

**Variasi Luas Elektroda Stainless Steel S304 Terhadap Kinerja Generator Hho Tipe Basah Menggunakan Katalis NaHCO<sub>3</sub>** (*Variations of Stainless Steel S304 Electrodes Vast against HHO Generator Performance Wet Type Using Catalysts NaHCO<sub>3</sub>*)

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**ABSTRACT**

*This research is about HHO gas generators performance which still improved by create some variations from any factor to influence its performance. These factors such as electrode, water quality (electrolyte water), catalyst's type which used in electrolyte water, electrode type, electrode structures, and level of electrolyte concentration. This research tried to find tools efficiency from configuration of by experiment studies. Electrode area manufacture and testing used stainless steel S304, nahco<sub>3</sub> catalyst used on HHO gas generators performance wet type. These generator consist of 8 electrodes, that is 4 cathodes and 3 anodes. There are three type of size for each electrode, that is 6x6 cm, 8x8 cm and 10x10 cm. Each electrode is arranged in series with the working voltage of 1.5 volts. Linear regression analysis shown that there are strong correlation between electrodes size and generators efficiency which is produced. The size of the electrode has different value of efficiency or performance of generators. The largest size, 10x10 cm, has a lowest value of HHO generator efficiency at 2.33%. It concluded that the size of the electrode could increase the rate of HHO gas production despite there are decreased generator efficiency with increasing size of the electrode. In this experiment, proved by the data of gas quality test results using a gas chromatography, the size of 6x6 cm electrode having 49.56% of hydrogen content, while the electrode size 10x10 cm has 49.54% of hydrogen content.*

**Keywords:** *Hydrogen Gas, Electrodes, Efficiency*