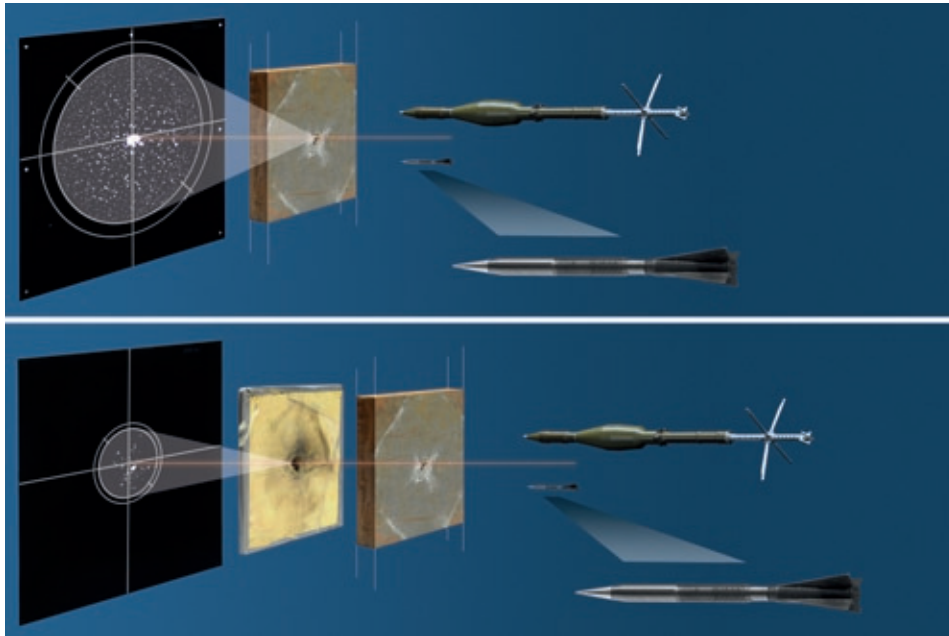


EVALUATE THE PERFORMANCE OF YOUR SPALL LINERS



TNO innovation
for life

TNO has developed a dedicated test method to evaluate the ballistic performance of spall liners. Although no international standards are prescribed, TNO can accurately and consistently determine the reduction of the spall angle as a result of using spall liners.

THREATS LEVELS

The test-setup is compatible with any shape or size of armour and spall liner. If it is desired TNO can provide the armour samples. In the indoor large caliber facility a large array of threats are available for the spall liner test. Most commonly TNO uses EFP, shaped charges and KE projectiles ranging from 20 mm to 35 mm. The facility is equipped with X-ray shadowgraph equipment and can provide high speed images to further analyze the spall liner test.

PERFORMANCE

To determine the spall angle TNO uses accurate digitizers to measure the fragment impact locations on witness plates. The image of the witness plates is then processed to measure the spall cone reduction.

- Standardized method for analysis of spall liner performance
- Digital analysis of spall cone
- Method accurate and consistent
- Well acknowledged method within industry



*Spall liner setup with armour
and shaped charge*

TNO.NL

TNO

TNO is an independent innovation organisation that connects people and knowledge in order to create the innovations that sustainably boost the competitiveness of industry and wellbeing of society.

TNO focuses its efforts on seven themes including Defence, Safety and Security: TNO works on a safe and secure society by creating innovations for people working in defence organisations, the police, emergency services and industry.

CONTACT

Bastiaan Geluk

E bastiaan.geluk@tno.nl

T +31 888 66 84 20

[TNO.NL/BALLISTICS](https://tno.nl/ballistics)