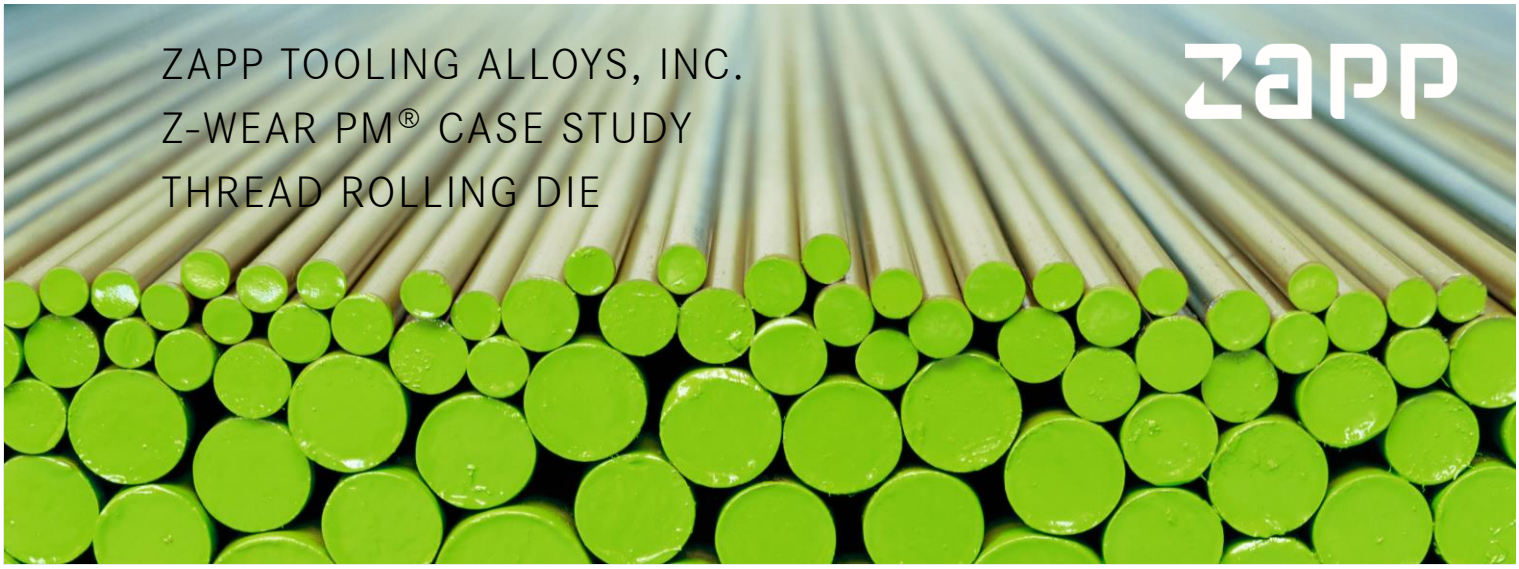

ZAPP TOOLING ALLOYS, INC.
Z-WEAR PM® CASE STUDY
THREAD ROLLING DIE

TOOL TYPE
Thread Rolling Die

WORK MATERIAL
Rebar at 2 1/8" diameter

ORIGINAL TOOLING MATERIAL
D2 at RC 59

PROBLEM IDENTIFICATION
The D2 thread roll dies experienced premature wear. Efforts to harden the D2 beyond Rc 59 resulted in catastrophic failure with the dies splitting from the OD to the ID.

RESULTS
D2 thread roll dies were used to thread 120 to 150 feet (1440-1800 lbs) of 2-1/8" dia rebar before wearing out. Attempts to increase the wear performance by hardening to above Rc 60 resulted in the dies splitting. The customer substituted Z-Wear PM® at Rc 62 and saw tool life improve to 1113 ft (13,350 lbs) before wearing out, an improvement of 750% to 900% compared to the D2.

SOLUTION
Z-Wear PM® heat treated to RC 62

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Further information regarding our products and locations are available in our image brochure and under www.zapp.com

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