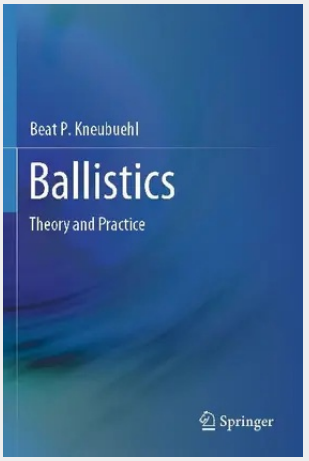
Kneubuehl

Ballistics

Theory and Practice



This work provides comprehensive, practice-oriented coverage of ballistics. It explains the principles and calculation methods for the main four areas of ballistics, regardless of calibre, drawing on numerous facts, observations and examples from the author's decades of experience.

The characteristics of explosive materials (detonating agents and propellants), methods for calculating gas pressure and the velocity of projectiles and rockets during the acceleration phase, alternative systems for accelerating projectiles and the acceleration of fragments.

The dynamics of the moment at which the projectile leaves the muzzle and propellant gas is ejected from the barrel, effects on the person or structure supporting the weapon and approaches to resolving questions regarding shots from close range in criminology and forensic medicine.

: The forces acting on a projectile and methods for calculating them, models for calculating trajectories (including the ballistic coefficient), gyroscopic projectile stabilization theory and aerodynamic optimization of projectiles.

Empirically-derived facts and data. The principles of ballistic protection design, ballistic testing problems and possible solutions and a comprehensive discussion of ricochets – a matter of considerable importance in forensics.

This book is intended for ballisticians, military personnel, police officers, criminologists, shooting range specialists, sport shooters, hunters and anyone else with an interest in ballistics.

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