

**Implementasi Instalasi Biogas Skala Rumah Tangga Tipe *Fixed Dome*
Konstruksi Beton pada Peternakan di Desa Pesanggaran Kabupaten
Banyuwangi** (*Implementation of Household Scale Biogas Installation with Fixed
Dome Type Concrete Construction in Pesanggaran Village Animal Husbandry
Banyuwangi Regency*) Supervised by Yuli Hananto, S.TP,M.Si (as chief counselor)
and Ir. Michael Joko Wibowo, M.T. (as a member counselor)

Nur Fitriyah
Study Program of Renewable Energy Engineering
Departement of Engineering
Program Studi Teknik Energi Terbarukan
Jurusan Teknik

ABSTRACT

Biogas installation with fixed dome type concrete construction is a biogas installation widely used in Indonesia household scale. The application of biogas installations requires theoretical planning and calculation to reduce operating failures due to malfunctioning digesters and high cost for maintaining component installations. Digester planning in this study was carried out using cow dung and cost with a 6 m³ digester capacity. Implementation of household scale biogas installation with fixed dome type concrete construction in pesanggaran village animal husbandry banyuwangi regency was successful and met operating standards because reactor is waterproof, dome is impermeable gas, distribution pipe is not seep, and the digester condition is suitable for the biogas fermentation conditions (anaerobic environment, temperature of digester have ranges between 38-40 °C and degree of acidity have ranges from 6.7 to 8.1).

Keywords: Digester, Fixed Dome, Biogas Installation, Cow Dung