EXPERIMENTAL STUDY ON CONCRETE BY PARTIAL REPLACEMENT OF COPPER SLAG AS A

FINE AGGREGATE

A PROJECT REPORT

Submitted by
A.ARUL SAHAYA SHALINI
G.BALASEETHA
N.BLESSY
C.BALA MURUGAN

in partial fulfillment for the award of the

degree of

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING



ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY
PALKULAM, KANYAKUMARI DISTRICT

ANNA UNIVERSITY: CHENNAI 600 025

ANNA UNIVERSITY: CHENNAI 600 025 BONAFIDE CERTIFICATE

Certified that this project report "EXPERIMENTAL STUDY ON CONCRETE BY PARTIAL REPLACEMENT OF COPPER SLAG AS A FINE AGGREGATE" is the bonafide work of A. ARUL SAHAYA SHALINI [963318103026], G.BALASEETHA [963318103032], C.BALAMURUGAN [963318103307], N.BLESSY [963318103034] who carried out the project work under my supervision.

SIGNATURE

Dr. J.SAHAYA RUBEN, M.E., Ph.D.,

HEAD OF THE DEPARTMENT

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Submitted for the Design Project Viva-Voce Examination held on 20,000,000

INTERNAL EXAMINER

EXPERIMENTAL INVESTIGATION ON CONCRETE USING M-SAND AS A PARTIAL REPLACEMENT OF

RIVER SAND

A PROJECT REPORT

Submitted by

S. L. ABIJITH	963318103004		
J. JERISTON ACKSNO	963318103050		
S. JEYASREE	963318103052		
M. AKSHIYA	963318103303		

in partial fulfillment for the award of the

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BACHELOR OF ENGINEERING

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ANNA UNIVERSITY: CHENNAI 600 025

ANNA UNIVERSITY : CHENNAI 600 025 BONAFIDE CERTIFICATE

Certified "EXPERIMENTAL that this project report INVESTIGATION ON CONCRETE USING M-SAND AS A PARTIAL REPLACEMENT **OF** RIVER SAND" is the bonafide work S. L. ABIJITH [963318103004], J. JERISTON ACKSNO [963318103050], S. JEYASREE [963318103052], M. AKSHIYA [963318103303] who carried out the project work under my supervision.

SIGNATURE

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Dr.N.SUTHANKUMAR, M.E., Ph.D.,

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Technology, Palkulam, Kanyakumari.

Submitted for the Design Project Viva-Voce Examination held on Al-.06.- 2022

INTERNAL EXAMINER

EXPERIMENTAL INVESTIGATION OF FERROCEMENT DOOR PANEL

A PROJECT REPORT

Submitted by

J.ANTONY JEBIN 963318103022

J.ASHLIN JINISHA 963318103027

R.CHITHRA KALA 963318103037

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ANNA UNIVERSITY: CHENNAI 600 025 BONAFIDE CERTIFICATE

Certified that the project report "EXPERIMENTAL INVESTIGATION OF CONCRETE BY USING TYRE WASTE AS A PARTIAL REPLACEMENT OF COARSE AGGREGATE" is the bonafide work of J.AJITHA [963318103009], V.ANUJA [963318103023], K.KARTHIKA [963318103054], S.MARY ASHWINI [963318103059] who carried out the project work under my supervision.

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Submitted for the project University Examination held on 22/06/. 2022

INTERNAL EXAMINER

EXPERIMENTAL INVESTIGATION ON STRENGTH OF CONCRETE BY USING TITANIUM DIOXIDE (TiO2) SLUDGE AS A PARTIAL REPLACEMENT FOR CEMENT A PROJECT REPORT

Submitted by

BEORINS.J

ANJALI DEVI.B

BEBINA.E

BHARVITHA.V

in partial fulfillment for the award of the degree

of

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IN

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ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY

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ANNA UNIVERSITY : CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that the project report "EXPERIMENTAL INVESTIGATION ON STRENGTH OF CONCRETE BY USING TITANIUM DIOXIDE (TiO2) SLUDGE AS A PARTIAL REPLACEMENT FOR CEMENT" is the bonafide work of BEORINS J(963318103310), ANJALI DEVI B (963318103021), BEBINA E (963318103308), BHARVITHA V (963318103033) who carried out the project work under my supervision

SIGNATURE

Dr.J.Sahaya Ruben, M.E, Ph.D.,

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Ms.B.Chella priya M.E.,

Supervisor

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Submitted for the project University Examination held on .21.06/2022.....

INTERNAL EXAMINER

EXPERIMENTAL INVESTIGATION OF GREEN CONCRETE USING DEMOLITION WASTE AS A PARTIAL REPLACEMENT OF COARSE AGGREGATE

A PROJECT REPORT

Submitted by

 B.BRUNDHA
 963318103036

 J.HEPZIBAH SUGANTHI
 963318103044

 V.AJAYSEN
 963318103302

 K.DISHON KUMAR
 963318103313

in partial fulfillment for the award of the degree

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PALKULAM, KANYAKUMARI DISTRICT

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BONAFIDE CERTIFICATE

Certified that this project report "EXPERIMENTAL INVESTIGATION OF GREEN CONCRETE USING DEMOLITION WASTE AS A PARTIAL REPLACEMENT OF COARSE AGGREGATE in the bonafide work of "B.BRUNDHA [963318103036],J.HEPZIBAH SUGANTHI[963318103044], V.AJAYSEN [963318103302],K.DISHON KUMAR [963318103313]" who carried out the project work under my supervision.

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Submitted for the Project University Examination held on ... 22:06.22

INTERNAL EXAMINER

EXPERIMENTAL AND RESEARCH ON PAPERCRETE

A PROJECT REPORT

Submitted by

BHASKER BHATT (963318103311)

IROM BUSHAN SINGH (963318103046)

MILTON LAISHRAM (963318103060)

NONGMAITHEM MANOJ SINGH (963318103074)

In partial fulfillment for the award of the degree

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ANNA UNIVERSITY: CHENNAI 600 025

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Certified that this project report "EXPERIMENTAL AND RESEARCH ON

PAPERCRETE " is bonafide work of

BHASKER BHATT

963318103311

IROM BUSHAN SINGH

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963318103074

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Dr. J. SAHAYA RUBEN, M.E., Ph.D.,

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HEAD OF THE DEPARTMENT

SUPERVISOR, Assistant professor

Department of Civil Engineering

Department of Civil Engineering

Rohini College of Engg. & Technology

Rohini college of Engg. & Technology

Internal Examiner

External Examiner

EXPERIMENTAL STUDY ON NATURAL COAGULANTS OVER CHEMICALS IN PURIFICATION OF SULLAGE

A PROJECT REPORT

Submitted by

MOIRANGTHEM NIKHIL SINGH

(963318103063)

MAHESH SINGH CHANGAMAYUM

(963318103057)

AHEIBAM NONGTHON MEETEI

(963318103005)

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Certified that this project report "EXPERIMENTAL STUDY ON NATURAL COAGULANTS OVER CHEMICALS IN PURIFICATION OF SULLAGE" is bonafide work of

MAHESH SINGH CH.

963318103057

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963310103063

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963318103005

who carried out the project under my supervision.

Dr. J. SAHAYA RUBEN, M.E., Ph.D.,

Prof. HARI GOPALA KRISHNAN

Head of the department

Supervisor, Assistant professor

Department of Civil Engineering

Department of Civil Engineering

Rohini College Of Engineering & Technology Rohini College of Engineering & Technology

Submitted for the project viva-voice examination held on ___

22/06/22

Internal Examiner

External Examiner

EXPERIMENTAL INVESTIGATION ON CEMENT CONCRETE WITH SEA SHELL POWDER

A PROJECT REPORT

Submitted by

P.J. AJITH 963318103008
P. JESLIN 963318103051
T.ANISH 963318103020
P.BALAMURUGAN 963318103306

in partial fulfillment for the award of the

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Certified that this project report "EXPERIMENTAL INVESTIGATION ON CEMENT CONCRETE WITH SEA SHELL POWDER" is the bonafide work of P.J. AJITH [963318103008], P. JESLIN [963318103051], T. ANISH [963318103020], P.BALAMURUGAN [963318103306] who carried out the project work under my supervision.

SIGNATURE

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Mr, R. Rajiv Gandhi, M.E.,

SUPERVISOR

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Submitted for the Design Project Viva-Voce Examination held on 22,06~2022

INTERNAL EXAMINER

PRODUCTION OF ECO-BRICKS FROM INDUSTRIAL WASTE USING ALKALI-ACTIVATED TECHNOLOGY

A PROJECT REPORT

Submitted by

JUNAID D

AKASH SANTHOSH

AJU MATHEW

in partial fulfillment for the award of the degree

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ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY DEPARTMENT OF CIVIL ENGINEERING ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report titled "PRODUCTION OF ECO - BRICKS FROM INDUSTRIAL WASTE USING ALKALI-ACTIVATED TECHNOLOGY" is the bonafide work of "JUNAID D (963318103053), AKASH SANTHOSH (963318103012), AJU MATHEW (963318103010).

who carried out the project work under my supervision.

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Submitted for the Design Project Viva – Voce Examination held on

22/06/22 -t22

Internal examiner

External examiner

EXPERIMENTAL INVESTIGATION ON FLY ASH BRICKS USING POLYPROPYLENE

A PROJECT REPORT

Submitted by

S.AMBIKA 963318103014
T.AMISHA DEVI 963318103015
V.DEEPTHI 963318103038
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in partial fulfillment for the award of the

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ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "EXPERIMENTAL INVESTIGATION ON FLY ASH BRICKS USING POLYPROPYLENE" is the bonafide work of S. AMBIKA (963318103014), T.AMISHADEVI (963318103015), V.DEEPTHI (963318103038), C.ESTHER MARY (963318103040) who carried out the project work under my supervision.

SIGNATURE

Dr. J.SAHAYA RUBEN, M.E., Ph.D.,

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(Jun 21,

SIGNATURE

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Submitted for the Design Project Viva-Voce Examination held on 2200

INTERNAL EXAMINER

EXPERIMENTAL STUDY ON CONCRETE WITH PARTIAL REPLACEMENT OF ORDINARY COARSE AGGREGATE BY RECYCLED COARSE AGGREGATE

A PROJECT REPORT

Submitted by

ANAND BALAJI A

963318103016

ABHIRAMI RAJ

963318103002

BABISHA M

963318103030

GOWRI HARSHINI R

963318103041

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IN

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ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that the project report "EXPERIMENTAL STUDY ON CONCRETE WITH PARTIAL REPLACEMENT OF ORDINARY COARSE AGGREGATE BY RECYCLED COARSE AGGREGATE" is the bonafide work of ANAND BALAJI A (963318103016), ABHIRAMI RAJ (963318103002), BABISHA M (963318103030), GOWRI HARSHINI R (963318103041) who carried tout the project work under my supervision.

SIGNATURE

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Department of Civil Engineering

Rohini College of Engineering&

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Submitted for the project University Examination held on .22 06 2022....

INTERNAL EXAMINER

THERMOCHEMICAL TREATMENT OF SLUDGE

A PROJECT REPORT

Submitted by

BALA SOWBARNIKA P 963316103027

JENITA C 963316103041

PRIYA M L 963316103060

THANGA PRIYA M 963316103085

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

CIVIL ENGINEERING

ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY

PALKULAM, KANYAKUMARI DISTRICT



ANNA UNIVERSITY: CHENNAI 600 025

SEPTEMBER 2020



THERMOCHEMICAL TREATMENT OF SLUDGE

A PROJECT REPORT

Submitted by

BALA SOWBARNIKA P 963316103027

JENITA C 963316103041

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ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY

PALKULAM, KANYAKUMARI DISTRICT



ANNA UNIVERSITY: CHENNAI 600 025

SEPTEMBER 2020



BONAFIDE CERTIFICATE

Certified that this project "THERMOCHEMICAL TREATMENT OF SLUDGE" is the bonafide work of "BALA SOWBARNIKA, JENITA, PRIYA, THANGA PRIYA" who carried out the project work under my supervision.

Dr. J. SAHAYA RUBEN

Mrs.T.SUTHAMALLI

HEAD OF THE DEPARTMENT

SUPERVISOR

Department of Civil Engineering

Department of Civil Engineering

Rohini College of Engineering and Technology

Rohini College of Engineering and Technology

Palkulam, Kanyakumari District

Palkulam, Kanyakumari District

Tamil Nadu.

Tamil Nadu.

Submitted for the Design Project Viva - Voice Examination held on

Internal Examiner

External Examiner





தமிழ்நாடு அறிவியல் தொழில்நுட்ப மாநில மன்றம் TAMIL NADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(Established by Government of Tamilnadu) Directorate of Technical Education Campus, Chennai - 600 025

Phone: 044-2230 1428

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DR. R. SRINIVASAN, M.Sc., Ph.D., F.I.C.S., M.A.C.S. (USA). **Member Secretary**

Lr.no:TNSCST/SPS2019-20/

18.12.2020

The Principal

Rohini College of Engineering & Technology

Kanyakumari - 629 401

Sir.

Sub :Student Project Scheme (2019-20) - submission of Utilization Certificate - reg.

Kind attention of Principal/Registrar

: 1 Council approval dt.18.03.2020 Ref.

2. Announcement in council's website dt.12.09.2020 & e mail to individual guide

With reference to the above council have sanctioned the student project and hope your students have completed the same. On completion of the project, as per approval you have to submit the Utilisation Certificate in the prescribed format (already sent & available in council website) duly signed by the Guide, HoD and Head of the Institution with seal.

Kindly arrange to submit Utilisation Certificate (hard copy) or refund the grant as DD on or before 31.12.2020. Project details are

Mrs. R. Sahila Devi HOD, Dept. of CSE Rohini College of Engineering and Technology Kanyakumari - 629 401	Real Time Fatigue Detection Using Raspberry Pi	Bibin Mohan S. Nagarajan I. Nagulesh J. Stepin Jegan	CSE-036	6500/-
Dr. J. Sahaya Ruben Head and Professor Dept. of Civil Engineering Rohini College of Engineering and Technology Kanyakumari - 629 401	Effective Utilization of Sludge Waste as a Partial Replacement of fine aggregate in Construction Application	C. Jenita P. Bala Sowbarnika M.L. Priya M. Thanga Priya	ECV-015	7500/-
Mrs. J. Basline Jenuba Asst. Prof. / Dept. of ECE Rohini College of Engineering and Technology Kanyakumari - 629 401	Design and Implementation of an Automatic Fire Exstingusing Alert System with Safety Ladders	Ashisha.H.Jiji.Sa m R. Bala Brintha A. Kalavathi	EEE-028	7500/-

Yours faithfully

Member Secretary