MATERIALS CHARACTERIZATION

OVERVIEW

During a manufacturing process, there can be concerns with product defects, contamination, and even failure. It could also release undesirable emissions or by-products that could potentially lead to exposure for workers and surrounding communities. Materials characterization testing can identify these issues before they become a hazard in the following ways:

- Identifying foreign minerals in raw materials to certify purity of products
- Photographing surfaces of painted products to determine the source of defects
- Analyzing corroded surfaces and buildup on pipes to find the source of corrosion
- Identifying flaky, particulate material clogging airfiltering units
- Differentiating regulated and unregulated fibers in air samples for OSHA compliance
- Measuring new fiber products to assure compatibility with manufacturer goals
- Analyzing recrystallization residues affecting worker exposure

HOW CAN BUREAU VERITAS HELP YOU?

Bureau Veritas' microscopy group takes pride in providing unique solutions to challenging problems through materials characterization. We can determine sample composition, fiber and particle size, foreign substances or physical defects, material origination, and various other properties.

Utilizing sophisticated methods, including scanning electron microscopy (SEM), transmission electron microscopy (TEM), and optical microscopy, we analyze a variety of sample types, including:

Fibers/Particulate	Water/Sludge	Cast Metals/Ceramics
Stack Emissions	Residues	Composites/Polymers
Metals/Alloys	Corroded Surfaces	Product Failure Samples
Textiles	Building Materials	Nanoparticles

ABOUT US

Our experts have extensive knowledge of applied microscopy in diverse scientific fields such as mineralogy, geology, materials science, and engineering. Bureau Veritas is a member of the American Society of Testing and Materials (ASTM), the Microscopy Society of America, ASM International, and the International Metallographic Society.

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