

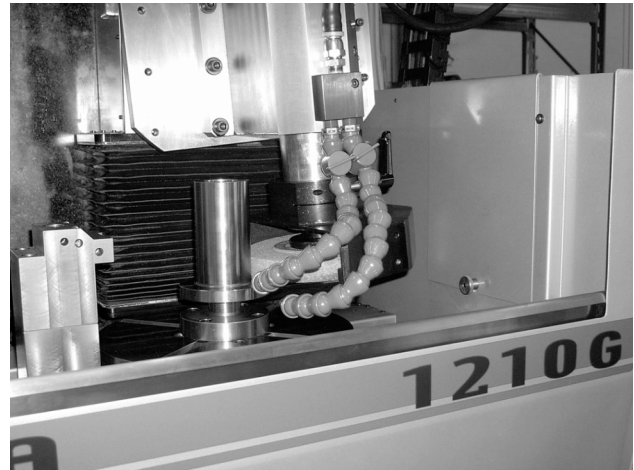
## Application Report: O.D and Face Grind

**MACHINE:** Accura 1210G

**WORKPIECE:** Shaft

**OPERATION:** O.D and Face grind

**MATERIAL:** 4150 (hardened)

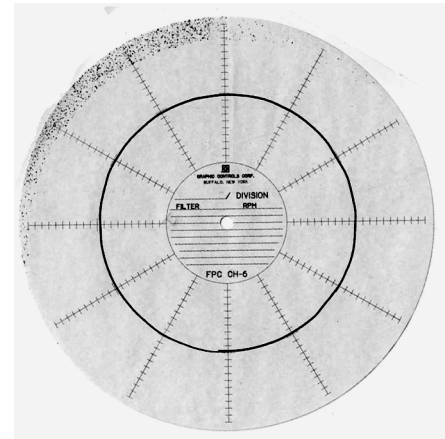


**OBJECTIVE:** To establish general performance guidelines for Accura 1210G as used in a typical universal grind application.

**DESCRIPTION:** The Accura 1210G was used to CNC grind the O.D. and face on a hardened 4150 steel shaft. The flanged shaft is 6" long. The large O.D. is 4" while the smaller O.D. is 2.5"

The 2.5" O.D. and large face were ground in one set-up and used the same wheel.

Roundness of the shaft after grinding, (ref. trace above), was 0.000004". Circular flatness of the thrust surface was measured at 0.000003", and squareness between the two surfaces was measured at 0.000005". This squareness value was defined by comparing the circular flatness of the face (or flange) to an established axis based on the O.D. of the cylinder.



### RESULTS

**ROUNDNESS OF 2.5" DIA.:** 0.00013 mm (0.000005")

**CIRCULAR FLATNESS OF FLANGE:** 0.0001 mm (0.000004")

**SQUARENESS OF 2.5" DIA. TO FLANGE:** 0.00013 mm (0.000005")

**WHEEL:** 1" X 8" Aluminum Oxide, 46H

**WHEEL SPEED:** 3600 RPM

**FIXTURE:** Bolted connection

**WHEEL TRUING / DRESSING:** Diamond nib