

# PT Wedge Manufacturing Process, Quality Control and Tolerances

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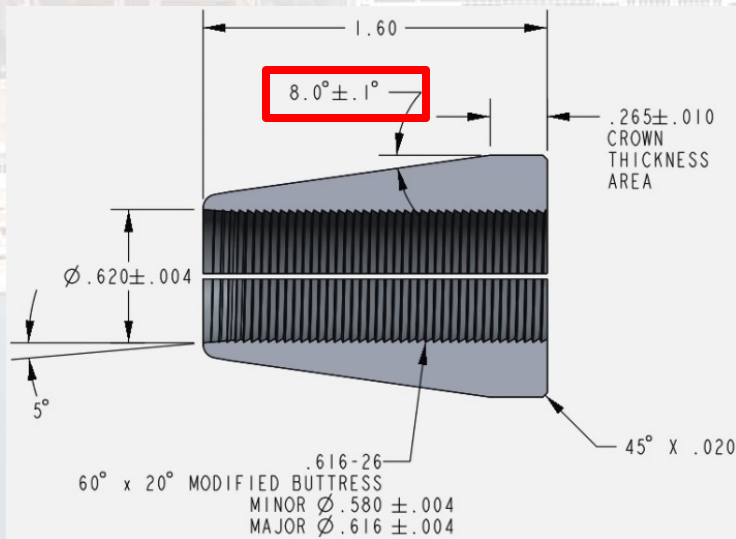


# Wedge Seating and Stress Distribution

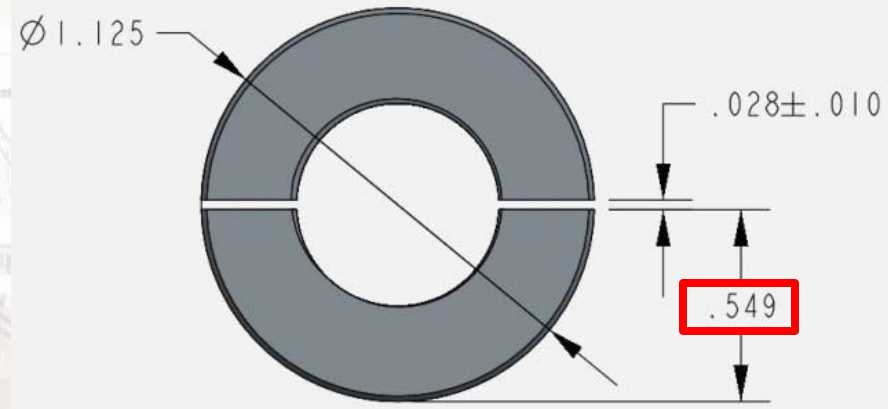
- VIDEO #1

# 2010 - 2013 Hayes Research at ND

Wedge taper angle differential



Wedge crown thickness



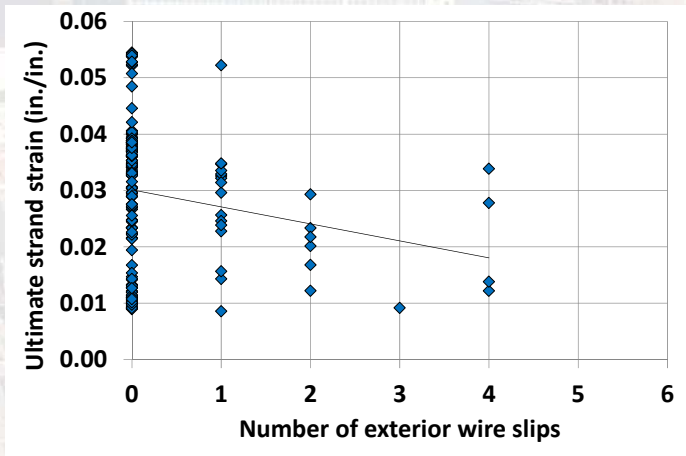
# Wedge Taper Angle Differential

- VIDEO #2

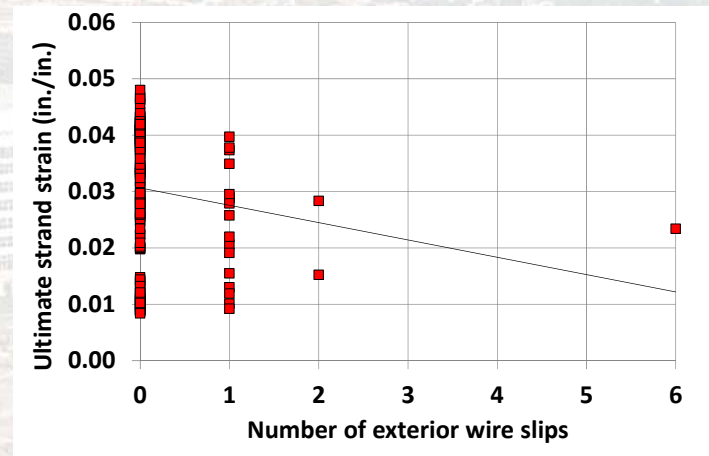
# Wedge Crown Thickness

- VIDEO #3

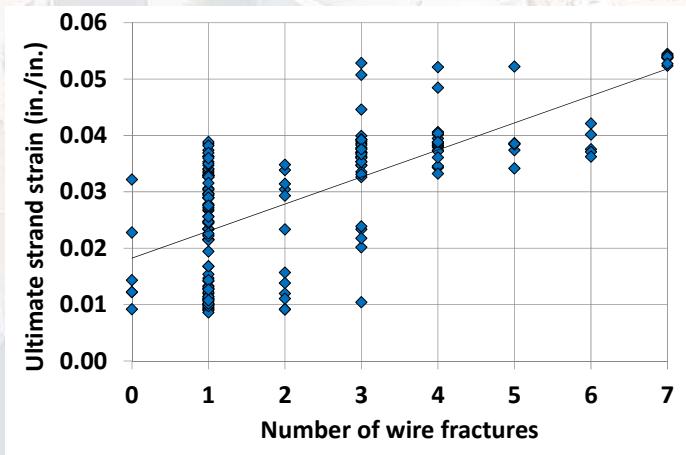
# Failure Mode versus Performance



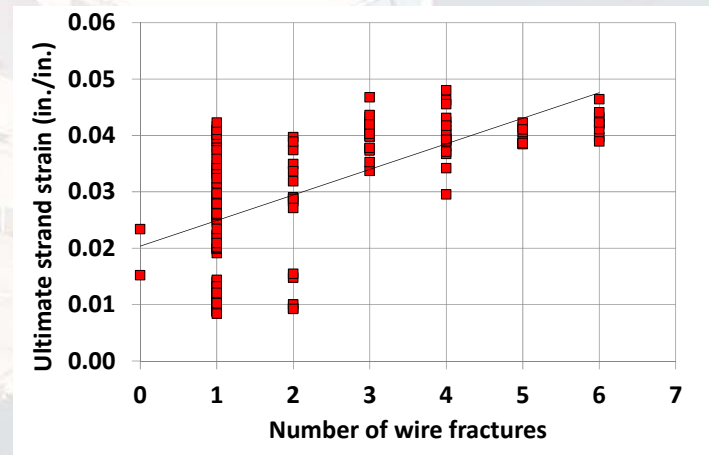
0.5-in strand



0.6-in strand

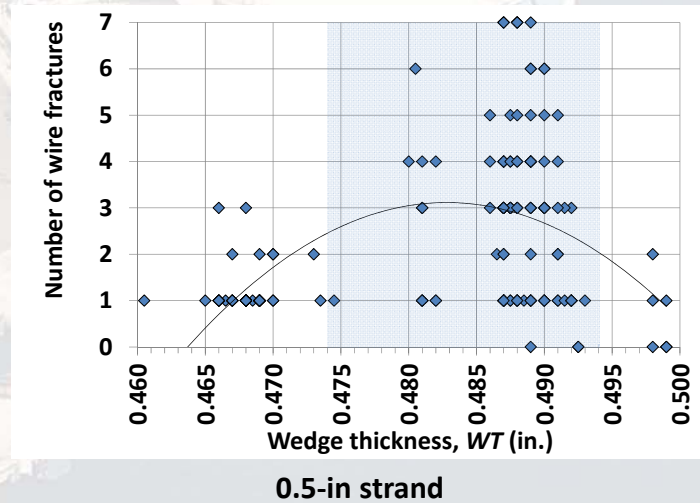
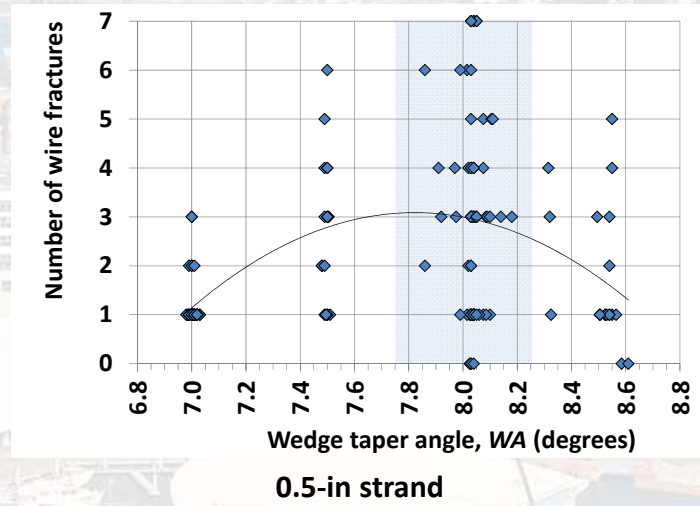


0.5-in strand



0.6-in strand

# Dimensional Parameters versus Failure Mode



# PT Wedge Manufacturing Tolerances

Component	Current industry mean	Current industry tolerance	Proposed mean	Proposed tolerance
Wedge taper angle 0.5"	7.0 deg (no differential)	+/- 0.1 deg	8.0 deg (+1.0 deg differential)	+/- 0.25 deg
Wedge taper angle 0.6"	7.0 deg (no differential)	+/- 0.1 deg	8.1 deg (+1.1 deg differential)	+/- 0.40 deg
Wedge crown thickness 0.5"	0.468"	+/- 0.015"	0.488"	+/- 0.01"
Wedge crown thickness 0.6"	0.530"	+/- 0.015"	0.549"	+/- 0.01"