

Abstract

CFD (Computational Fluid Dynamics) is a method used to examine a fluid flow or water . But over the times , this method begin to apply in the fields of engineering, one of which is transport. CFD are not individual vehicles in the flow , but show at the traffic flow as a simple flow continuously distributed . CFD begins by calculating the density of vehicles to determine the relationship of the number of vehicles and the length of a road segment .Furthermore , CFD also calculates the current value and saturation current vehicle to determine its number of vehicles every hour . While the rules MKJI (Indonesian Highway Capacity Manual) is a method designed to solve problems related to the capacity of the road and traffic in Indonesia . MKJI can determine the time of the traffic lights , road capacity and degree of saturation of a segment . These results can be obtained based on the current value and saturation current obtained from the CFD calculation method.

The final results obtained in this thesis is the simulation of the traffic light which is built based on the results of the CFD calculation method and state rules and MKJI actual intersection . So it is expected that simulation can provide a picture of the real situation on the ground approach .

Keywords : CFD (Computational Fluid Dynamic), rules of MKJI (Indonesian Highway Capacity Manual), traffic light, simulation .