



Forensic Analysis & Engineering Establishing Why... By Alan Hailston

Hampton Roads is fortunate that the national headquarters of the only internationally recognized forensic science and engineering firm calls Virginia home. From the planting of its original roots in Florida in 1966, Forensic Analysis & Engineering Corporation (FAEC) brings advanced capabilities as-to-fore not found in this area of the country. "And fate played a big part in this fortunate event," says FAEC's president and CEO Robert Kochan. It was another summer day in Houston. Kochan's career as a construction project engineer in the oil industry was going well. Then, out of the blue, Kochan received a phone call that would change his professional life forever. The voice on the other end was a referral by a local prominent attorney who wanted to discuss some forensic investigative work. After completing all of the normal introductions, Kochan jokingly asked "just what is forensic engineering?"

The man on the phone was a partner in a small forensic engineering firm in Houston. After consulting with his firm for a short time, Kochan's interest in answering the ever present questions of why and when an event occurred piqued his curiosity. "Later, when an invitation was offered to me to join the firm fulltime as their senior marine investigative engineer, I jumped into the field with both feet. That's when it all began," adds Kochan.

It didn't take long for Kochan, with his entrepreneurial spirit, to learn the business. After taking a number of years to perform forensic investigations, develop business clientele and manage operating budgets, Kochan broke away from the firm and purchased the rights to his uncle's 30-year-old engineering and construction firm. Founded in 1966 and based in central Florida, Kochan focused the direction of his new acquisition specifically into performing construction, system and product failure analyses. "The first point of our refocusing effort was to change the name of the company to Forensic Analysis & Engineering Corporation (FAEC) to more precisely indicate to businesses and the legal community exactly what the company could do for them," says Kochan. FAEC was later established with foreign corporation status in North Carolina in 1996 and has since grown to a team of over 55 multidisciplinary professional engineers, scientists and technicians. FAEC established its Hampton Roads satellite office in 2002 and later based its East Coast Operations center in Hampton, Va. in 2011. The firm has continued to grow and diversify by adding Forensic Marine Investigations International (FMI), a division of FAEC, as its marine investigative arm. FAEC and its experts at FMI can now be engaged from 18 contact points across the North American continent; from Honolulu in the west, east along the Gulf Coast, south to Miami and north to Maine. FMI also covers all of the major port cities along the U.S. east coast. "We live in a world where we never know what or where something will occur next. It seems like we've worked all around the globe at one time or another," says Kochan.

FAEC specializes in professional analyses and technically accurate engineering evaluations to provide unbiased, ethically based solutions to ultimately establish why a situation occurred. "There are many highly qualified forensic engineering firms across the United States. To my knowledge, FAEC (and its subsidiary FMI) is the only firm in the country and possibly the world, that offers its clients the type of specialization capable of performing and incorporating a totally scientific forensic analysis into the process of a forensic engineering-based solution," says Kochan. "Having the expertise in both areas is a major benefit to our clients and sets us apart from other firms. The required investigation becomes more thorough, technically accurate and court defensible."

Over the past 17 years, Forensic Analysis & Engineering has performed investigations in to the causation of single and complex vehicle accidents, residential fires, product defects and commercial construction failures. Questions regarding an individual's paternity, the legitimacy of someone's will or even the similarity of two patented items are all within the realm of the firm's expertise. FAEC investigates the full gamut; from performing fiber comparisons, evaluating gunshot residue, calculating bullet trajectories, measuring carbon monoxide poison levels, doing microscopic hair follicle comparisons as well as both chemical and metallurgical specimen identification.

Performing a legitimate forensic investigation is an extensive process. “In order to identify the specific causation of an event, we must seek to learn the truth about what was going on with the individuals involved as well as the equipment or the facility just prior to the subject event taking place,” says Kochan.

In a recent maritime event, the U.S. Coast Guard conducted an investigation into the circumstances of a local boating accident which resulted in the collision of two vessels and a tragic death. The licensed captain of the larger colliding boat, an off-duty U.S. Navy Reserve officer, faced civil, criminal and Navy judicial charges that could have resulted in a court-martial, loss of time in grade, loss of retirement benefits and financial judgments if he had been found guilty of negligent operation of his vessel. The plaintiff’s case rested on the U.S. Coast Guard’s investigation, which claimed that the broadside collision of the smaller fishing boat was due to the licensed operator’s negligence and excessive speed within an uncontrolled channel.

“The time and location of the collision were not in question. The visibility from each vessel’s vantage points and the actual speed of each vessel were the only necessary concerns. What needed to be analyzed further was the exact sequence and conditions of events that led up to the collision,” says Kochan. Team members of Forensic Marine Investigations International were called in by the defense team. FMI’s mechanical and marine engineers, working in conjunction with their naval architects, marine vessel operations experts and accident reconstruction specialists immediately went to work on the case. First, they verified that there was not a posted speed limit through the channel where the collision occurred. Secondly, further testing and research verified that the captain’s vessel was not designed or even capable of reaching the speed it was being claimed to have been traveling. FMI later secured video footage from the bridge overhead cameras (which the USCG failed to analyze) as well as Google maps and the recorded tide levels at the time of the collision. The distances shown on Google maps were then physically measured and cross verified for accuracy. The height and field of view from the captain’s operating position on his vessel was also determined. Precise measurements were taken of the spacing between bridge piling supports as well as the freeboard height of the wooden fender planks on each side of the channel under the bridge.

“When completed, our findings provided a very accurate representation of the precise conditions at the time of the accident. FMI was able to accurately determine the relative speeds of the two vessels. In contrast to the unsubstantiated statements issued by the USCG investigator, our analysis showed that captain’s vessel was in fact traveling at a much slower speed and that his vision of the smaller vessel was impaired due to low tide water levels and the height of the channel’s bridge fenderings. Ultimately, our findings determined that speed was not a factor, but rather, it was an issue of visibility. We concluded that it was impossible for the captain to have seen the smaller vessel and to stop his vessel within a reasonable distance and time in order to avoid the collision,” says Kochan. After presenting their facts and scenario of the accident, the judge dismissed the case and declared the captain not liable. This avoided a lengthy and costly trial, and more importantly, it negated any possible court-martial. “We were pleased to have been instrumental in preserving this man’s 20-year career with the U.S. Navy,” adds Kochan.

Robert Kochan acknowledges that his lengthy career at Forensic Analysis & Engineering could not have transpired if it were not for the professional support that he has received from his wife April, currently the firm’s corporate operations manager. Her interpersonal skills are a key reason why so many of the firm’s clients call her directly when they wish to re-engage FAEC’s services. They have come to know and appreciate her business acumen and interest in serving their particular needs. April Kochan and the other members of FAEC’s senior management staff continue to work together to provide their clients with the type of service that all professionals in Hampton Roads and around the country have come to expect.



Seated: Bob Kochan Back row L-R: Nancy Kim, Kelly McCutchen, Nichole Williams, April Kochan

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