

Ricochet Testing
for
90gr PolyFrang 9mm Projectile
PolyFrang, LLC
Research and Development Laboratory
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Scope

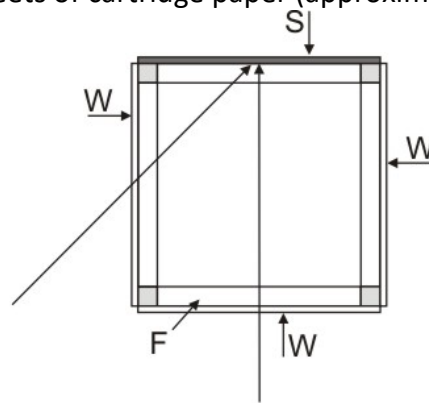
Test verifies that the bullet will not produce dangerous fragments or excessive penetration.

Boundary Conditions

Bullet velocity 381mps. Pressure 36kpsi.

Materials and tools

- Glock 19 Gen 4 with Glock magazines
- 500 mm x 500 x 500 wooden test frame for mounting the steel plate and witness sheets. The frame (F) shall be made of approximately 40 mm x 40 soft wood
- 10 mm x 500 x 500 steel plate, nominal hardness of 500 HBW (Brinell); AR500 steel plate
- 500 mm x 500 witness sheets of cartridge paper (approximately 270g/m²)



Test frame for frangibility test as seen from above showing 0° and 45° impact angles.

Sampling and test specimen preparation

Random sampling. Sample size was n=6+6. Ammunition maintained at room temperature for greater than 2 hours.

Method

Witness sheets were stapled to 5 sides of the test frame. Clear packing tape was used to seal all seams of the witness sheets. A shot was fired at the steel plate (S) at the prescribed angle to surface normal through the witness sheet (W). Shooting distance is 5 m. Testing was carried out 6 times for each defined angle. The impact angles were 0° and 45° to surface normal of the steel plate.

Reporting

The results produced zero perforation of witness sheets and the images are included below. No penetration of the steel plate was seen, and the image is included below.



0 deg, front



0 deg, top



0 deg, bottom



0 deg, right



0 deg, left



45 deg, front



45 deg, left



45 deg, top



45 deg, bottom



45 deg, right (reused)



AR500 Steel Plate