

(54) Title of the invention : NON-POZZOLANIC FILLER MATERIAL FOR IMPROVING THE FLEXURAL STRENGTH OF CONCRETE

<p>(51) International classification :G02B0021000000, B32B0015010000, C04B0028180000, C22C0038160000, C12Q0001440000</p> <p>(86) International Application No Filing Date :PCT// :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number Filing Date :NA :NA</p> <p>(62) Divisional to Application Number Filing Date :NA :NA</p>	<p>(71)Name of Applicant : 1)R.V.R & J.C COLLEGE OF ENGINEERING Address of Applicant :R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019, ANDHRA PRADESH INDIA ----- ----- Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr.N. Venkata Sairam Kumar Address of Applicant :Assistant Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh ----- 2)Mr. K. S. Vivek Address of Applicant :Assistant Professor, Department of Civil Engineering, Vasireddy Venkatadri Institute of Technology, Nambur-522508, Andhra Pradesh - ----- 3)Dr.A.Srinivasa Prasad Address of Applicant :Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh ----- ----- 4)Mr.P.V.S.Maruthi Krishna Address of Applicant :Associate Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh ----- 5)Mr.R.Surendra Babu Address of Applicant :Associate Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh ----- 6)Mr.M.L.N.Krishna Sai Address of Applicant :Assistant Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh ----- 7)Mr.S.V.Satyanarayana Address of Applicant :Assistant Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh ----- 8)Mr.M.Srikanth Kumar Address of Applicant :Assistant Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh ----- 9)Dr.K.Leela Krishna Address of Applicant :Assistant Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh ----- 10)Ms.Y.Madhavi Address of Applicant :Assistant Professor, Department of Civil Engineering, R.V.R & J.C College of Engineering, Chowdavaram, Guntur-522019, Andhra Pradesh -----</p>
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(57) Abstract :

ABSTRACT NON-POZZOLANIC FILLER MATERIAL FOR IMPROVING THE FLEXURAL STRENGTH OF CONCRETE The present disclosure is a method for improving flexural strength of concrete with the help of the fine stone dust (FSD) a waste generated from the stone crushing units as Non-Pozzolanic filler material. The present disclosure is represented on prism specimens cured for 28 days and 90 days of size 150 mm x 150 mm x 700 mm as per IS: 516: 1959 using FSD using non-pozzolanic filler material by partial replacement of cement by weight. The proportions of FSD used in the present disclosure are 10%, 20%, 30% and 40% by weight of cement. The properties investigated are X-ray diffraction analysis (XRD), flexural strength and scanning microscope analysis for examining the internal microstructure of FSD concrete. Upto 30% and 20% replacement ratio of FSD with cement in concrete, the intensity of calcium silicate hydrate compound and flexural strength is higher in FSD concrete respectively. Fig. 1 A set of beam specimens after curing

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