

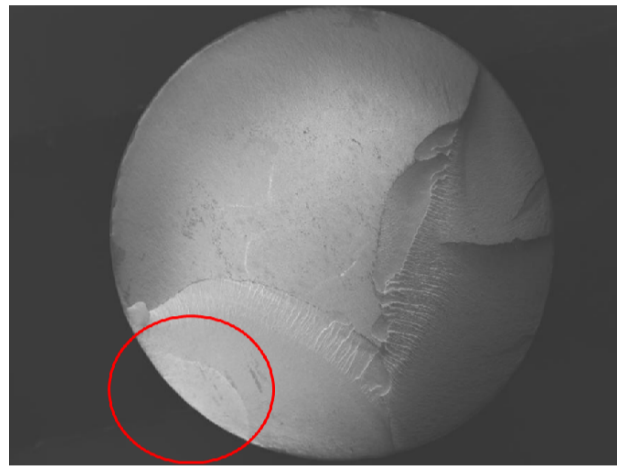
# Resolving Punch Failures

Learn how our Material Support & Solutions team solved this customer material issue.



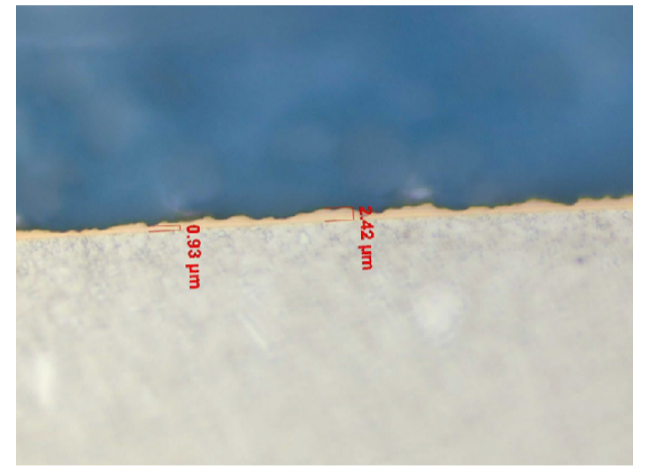
## THE PROBLEM

The punch life in a customer's die decreased significantly from 700,000 hits to less than 20,000 hits. These punch failures resulted in lower productivity and required sorting to remove non-conforming parts.



## THE ANALYSIS

Titanium carbonitride coating thicknesses and surface hardness's of new and used punches were evaluated. In addition, fracture surfaces of broken punches were examined. The coatings on the punches with premature failures were found to have accelerated wear.



## THE SOLUTION

The accelerated wear was due to insufficient coolant during the highspeed stamping process. Process controls were implemented, and punch life returned to 700,000 hits.

## — THE ACTION

When you have tool & die issues, contact the Material Support & Solution team at Worthington.