

Concrete from an agricultural waste-oil palm shell (OPS)

Abstract

Wastes are produced in large quantities from agro-based industries and the use of these waste materials in construction industry would contribute towards a cleaner environment. It also results in a cost effective construction material. A concrete using oil palm shell (OPS) as coarse aggregate has been found useful as structural concrete. As the bulk density of OPS is much less than stone aggregate OPS concrete becomes a lightweight concrete with a density of about 1850 kg/m³. The compressive strengths of OPS concrete range from 20 to 24 N/mm² for 28 days; this satisfies the strength requirement of structural lightweight concrete. A test on concrete floor slab using OPS concrete is also discussed.