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(51) International classification :E02D0001020000, G06F0030130000, E02D0033000000, E02D0001000000, E02D0001080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD Address of Applicant :Dhanbad -826004, Jharkhand, India Dhanbad ----- 2)MINISTRY OF COAL, GOVT. OF INDIA 3)CENTRAL MINE PLANNING & DESIGN INSTITUTE LIMITED Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Sekhar Chandra Dutta (Principal Investigator) Address of Applicant :Department of Civil Engineering, INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD, Dhanbad – 826004, Jharkhand, India Dhanbad ----- 2)Sarat Kumar Panda Address of Applicant :Department of Civil Engineering, INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD, Dhanbad – 826004, Jharkhand, India Dhanbad ----- 3)Sanket Nayak Address of Applicant :Department of Civil Engineering, INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD, Dhanbad – 826004, Jharkhand, India Dhanbad ----- 4)Lohitkumar Nainegali Address of Applicant :Department of Civil Engineering, INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD, Dhanbad – 826004, Jharkhand, India Dhanbad ----- 5)S. Kundu Address of Applicant :Department of Civil Engineering, CENTRAL MINE PLANNING & DESIGN INSTITUTE LIMITED, Gondwana Place, Kanke Road, Ranchi – 834031, Jharkhand, India Ranchi ----- 6)Farah Nawaz Address of Applicant :Department of Civil Engineering, CENTRAL MINE PLANNING & DESIGN INSTITUTE LIMITED, Gondwana Place, Kanke Road, Ranchi – 834031, Jharkhand, India Ranchi ----- 7)Sumit Kumar Address of Applicant :Department of Civil Engineering, BIRSA INSTITUTE OF TECHNOLOGY SINDRI, Dhanbad Road, Sindri -828123, Jharkhand, India Sindri ----- 8)Rabindra Nath Jha Address of Applicant :CENTRAL MINE PLANNING & DESIGN INSTITUTE LIMITED, Gondwana Place, Kanke Road, Ranchi 834031, Jharkhand, India Ranchi -----
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(57) Abstract :

The present invention relates to utilization of opencast backfilled mines land and a method of constructing building structures on backfilled open cast mines. After selecting at-least five years old backfills, bore holes are made at an interval of 5m with at least 15m depth to check if the bore holes are collapsing. If not, undisturbed sample is collected to calculate the bearing capacity of soil. Odometer test is carried out to understand the settlement characteristics of soil with pressure-void ratio curve to calculate the compression index of soil (Cc). The bearing capacity (minimum bearing capacity chosen ~ 5 t/m2) is evaluated by MASW and in site footing tests at least a few important locations. From the noted bearing capacities, the least value is chosen to ensure safety considering non homogenous uncertain nature of the soil. After finalization of the soil bearing capacity, a raft footing is constructed for a two-storey building and buildings are constructed considering dead load and live load.

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