

# FUSED GLASS VS. TEMPERED GLASS

	TEMPERED SIGHT GLASS	CANTY FUSEVIEW™
<b>STRENGTH:</b>		
BRITTLE	If it is scratched, the scratch will subsequently elongate. It then fails. REPLACE IMMEDIATELY!	Scratches do not affect safety or life.
RESIDUAL STRESS	You create residual stress when bolting up. Rebolt will cause excessive residual stress and cracking. FAILURE SOON FOLLOWS!	Bolt, unbolt, inspect or clean daily for many years. No residual stress problems.
ANNEALING	Glass anneals at temperatures as low as 200F. Therefore, the 3:1 tempering enhancement is destroyed.	Temperatures below FuseView™ rating do not affect it. Pressures through 10,000psi available. Temps to 2,000F available.
<b>IMPACT:</b>		
SHOCK	Impact (shock) causes catastrophic failure - shatters into a multitude of small fragments.	Dropping, hitting, rapid pressure changes do not affect FuseView™. Reference CANTY impact test report.
LAMINATING	Multiple glass layers (usually two) are laminated together to increase strength. Limited results. Temps above 450F cause rapid delamination and loss of optics. Thus, at high temps only one piece of glass can be used, yielding lower safety.	Laminating is not necessary for improving strength or impact capability.
<b>TORQUING:</b>		
SENSITIVITY	Torque allowed is very low. It is easy to over torque, and crack glass.	You can strip the bolts without damaging the FuseView™!
GASKETS	Two (2) soft gaskets are required to eliminate loading point.	Only one gasket is necessary!
IMPOSSIBLE TOLERANCES!	One foot pound or less total torque differential from bolt to bolt.	No concern about torque. You're torquing metal on metal. Just try to crack it!
NON-ANSI	The stud pad must be purchased special from the sight glass supplier.	CANTY fits to standard ANSI dimensions. You don't have to buy the stud pad from us.
<b>SEATING:</b>		
FLATNESS	Must be within .003" to prevent point overload.	Impossible to cause improper working tolerance due to corrosion or handling.
FINISH REQUIRED	62 RMS is required to avoid point overload.	The finish does not affect the FuseView™.

**Cont. On next page...**

# FUSED GLASS

VS.

# TEMPERED GLASS (cont.)

	TEMPERED SIGHT GLASS	CANTY FUSEVIEW™
<b>CLEANING:</b>		
STRESS	When you unbolt - THROW IT AWAY! (See residual stress above).	You NEVER THROW AWAY a FuseView™!
SPRAY CLEANING	NOT ALLOWED! You could never achieve the necessary sealing tolerances (see Torquing above)	CANTY spray ring is perfect for both liquids and gases - gas, air, nitrogen etc. Spray ring can actually extend sight glass usage. THIS IS A CANTY SPECIALTY!
<b>SPECIAL PACKING:</b>		
CREEPING	Low torque does not allow you to handle the Teflon (etc.) gasket creep.	USE WHATEVER TORQUE YOU NEED as specified by gasket manufacturer and your process.
LEAKAGE	Low torque does not allow you to handle leakage problems easily.	USE WHATEVER TORQUE YOU NEED as specified by gasket manufacturer and your process.
SAFETY	Creeps and leakage cause high labor cost and can allow <u>unsafe</u> vapor emission into your plant.	You can torque until you strip the bolts. <u>It will not affect FuseView™ safety or life.</u>
<b>CERTIFICATION:</b>		
VESSEL	See note 1.	Yes, it is <u>always</u> certified.
SIGHT GLASS	No, never certified, unless it is a CANTY FuseView™.	<u>YES CANTY CERTIFIES!!!!</u>
QUALITY CONTROL	No quantifiable QC on the tempered process.	CANTY quality manual is available upon executive request.
QC TESTING	No manufacturer sample tests... lot tests or otherwise.	CANTY hydrotests at 1.5x rated pressure. CANTY provides testing to ASME code on non-standard components.
DATASHEET	It is attached....BUT.... No one stands behind it.	CANTY states characteristics and certifies it!

**Note 1: Pressure vessels are manufactured to ASME code. The additional expense of material testing, and certifying, welder qualifying, and engineering calculations to code are a premium that provide for a safe, reliable system. Why is it that tempered sight glasses (the part you extend your head over) have no testing, QC, or certification on the tempered glass?**