

FLOATING HYDROCARBON STORAGE AND BUNKER FACILITY

KK Ang^{1#}, J Dai¹, BK Lim¹ and CM Wang²

¹Department of Civil & Environmental Engineering, National University of Singapore,
Kent Ridge, Singapore 119260

²School of Civil Engineering, University of Queensland, St Lucia,
Queensland 4072, Australia

Abstract – This paper presents the development of an innovative floating oil terminal for use in coastal waters. Entitled “Floating Hydrocarbon Storage and Bunker Facility” (FHSBF), this invention comprises several innovative free-floating self-stabilising storage tanks of various capacities that are moored together by separate floating barges housing processing facilities and are equipped with floating berths on the sides. As the key elements of this invention, the design and stability of the self-stabilising storage tanks are discussed in detail. This paper also provides recommendations on the geometric properties of the storage tanks for a stability and cost-effective design. Keywords: floating hydrocarbon storage facility, self-stabilising tank, very large floating structure, modular design.