

# Lab 2b: Hardness Testing

## Group 2d

Bijan Varjavand

October 26, 2016

Talk about hardness and how it is measured (different scales, units, equations). Describe in more detail the Vickers and Rockwell hardness tests (generally).

Talk about sample prep.

Procedure for Vickers test. Reference tables and figures, including lots of data. Aluminum data, then steel.

Procedure for Rockwell test. Reference tables and figures, including lots of data. Aluminum data, then steel.

Analysis of data, look at average and standard deviation. Compare to literature values. Convert to hardness in YS/TS and compare.

Show results from calibrations? Compare with 2a values.

Appendix:

	1	2	3	4	5
Annealed 1018 Steel	120	124	123	123	123
Annealed 6061 Aluminum	37	39	40	40	40

Table 1: Vicars Hardness Data

	1	2	3	4	5
As-Received 1018 Steel	58.6	58.3	58.2	58.5	58.3
Annealed 1018 Steel	32.7	36.3	35.9	35.9	35.5
As-Received 6061 Aluminum	36.9	38.1	40.1	39.8	38.7

Table 2: Rockwell Hardness Data

Figure 1: Images