

Conceptual Design of an Automated Biomethane Test Using Interacting Criteria

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Abstract : This paper presents the conceptual design of an automated biomethane potential measurement system. First, the design specifications for the BMP system and the basic components of the system will be presented. Three concepts that meet the design specifications will be presented. The basic characteristics of each concept will be analyzed in detail. The concepts will be evaluated using a set of design criteria that includes flexibility, cost, size, complexity, aesthetics, and accessibility in order to determine the best solution. The evaluation will be based on the discrete Choquet integral.

Keywords : automated biomethane test, conceptual mechatronics design, concept evaluation, Choquet integral

Conference Title : ICEADS 2023 : International Conference on Engineering and Design Sciences

Conference Location : Bali, Indonesia

Conference Dates : January 09-10, 2023