

Glass Assessment Tools – Purpose and Proper Field Application

Have you ever been left wondering about the glass in the windows of your facility? Knowing this information is critical to determining if the windows can withstand the blast loading associated with the detonation of a nearby explosive device or other aggressor tactics targeting your windows. Construction drawings or markings on glass alone are not always adequate to know what's been installed. There are tools that can be used to assess glass panes in windows and doors.

For example, a thickness gauge (Figure 1) can be used to measure the thickness of glass and air gap in various combinations of single or multi-pane units. This gauge will also indicate if the glass is laminated or filmed. When placed against the glass and activated, the gauge will display lines that indicate the edges of each of the glass panes and air gap that make up the window glazing. A moveable scale allows the user to quickly determine the thickness of each layer, including any interlayer or film, across the glazing cross-section (Figure 2).

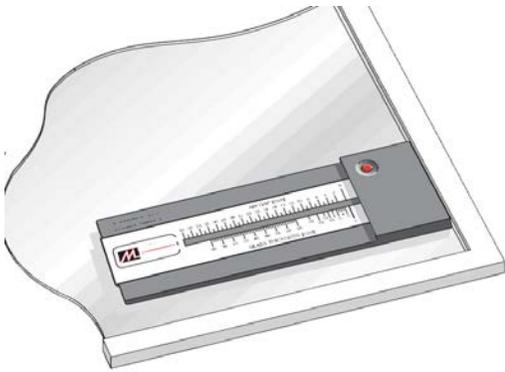


Figure 1.



Figure 2.

Another helpful tool that's available is a material gauge. This particular tool will indicate if the various panes of glass have had a strengthening treatment applied to them. The gauge shows colored lines that represent the surfaces of each glass pane (Figure 3). Depending on variations of the colors displayed it can be determined if a pane of glass has undergone some form of strengthening process (Figure 4). While not able to provide specific properties, this tool does indicate if you're dealing with common annealed glass or a stronger type of glass.



Figure 3.

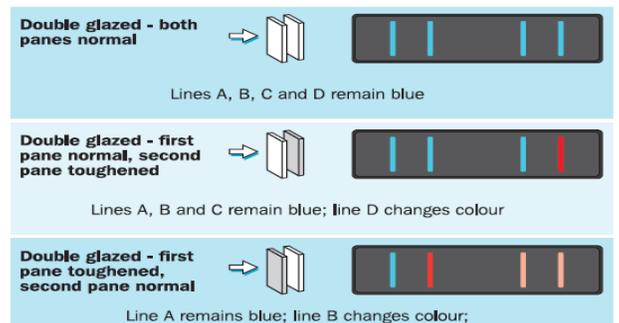


Figure 4.

Glass assessment tools are very helpful in providing accurate information for assessments, resolving construction issues, verifying as-built conditions and other situations. The PDC has these tools on hand and have personnel trained on their use. Please contact Bill Veys at 402-995-2379 or Matt Tomanek at 402-995-2382 with questions about glass assessments, glazing materials, window standards, blast resistant windows, window testing, windows software, windows training, etc.



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