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Traits to Dig for in an Engineering Expert

By Gennaro G. Marino, Ph.D., P.E., D.GE – January 21, 2014

An effective expert engineer is a person with a broad range of talents not usually associated with the personality, training, and experience of engineers. Finding an engineer who can translate the engineer's perspective to address the relevant issues in your litigation can be challenging.

Sound Engineering Opinions

The standard to which a court will hold an engineering expert is a "reasonable degree of engineering certainty." What does this mean? Some will argue this means you only have to be more certain than not in the conclusions you reach. In taking this position, a forensic engineer can be put in a precarious position if he or she is only slightly more certain. In this situation, a conclusion reached is much more susceptible to invalid assumptions made and to subsequent facts discovered about the case. In turn, an expert who performs a sound engineering investigation and analysis is much less vulnerable and can better withstand the test of cross-examination.

Caution should be exercised if the expert is willing to opine with little investigation. The engineer who is an overzealous advocate can be a liability as additional data become available.

Integrity

A key point for an expert is his or her integrity. This is especially true in engineering cases where technical opinions are the basis of the case. Here, an expert with exposed and perceived integrity issues fails the "taste test" for the laypeople in the jury box. Issues of integrity are many times a focus of cross-examination and can destroy an expert's credibility.

Analytical Skills

Your expert should have an ability to uncover and understand the key issues in the case. Often, during his or her investigation, a good expert will discover important information and issues that were not known before. Unfortunately, however, the engineering expert many times does not focus on the legal significance in his or her investigation. This includes not only liability issues but also the damages aspects of the case. Winning the case in court means little if the damages awarded are small.

Confidence

Your expert should have the ability to opine confidently on his or her findings. Combined with being an integral part of the expert's personality, this is related to the engineering expert having a sound approach to his or her investigation. When a sound approach is taken, confidence should be evident in the expert's testimony as a reflection of the expert's internal certainty in the quality of his or her work.

Good Argument Skills

An engineering expert with good argument skills, armed with a sound analysis, can effectively turn a case. Because of the technical issues involved, the engineering expert should have the ability to assist with preparation for deposition and trial by suggesting effective cross-examination. The expert should also have a knack for evaluating inconsistencies in opposing expert opinions. This can apply to one expert or more than one testifying on the same issues.

Report Writing

A well-thought-out forensic engineering report should be the foundation of your expert's opinions. The expert should have the ability to state all opinions clearly, demonstrate thorough analyses, and provide sufficient backup



and references. When retaining an expert, don't hesitate to request a writing sample; a prior forensic report can assist in your selection.

Trial Preparation

Your engineering expert should be capable of preparing clear and concise testimony focused on the key issues for direct examination considering his or her audience. In addition to an outline that lays out the facts, analyses, and the expert's resulting opinions, it is important that your expert be able to assist in creating effective illustrations or exhibits. Persuasively illustrating relevant engineering issues in the case can be essential to communicating with the jury.

Trial Communication Skills

Your expert should have the ability to present a concise and simple message about the important aspects of the case and the ability to maintain credibility through cross-examination. Arguing arcane engineering points only provides a distraction and wastes precious courtroom time. For example, in a bench trial, another expert and myself were to testify on overlapping subjects.

The best insurance on cross-examination is a careful forensic investigation based on sound methodology. The expert should have the ability to address such issues when presented. For example, at deposition, opposing counsel may request every minute piece of information on the project in order to uncover any data contrary to the expert's opinions. Your expert should be able to address such issues head-on at his or her deposition and thereby deprive opposing counsel of any ammunition for cross-examination at trial.

Of course, the foundation of an expert's performance during trial is his or her speaking and teaching ability. Engineering can be made quite boring. Therefore, your witness should be animated and likeable in a courtroom setting. When interviewing a potential expert, ask for references of other attorneys the expert has worked with whom you can contact regarding his or her trial abilities. One test of an expert's teaching ability is whether he or she is capable of making you understand the science or engineering of the case. Another test is to have the expert explain the essence of a case he or she worked on in the past. Obviously, this test would be most effective in person, if the case merits it.

Qualifications

Although intuitively it appears that the stronger the credentials, the better the expert, this is not necessarily the case. At trial, the jury will assess the testifying expert based on a combination of all of these skills. A brilliant expert who cannot communicate will be much less effective than an expert of only average credentials but who is a gifted teacher who can simply and persuasively communicate the essence of your case.

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