ABSTRACT

Marine communication technology that used nowadays is the communication technology via satellite known as Vessel Monitoring System, but to use this technology required large and expensive devices that difficult to implement to small fishing vessel under 30 Gross Ton. Therefore, developed communication technology through High Frequency channel so that the small fishing vessel can communicate with the coast which is become the base station.

Fixed antenna with good performance that showed from its parameters such as radiation pattern, gain and Voltage Standing Wave Ratio required at base station so that the communication can work well. To satisfy that requirements, carried out the design of folded dipole antenna that work at maritime band 6.2-6.525 MHz. With the theoretical calculation of antenna geometry as the input to the 4NEC2 software, obtained the values of the parameters as the output. After the output of the simulation shows the value of parameters that satisfied the requirement, it can be done making the prototype of antenna.

According to the simulation, the antenna has bidirectional radiation pattern just like dipole $1/2\lambda$ antenna, the value of VSWR between 1.53 until 1.9 with the bandwidth about 350 kHz. Gain of antenna is 2.23 dBi that obtained from comparation method with the standard antenna.

Keyword: Folded Dipole Antena, Standing Wave Ratio, Radiation Pattern, Gain.