

sTEem-at-Work
 Answer Puzzle #61

Pump Part selection for thick fluid applications

A new technician rebuilds positive displacement pumps for a customer that uses their pumps to transport viscous fluids. The Tech knows this customer always uses their pumps to move a fluid that gets thinner when the pump applies more pressure on that moving fluid. This puzzle can trigger discussions at multiple levels: the simple recognition that curve (a) and (c) are not linear and have, respectively, positive and negative slope values from the green dot on; visual approximations of slope magnitudes; an introduction to viscosity, shear, and shear rate;. With all three curves on one graph, the properties and uses of both dilatant and pseudoplastic fluids can be introduced. The most intense lesson would include Newton's law for Viscosity and the fully developed velocity profiles for flow of all three types of fluid that could be entering a long pipe. The puzzle complements and reinforces the lessons from puzzle # 60.

Technician selected Repair Kit Pump #450.

yes or no

