(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2023

(21) Application No.202341051370 A
(43) Publication Date : 01/09/2023

(54) Title of the invention : EFFECTS OF MINERAL ADMIXTURES ON PROPERTIES OF CONCRETE

(51) International classification :C04B0028040000, C04B0028080000, C04B0018140000, C04B0111100000, C04B0040000000
(86) International Application No :PCT// /
Filing Date :01/01/1900
(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)St. Martin's Engineering College**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad Secunderabad ---------- ----------
**Name of Applicant : NA**
**Address of Applicant : NA**
(72)**Name of Inventor :**
**1)Ms.Sandhya Kiran J.K, Assistant Professor, Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**2)Dr. Santosh Kumar Patra, Principal , Dept. of CSE SMEC**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad Secunderabad ---------- ----------
**3)J.Mahesh Student, Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**4)B.Adarsh, Student , Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**5)G. Dhavaleshwar Rao, Student , Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**6)Ms. S.Priyanka Assistant Professor, , Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**7)D.Sai Santosh, Student, Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**8)G.Sharvan ,Student , Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**9)K.Saikrishna Student, Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**10)K.Pavan Kalyan Goud, Student, Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**11)P.Likith, Student , Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**12)B.Krishna Prasad, Student, Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**13)A.Sravani, Student , Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------
**14)M.Vaishnavi, Student, Civil Engineering**
Address of Applicant :Sy no 98 100 dhulapally Kompally Secunderabad SECUNDERABAD ---------- ----------

(57) Abstract :
The properties of fresh concrete including workability, heat of hydration, setting time, bleeding, and reactivity by using mineral admixtures fly ash (FA), silica fume (SF), ground granulated blast furnace slag (GGBS), metakaolin (MK), and rice husk ash (RHA) have been investigated by adding mineral admixture. Comparison of normal and high-strength concrete in which cement has been partially supplemented by mineral admixture has been investigated. Chemically active mineral admixtures decrease workability and setting time of concrete but increase the heat of hydration and reactivity. On the other hand, microfiller mineral admixtures increase workability and setting time of concrete but decrease the heat of hydration and reactivity. In general, small particle size and higher specific surface area of mineral admixture are favorable to produce highly dense and impermeable concrete; however, they cause low workability and demand more water which may be offset by adding effective super plasticizer.

No. of Pages : 14 No. of Claims : 5