Abstract

Fresh water is a basic requirement that must be met every day on an ongoing basis. Increasing population, accompanied by an increase in the number of social facilities, Potential problems of supplying clean water. Subdistrict Kartoharjo have that problem also viewed Kartoharjo district is a strategic district for economic development. At the peak water usage, residents often experience water shortages, especially in areas far from sources of water supplies. Re-evaluate and plan a clean water distribution network should be supplying the water. In the grace period for 20 years is expected the need for clean water consumption can be met.

In 2009 the total population in the district of Madiun Kartoharjo is 108,293 inhabitants. in 2020 the estimated population of 142,869 inhabitants. Supplies of clean water in 2009 was 20.38 liters / sec, while the need for clean water in 2020 is estimated to 41,358 liters / sec. The addition amount of water needs is greatly influenced the development pipeline, which is managed by PDAM Madiun.

Floating pipeline in 2020 carried out by adding a new pipe and diameter change. In 2010 the number of service still not maximized Kartoharjo IPA or service was limited to areas close
to the IPA Kartoharjo, it's because the new IPA Kartoharjo officially put into operation in 2010. With the discussion of the distribution network in the District IPA Kartoharjo expected amount of service can run optimally.

**Key words**: Clean Water, Network, Epanet, Peak Hour