

JM CANTY
PROCESS TECHNOLOGY

CANTY FUSEVIEW™ VS. TEMPERED SIGHT GLASSES

	Tempered Sight Glass	Canty Fuseview™
○ STRENGTH		
●Brittle	If it is scratched, the scratch will subsequently elongate. It then fails. REPLACE IMMEDIATELY!	Scratches do not effect 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 200° F. Therefore, the 3:1 tempering enhancement is destroyed.	Temperatures below Fuseview™ rating do not effect it. Pressures through 10,000 PSI available. Temperatures up to 2000° F available.
○ IMPACT		
●Shock	Impact (shock) causes catastrophic failure - shatters into a multitude of small fragments.	Dropping, hitting, rapid pressure changes do not effect Fuseview™. Reference Canty impact test report.
●Laminating	Multiple glass layers (usually two) are laminated together to increase strength. Limited results. Temperatures above 450°F cause rapid delamination and loss of optics. Thus, at high temperatures only one piece of glass can be used, yielding lower safety.	Laminating is not necessary for improving strength or impact capability.
○ TORQUING		
●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. Your 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.
○ SEATING		
●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 effect the Fuseview™.

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○ CLEANING

- 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.. Spraying can actually extend sight glass usage. **THIS IS A CANTY SPECIALTY!**

○SPECIAL PACKING

- 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 unsafe vapor emission into your plant. You can torque until you strip the bolts. It will not effect Fuseview™ safety or life.

○ CERTIFICATION

- Vessel *See note 1.* Yes, it is always certified.
- Sight glass No, never certified..unless it is a Canty Fuseview. **YES CANTY CERTIFIES!!!!**
- 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 @ 1.5 rated pressure. Canty provides testing to ASME code on non-standard components.
- Data Sheet 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, Q.C., or certification on the tempered glass?

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