



providing world-class leak test and assembly verification solutions

AMMUNITION TESTING

Problem:

An ordinance manufacturer is required to audit test assembled ammunition to insure that there are no defects in the assembly process. They currently are using a water tank dunk with a vacuum pulled on the tank, and then looking for bubbles. All the rounds that are dunked must be discarded, to insure that none were compromised by the water. The manufacturer wanted to find a better way to test without having to toss out good product.

Test requirement:

Develop a method that allows the manufacturer to test both 7.62mm and 50 caliber rounds in the same test stand, which will allow the good parts to be returned to production.



CTS Solution:

Cincinnati Test Systems developed a four station test stand that can be manually loaded with either the 7.62 or the 50 caliber rounds. When the rounds are placed in the nest and lifted and locked into place, the test stand recognizes which round is to be tested and automatically selects the correct test program. The Sentinel™ I-24 leak test instrument then outputs a signal to the CTS Connect™ air actuated connector which then seals the round in the chamber and conducts a volumetric fill test under vacuum to detect any defect in the round which would cause a loss of vacuum during the test cycle. The I-24, with its five tooling control capability and its 12 inputs and 8 outputs meant that a PLC was not required to run the station, resulting in a much lower cost and simpler design.

The Result:

The manufacturer is able to save enough cost in wasted audit rounds to pay back the cost of the test stand in a six month period. It also made the job a lot more pleasant for the audit tester, not having to deal with the wet rounds.

