RAPID PROTOTYPING

» Turnaround prototypes at 2X the speed of the competition
» Prototype in a wide variety of alloys, shapes, hardware connections, and sizes
» Use Mott’s proprietary 3D printing technology to create unique and complex geometries for filtration and flow control applications

SEM/EDS ANALYSIS

» Provides high resolution imaging of samples and elemental detection of inclusions, debris, stains, and contaminants
» Useful for various analyses of media, identifying areas for improvements, and avoiding potential failure or downtime
» Tests conform to ASTM E1508

CLEANLINESS TESTING

» Component flushing and rinsing and gravimetric testing
» Various microscopic inspection tests available, such as optical particle counting and sizing using Hirox 3D Microscope
» Tests conform to ASTM D5907

QUANTITATIVE CHEMICAL ANALYSIS

» Optical Emission Spectroscopy and Wavelength Dispersive X-Ray Fluorescence are capable of bulk, minor, and trace elemental analysis of materials and alloys
» Determine elemental composition of solids or liquids
» Tests conform to ASTM E227, E415, E1086, E1251, A751, E1009, E322, E572, E1085, E1031 and E1019
FILTRATION PERFORMANCE AND FEASIBILITY TESTING

» Measure clean flow rate vs pressure drop, turbidity, particle size analysis, gravimetric analysis, and evaluation of cake properties
» Testing is critical for confirming media selection and preliminary filter sizing
» Tests conform to ASTM F795

MECHANICAL PROPERTIES TESTING

» Perform tensile, compression, and three-point bend testing on materials. Additionally, macro and micro hardness testing is available
» Determine ultimate yield strength, ultimate tensile strength, elongation, and hardness
» Tests conform to ASTM E8/E8M, E18, E384 and B578

POROUS MEDIA CHARACTERIZATION

» Measure bubble point, max pore size, pore size distribution, and flow characteristics
» Determine design considerations for a product in order to meet your desired system specifications
» Tests conform to ASTM E128, F316, and ISO 4003-1977

FAILURE ANALYSIS AND LIFECYCLE TESTING

» Lifecycle testing on porous sheets is capable of measuring the effects of long term corrosion exposure, pressure cycling, and other processes that may alter mechanical integrity
» Critical to determining when parts will likely need replacement and avoiding production downtime due to unforeseen complications
» Tests conform to ASTM E1508

METALLOGRAPHY

» Metallographic sample preparation, SEM/EDS, and optical microscopy techniques can determine phases in alloys, grain sizes, inclusion content, and coating thickness
» Analyze metal media properties and characteristics
» Tests conform to ASTM E3, E1920, E112, B487, E407, and E340