

P16315

## Gauge Removal Feasibility

### Preliminary Test:

- 1) Affix gauge to test sample. Place known load on sample, creating a known strain.
- 2) Remove gauge.
- 3) Affix gauge to test sample in same location. Re-test with the same known load.
- 4) If second strain reading is within 2% of initial reading, gauge can be reused.
- 5) Repeat until gauge measures a strain that is greater than 2% of the initial strain.
- 6) Record number of times the gauge was removed and the process used to remove the gauge.

However, after talking to a Subject Matter Expert, we were told that the strain gauges we were using would only be accurate for one use, as they are delicate and removing them would damage the gauges. The test plan was altered to determine if the strain gauges would damage the blade when removed. The current test plan is as follows:

- 1) Affix gauge to test sample. Place known load on sample.
- 2) Use calculations to determine if the gauge is placed accurately on the test sample (see: Gauge Accuracy Feasibility).
- 3) Remove gauge. Record method of removal and any visual defects created by the removal of the strain gauge.
- 4) If any visible gauges are created while removing the gauge, the tested process fails and will be revised.