

ME 531 Inelastic Design Methods
 Homework # 4
 hard copy)

Name _____
 March 13, 2020 (electronic or

A thin walled cylinder is subjected to tension-torsion strain controlled history shown in Figure below. Determine the axial and shear stress-strain responses. Use combined isotropic (h) kinematic hardening(c) and Von Mises Yield Criteria with Prager's hardening rule. All the equations were given in the lecture notes. Material properties are to be obtained from Lamba's paper - Part 1 using the figure below (use the hardening to get h, and the slope to get c) and the control strain history is also given below (from Lamba's paper- Part 2). Simulate approximately five cycles (0123456781234.....).

