

BPSIS Ammunition Casing

PROJECT SCOPE Provide coating capable of withstanding aggressive Star Crimp at the case mouth without flaking.

PRODUCTS
Ducta-bright 7a® Nickel



Figure 1: Ducta-bright 7a® withstands the extreme crimp of the Lehigh BPSIS Casing.

“I was pessimistic about finding a finish for the BPSIS application. Ducta-bright 7a® performed flawlessly providing a bright and durable nickel that will help ensure our rifle performs when it counts.”

- David Fricke, Lehigh Defense.

Overview

Ducta-bright 7a® Nickel is the cornerstone finish within APT’s family of ammunition and firearm finishes. It was developed in 2010 in response to growing demands within the self-defense ammunition market for a ductile, bright nickel process that could reliably withstand the extreme stress that occurs when casings are loaded and fired repeatedly. Traditional bright nickel systems have organic brighteners added which increase the stress in the deposit. This results in a finish that can often crack or flake during loading and/or firing.

Ducta-bright 7a® was developed in response to this in a year-long R&D project at APT. The goal was to create a ductile and bright nickel deposit that would be optimized for the most aggressive ammunition applications. Of the 40 process variants that were developed and tested, group A within Lot 7 produced the best combination giving the process its signature name.

CHALLENGE

Recently Dave Fricke, President of Lehigh Defense, approached APT with a challenge for his new BPSIS (Black Powder Substitute Ignition System) casings. Dave needed a coating that would withstand the extremely aggressive star crimp at the case mouth without flaking. To say the crimp is aggressive is putting it lightly...the casing mouth is essentially turned into modern art through a dramatic crimp/fold process.

SOLUTION

APT Engineering recommended Ducta-bright 7a® nickel for the application and the results illustrate how truly durable the deposit is. The nickel finish remained fully adherent and did not crack or flake even despite the brass itself beginning to craze due to the extreme yielding of the crimp process.

Dave who was doubtful if he would find a finish suitable for the BPSIS was thrilled, “I was pessimistic about finding a finish for the BPSIS application. Ducta-bright 7a® performed flawlessly providing a bright and durable nickel that will help ensure our rifle performs when it counts.” Lehigh Defense is known for innovation in projectiles and firearm applications.