

Please answer the following questions:

1. Describe all different ways metal surfaces can wear when spherodized 1020 steel is slid against 52100 steel at low speeds under a light load and under a heavy load.
2. Describe all different ways of reducing friction for the case described in Problem #1. Provide your estimated coefficients of friction for each one of your suggestions.
3. Describe how you would increase wear resistance of the materials described in Problem #1.
4. Describe the consequence of plating the 1020 steel of Problem #1 with a thin layer of gold (after the steel surface is flush plated with nickel) and performing the friction and wear tests.