Intermediate and High Velocity Gas Gun

Velocity range:
- 20 - 225 m s\(^{-1}\) with a 150 g projectile (30 - 3797 J)
- 80 - 350 m s\(^{-1}\) with a 15 g projectile (48 - 918 J)
- 100 - 410 m s\(^{-1}\) with a 3 g projectile (15 - 252 J)

Two firing configurations:
- Single projectile with a 38 mm bore x 4.6 m length barrel
- Tri-fire with three 25 mm bore x 4.6 m length barrels
- Fires three projectiles simultaneously to simulate warhead fragmentation damage
- Sequential impact with controlled impact location

Sample sizes & boundary conditions:
- 100 mm x 100 mm to 280 mm x 280 mm
- Simply-supported & fully-clamped

Repeatability:
- ±0.15 m s\(^{-1}\) for velocities less than 120 m s\(^{-1}\)
- ±0.31 m s\(^{-1}\) for 120 m s\(^{-1}\) to 400 m s\(^{-1}\) velocities

Data acquisition:
- Rosemount pressure transducer
- Dell PC data logger
- Two CED Millennium photoelectric chronographs
- Four magnetic induction velocity sensors
- High speed photography available (400,000 fps)

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