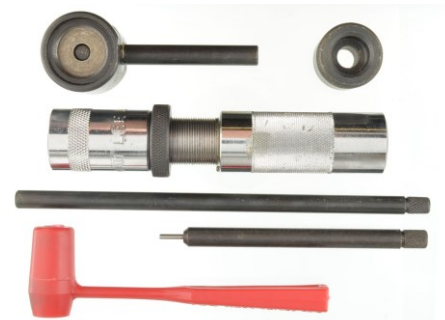
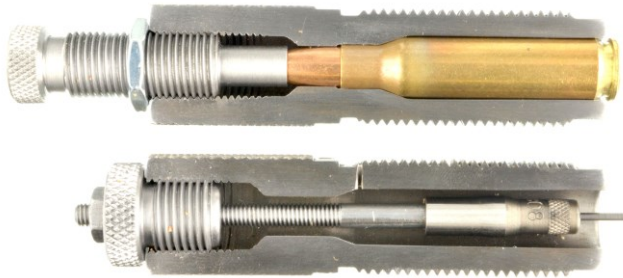


Toolmarks on Reloaded Ammunition

Forensic Training Class



Where:
86916 Landsberg,
Bavaria, Germany
FSG Sandau Shooting Range

When:
April 08th – 12th, 2024

Language:
The class will be
held in English

Instructor:
Axel Manthei
Firearm Examiner

Contact:
Axel Manthei
Albrecht-Nützel-Weg 29
86916 Kaufering, Germany
info@cartwinpro.com
Phone +49-8191-66704

Reloaded ammunition may be encountered by the firearm examiner in the forensic examination of evidence. Identifying it as such ammunition is of importance. Toolmarks of the reloading process can identify the reloading tools used. But they may also interfere with the identification of a firearm. This hands-on training class will specifically address reloaded ammunition from the view of the firearm examiner.

- Practical, hands-on reloading techniques, with single stage and progressive reloading machines.
- Toolmarks and the tools they are produced with will be examined.
- Explanation of the different tools and dies involved in the reloading process.
- Case cleaning methods and their effect on breechface, extractor and ejector marks.

- Origin and persistence of toolmarks on the cartridge cases and primers after firing.



- Hands-on practice of the different bullet manufacturing processes used by reloaders.
- Toolmarks on the bullets.
- Hands-on conversion of commonly available cases into obsolete calibers.



- Reloading methods for obsolete calibers (rimfire – pinfire).



- Sources for reloading tools and dies.
- A thorough review of reloading components (projectiles, cases, primers and propellants).

- Introduction to the examination of reloading accidents with blown up firearms.



- The history of reloading.
- Historical reloading tools.
- Finally,
Test the newly acquired knowledge with multiple test examples:
"Is it a reloaded cartridge?"

Different toolmarks on reloaded cartridges will be examined and evaluated by the students.



Equipment available:

Reloading equipment
Bullet manufacturing equipment
Stereo Microscopes
Comparison Microscope
Modern equipped class room
Shooting range

Tuition fee

Tuition Fee € 1090,- Euro / student
(+VAT if applicable)
including

- Monday through Friday class
- 100-page work book
- All components (bullets, cases etc.) used during the class



The modern equipped class room



Test firing of reloaded ammunition on the shooting range

Axel Manthei,
Ing. (EUR ING)

Forensic Scientist
Firearm Examiner
Accomplished Target Shooter



Axel Manthei has an engineering degree in firearms design and ballistics from the HTBL Ferlach, Austria. He was employed as a research & development engineer with UMAREX for 6 years. Since 1988 he is working as a Firearms Examiner in a large German Police Crime Laboratory, and has examined crime scenes in Europe, Asia and South America. He also owns his own company which produces the well-known Ammunition Database CartWinPro.

Axel is a Distinguished Member of the Association of Firearm and Toolmark Examiners (AFTE). He has presented numerous papers at AFTE (Association of Toolmark and Firearm Examiners), ENFSI (European Network of Forensic Science Institutes) and other forensic conferences in the US, Africa and across Europe.

Also, he is an accomplished target pistol shooter on an international level. He has competed in Europe, America, Asia, Africa, Australia and the Middle East and has been a US-National Champion as well as World Champion. In this capacity he reloads his own ammunition since 1977. In these 45 years the cartridges he has produced probably exceed a quarter of a million rounds.



The combination of being a handloader and a forensic scientist in the field of firearms and ammunition prompted the idea of a class in the forensic aspects of reloading for firearm examiners in 1999. Since then, well over 300 firearm examiners from 17 countries have taken part in this seminar.