CONTACT INFORMATION

Email us at minerals@sgs.com
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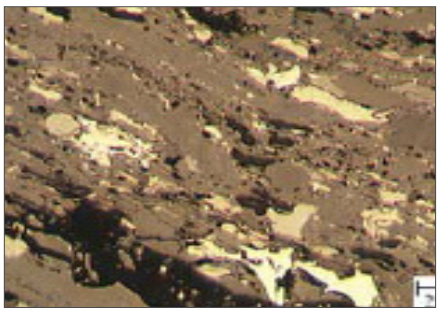
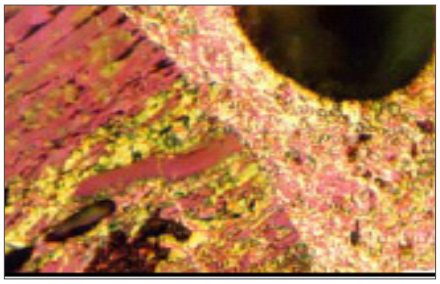


Coal Particle in reflected light (500x)



Coke in reflected light (500x)