



D33 Criminal Engineering and Science Without Consequences: Why?

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Learning Overview: The goal of this presentation is to share with the forensic science community the concerns and questions regarding the prevalence of criminal engineering and science within the automotive and other product manufacturing communities. The often-nebulous distinction between negligence and criminal behavior by scientists, engineers, and their managers will be explored.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing important and enlightening information and discussion regarding examples of the lack of consequences for those making decisions that predictably, negatively impact public safety.

Why are engineers, scientists, and their managers within this industry not held criminally responsible for their defective designs? Routinely, we find instances where engineers, scientists, and their managers make decisions which negatively affect public safety. The unethical (criminal?) environment that enables “crooked” engineers and their managers to get away with exposing the public to defective designs for sundry reasons are a malignant part of American industry. Personal bonuses and increased corporate profit are basic factors motivating such unethical behaviors. Those responsible typically never suffer the consequences of their designs or the decision to deploy them. For example, the Volkswagen® executives currently under arrest/indictment for spoofing smog controls are for relatively insignificant offenses compared to the design and manufacture of predictably weak seats, slackening seat belts, fuel tanks that are in the crush zone at the rear or side of vehicles, inertially releasing seat belt buckles, exploding airbags, and perpetually weak roof and door latch structures, all of which have killed thousands of children and adults. An example of particularly grievous behavior by the automotive industry, in collusion with the United States Department Of Transportation (DOT), was a regulation governing roof strength (FMVSS 216), which was supposed to be a “temporary” standard, but remained in force for more than 30 years. In 1996, the DOT declared that FMVSS 207 was “flawed and inadequate,” yet automakers continue to design to this standard. Additionally, automakers continue to design seats to the flawed and inadequate FMVSS 207. The latest known instance of negligence that appears to rise to the level of criminal action, is with the Boeing® 737 MAX. Commercial aircraft defects are particularly notable in that hundreds of people die at once, instead of one or two at a time in ground vehicle crashes. If an automobile mechanic cut a hidden portion of a seat belt that later resulted in the failure of the belt and consequent injury/death, he would likely be held criminally liable for “sabotage” of the vehicle’s safety system. This is NOT the case for those that knowingly introduce defective products into the stream of commerce. Why should those who introduce dangerous designs at the engineering department or the board room, be treated any differently than an individual that intentionally disables a safety system?

In 1966, Dr. John Stapp, pioneer of American automotive safety testing and regulation, proposed that the automotive industry and its personnel be held individually criminally responsible for their actions that resulted in dangerous vehicle designs. Obviously, his insightful recommendation, based on well-known and documented human behavior, was rejected. It is this study’s position that the undue political and financial influence of industry and the lack of appropriate laws and/or enforcement are the reasons that such murderous behavior has been and continues to be allowed. Adults and children continue to needlessly die. Why?

Criminal Engineering and Science, Defective Engineering Decisions, Consequences-Negligent Engineering