

ABSTRACT

Mantak Tari Beach is a beach located in Simpang Tiga District, Pidie Regency. Mantak Tari Beach directly faces the Malacca Strait. Mantak Tari Beach is an area that is used as a place to lean fishing boats. Sedimentation is the process of accumulation of particles originating from weathering, erosion, and biogenic production, through sediment transport and sedimentation into sediments at the bottom of the water. Sedimentation in the Mantak Tari beach area causes siltation that disrupts the traffic of fishermen's activities, so it needs to be dredged regularly. This research was conducted in October 2024. Sampling locations were determined at three different stations, in order to describe the characteristics of the area that will be used as a sampling location. the results of the research the value of the sedimentation rate found on Mantak Tari Beach, Simpang Tiga District, Pidie Regency ranges from 610.87-1,206.05 mg/ cm²/day. The highest sedimentation rate was obtained at station 1 around 1,206.05 mg/cm²/day. The types of sediment fractions found in the three stations are very coarse sand, coarse sand, moderately coarse sand, fine sand, very fine sand, clay or silt. The sediment fraction whose percentage is the most is the type of sand rather coarse with a percentage of 69.9% found at station 2. Average current velocity values range from 0.14-0.20. The highest current velocity is found at station 1, which is 0.20. the highest tide on day 1 with a height of 155 cm at 08.00 WIB.

Keywords: Current Speed, Mantak Tari, Sedimentation, Sediment Fraction, Sedimentation Rate, Tides.