

DAMAGE COMPLAINTS: DAMAGE POTENTIAL, PRE-BLAST EVIDENCE, HUMAN RESPONSE

David R. Ziegler
Sauls Engineers, Incorporated

ABSTRACT

The concept and facts concerning "threshold blast damage" are not considered "general knowledge". Perhaps because of a lack of knowledge, understanding, and experience of blasting effects, property owners and lay-persons may attribute a wide range of common cosmetic conditions to "blasting damage".

Research has shown that even threshold damage is unlikely to occur at, or below, a regulatory level of 2.0 inches/second. The raw data from applicable studies, as well as our experience, find many cases of considerably higher vibration levels which did not result in damage, or claims of damage.

What property owners do know, is that blasting effects (ground vibration or airblast) are responsible for structure responses that they can feel at their property. A typical human response is to then look for, and often find, "damage" conditions which they attribute to the blasting operation.

Blasters are sometimes too quick to believe that a property owner is 'just trying to get something for nothing.' Though this may occasionally be true, our findings and beliefs are quite the opposite; most damage claims come from people who honestly and truly believe that they have suffered damage.

A great majority of damage claim investigations find no physical evidence or data which indicate blasting effects as the cause of the damage claimed. In fact, a majority of investigations find evidence that the condition(s) were pre-existing.

A discussion of the human response leads to a greater understanding of the reasons why damage claims are so prevalent, and the need for pre-blast inspections and seismic monitoring. This presentation discusses some of the aspects of human response, and the need for a prompt, thorough, and comprehensive investigation of damage claims, by a highly qualified and skilled expert.

In the following discussions, when reference is made to blasting effects, this is normally referring to either airblast effects, ground vibration, or a combination of these effects.