Filtration Group Establishes Scientific Centers of Excellence at Clear Edge Filtration and Filtran to Accelerate Product Innovation and Provide Unparalleled Levels of Customer Support

Filtration Group has a longstanding history and global reputation as a filtration technology innovator through its individual companies. A critical part of Filtration Group’s innovation strategy centers on the establishment of cutting edge scientific centers that will drive innovation and field technical support across the companies in our core markets. These centers must have the latest analytical equipment and be staffed with engineers and scientists from a broad variety of disciplines who have years of experience in investigating and solving complex filtration problems.

Beginning in 2004, Filtran consolidated its laboratories outside of Europe into a modern facility in Stillwater, Oklahoma and established the Filtran Technical Center to serve customers in North America, Japan, Korea and China. The Filtran Technical Center was consolidated with all manufacturing operations in North America to a newly constructed facility in the Des Plaines, IL facility in 2009. Throughout this same period, Filtran’s European laboratories became a leader in innovation in the company’s core automotive markets in Europe. In 2010, Clear Edge set upon a similar path to upgrade its analytical capabilities by investing in two new state of the art filtration laboratories in Europe and North America. Today Filtran and Clear Edge’s scientific laboratories are unparalleled in driving innovation and supporting customers in core markets.

The next challenge in Filtration Group’s development is to accelerate innovation across all of our business by leveraging the combined analytical capabilities and extending these capabilities across the entire Filtration Group. The technical teams of Clear Edge and Filtran have been leading the way in the initial phase of this initiative, and considerable progress has already been made.

The first step in the process was to create a comprehensive compilation of the analytical and technical resources that exist today within the Clear Edge and Filtran scientific laboratories. For each laboratory a matrix of information has been developed that documents:

- The size of laboratory, number of staff along with experience and technical qualifications
- Innovation and management processes/tools used
- An inventory of analytical equipment and its capabilities

The key laboratory equipment has been divided into three distinct classifications: Core, Specialized & Filter Testing. Core is standard analytical equipment that includes mechanical testing, imaging and microscopes, and chemical/polymer testing capability. Specialized equipment includes other test equipment developed
for specific customers. Filter testing equipment includes flat sheet testing, flow and pressure drop testing, particle removal efficiency, pilot and mobile filter test equipment and specific testing software technology.

The information has been assembled and made available through an internet based sharing service that can be accessed by Filtration Group businesses and updated on a regular basis. This database enables a Filtration Group company to identify testing a testing capability that may enable it to develop a new product or provide a customer with additional technical support.

Another important aspect of the initiative was to document the extensive technical knowledge and expertise that exists within the Filtration Group Liquid Process and Fluid companies. The areas of expertise include:

- Liquid filters
- Air/Gas filters
- Filter media
- Product and Process Analysis
- Intellectual Property (IP) Management
- Equipment & software (e.g. CFD & FEA modeling, simulation and analysis)

A process is being built around these two databases that will enable us to quickly and easily identify and connect the appropriate technical resource to a particular business request. A technical coordinator will be appointed in early 2014 to process laboratory service requests for Global Filter and Jonell. In the Liquid Process Division, this resource will be headquartered from the newly developed state of the art process filtration Scientific Laboratory at Clear Edge Filtration in Tulsa, Oklahoma. Basic analysis that can already be conducted at this laboratory includes microscopy, flow, pressure and integrity testing. Additional capabilities will be added to the existing scientific centers as needs within the individual businesses are identified.

These initiatives will enable the Filtran and Clear Edge Scientific Centers of Excellence to accelerate innovation in their respective markets by leveraging their combined analytical capabilities in 2014 and beyond. Just as important, both scientific centers will be expanded to support additional businesses within the Filtration Group such as Global Filters and Jonell. This will enable these companies to speed development time and decrease costs, and minimize duplicate resources.

As Filtration Group continues to grow and acquire additional analytical and technical resources, the Scientific Center of Excellence Platforms will be expanding to provide new capabilities to the group. This
will enable our businesses to provide customers with the most advanced filtration media and solutions to solve their most challenging contamination control problems.

The following highlight just a few of Filtration Group’s analytical and testing capabilities:

Laser Particle Counter in the Media Development Labs at Clear Edge Germany

Cold Flow Test Facility at Filtran

Multipass Efficiency Test Stand at Filtran
New process filtration labs at Clear Edge Tulsa, US

Scanning Electron Microscope (SEM) and Energy-dispersive X-ray spectroscopy (EDX) in Media Development Labs at Clear Edge Germany

Flow Velocity Streamlines from Computational Fluid Dynamics (CFD) modeling at Filtran
Filter housing deflection as modeled by Finite Element Analysis (FEA) software at Filtran

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