This research is a fast and compact method to determine the surface roughness of a coating. A single cylinder type rotational viscometer is used to measure the kinematic viscosity of a fluid. Three spindles were provided with different surface roughness's with a coating and blasting grit. In this research the impact of the resistance on the viscosity is monitored and a relation between these two components is derived. The effect of the resistance is studied by calculating the torque using the viscosity measurements. The relation is derived by showing the coefficient of the torque at different Reynolds numbers The aim of this research is to check if this alternative method can successfully be used in the future.