

Dr. SWARUP RANJAN DEBBARMA

B.Tech (Civil), M.E (Structures), Phd

PERSONAL DETAILS

Son of Mr. Jiban Lal Debbarma
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Date and place of Birth: 09th April 1972; Agartala, Tripura

Passport No. K0476826 issued by Govt. of India

ACADEMIC QUALIFICATIONS

National Institute of Technology, Durgapur,

Deem University, 2009 – 2013

Phd Degree (RC & PSC Flexural Structures)

Delhi College of Engineering;

Delhi University, 1995 - 1997

Masters of Engineering (Structures)

North Eastern Regional Institute of Science and Technology;

North Eastern Hill University, 1989- 1995

B. Tech. (Civil Engineering)

PRESENT POST HELD

Principal Scientist

Head, Resource Planning & Business Development Group

WORK EXPERIENCE

CSIR - Central Mechanical Engineering Research Institute; Durgapur

PRINCIPAL SCIENTIST 2012 to Present

SENIOR SCIENTIST; 2007 to 2012

SCIENTIST – C; 2002 to 2007

SCIENTIST – B, 2001 to 2002

CSIR – Structural Engineering Research Center; Ghaziabad

SCIENTIST- B: 1997 to 2001

PROJECTS COMPLETED

1. Determining growth of time-dependent strain in RC and PSC flexural members.
2. Instrumentation of two cantilever arms at pier P5 of the Zuari Bridge on NH 17 at Goa, which was under rehabilitation.
3. Assessment of concrete quality through NDT viz. Rebound Hammer, Ultrasonic Pulse Velocity, Cover Scan, Petrographic analysis, of span P5 of Zuari Bridge, at Goa on NH 17.
4. Instrumentation of the 18 pre-cast and pre-stressed concrete box girders of the Super Structure and one abutment of Aroli Bridge across Thane Creek at New Mumbai.
5. Monitoring of Second Road Bridge across Thane Creek; Mumbai.
6. Behavior of pre-stressed concrete bridges under time dependent effects; in house R&D.
7. Response Monitoring of span P6 and span P4 of Zuari Bridge on NH. 17 at Goa during external pre-stressing, through Instrumentation.
8. Performance monitoring through Instrumentation of Ganga Bridge at Varanasi.

INTERNATIONAL JOURNAL PUBLICATIONS

1. P. Mandal, **S.R.Debbarna**, B. Ruj “Stabilization of Arsenic Sludge-Generated from Arsenic Contaminated Groundwater Water Treatment Plants” under review in “**Chemosphere**” International Journal published by **Elsevier**.

2. **Debbarma.S.R**, Saha.S, "Behavior of Concrete Beams reinforced with SMA and steel bars under cyclic and monotonic load" **Magazine of Concrete Research**, ICE Publisher, Vol.66, No.6 Jan 2014, pp.305-314. DOI: 10.1680/mac.13.00203.
3. **Debbarma S.R.**, Kundu S., Vineet V. "An Investigation of Daylight Performance and Energy Saving in Foundry Shed and Staircase Building", **International Journal of Engineering and Innovative Technology**, ISSN 227-3754, Vol.3, No.3, September 2013, pp. 397-401
4. **Debbarma.S.R**, Saha.S. "An experimental study on growth of Time-dependent strain in Shape Memory Alloy reinforced Pre-stressed concrete beams", **Magazine of Concrete Research**, ICE Publication, ISSN 0024-9831, Vol.65, No.16, August 2013, pp.1003-1009. DOI: 10.1680/mac.13.00050,
5. **Debbarma S.R**, "Construction of low budget road using steel industries waste, like Blast Furnace Slag boulders and Fly ash", **International Journal of Multidisciplinary Research and Advances in Engineering**, Ascent Journals, ISSN 0975-7074, Vol.6, No.1, Feb.2013, pp.141-150.
6. **Debbarma.S.R**, Saha.S. "Stiffness of concrete flexural members increases on use of Shape Memory Alloy bars as reinforcement", **Recent Trend in Civil Engineering & Technology**," STM Journals, ISSN 2249-8753, Vol.02, No.03, Dec. 2012, pp.24-38
7. **Debbarma.S.R**, Saha.S. "An experimental study on growth of time-dependent strain in Shape Memory Alloy reinforced concrete beams and slabs", **International Journal of Civil Engineering & Technology**, IAEME, ISSN 0976 – 6308 July 2012; Vol. 3, No. 2, pp 108-122,
8. **Debbarma.S.R**, Saha.S.; "Growth of time-dependent strain in reinforced cement concrete and prestressed concrete flexural members", **International Journal of Concrete Structures & Materials, Springer**, ISSN 1976-0485, June 2012; Vol.6, No.2, pp 79-85, DOI: 10.1007/s40069-012-0008-x,
9. **Debbarma.S.R**, Saha.S., "Review of Shape Memory Alloys applications in civil structures, and analysis for its potential as reinforcement in concrete flexural members", **International Journal of Civil and Structural**

Engineering, Integrated Publishing, ISSN 0976 – 4399, Vol.2, No.3, May 2012, pp. 915-933. DOI: 10.6088 /ijcser.00202030020.

10. **Debbarma. S.R.**, Saha. S., “In-situ investigation of thermal gradient and growth of strain in long-span PSC box Girder Bridges due to atmospheric temperature and its effects in profile of girders.” *International Journal of Earth Science and Engineering*, ISSN 0974-5904, Vol.04 No.06 Oct.2011. pp 709-715.

INTERNATIONAL CONFERENCE PRESENTATIONS

1. P. Mandal, A. Saha, **S.R.Debbarma**, B. Ruj “Disposal problem of Arsenic Sludge generated during arsenic removal from drinking water” excepted for presentation on **5th International Conference on Solid Waste Management** to be held at IISC, Bangalore on 24-27 Nov. 2015
2. **Debbarma.S.R**, Saha.S. “Instantaneous and long-term deflections analysis of Shape Memory Alloy reinforced Pre-stressed concrete beams”, *International Conference on Global Innovations in Technology and Sciences 2013*, 4th to 6th April 2013, I.D: 1-1-6, Kottayam, India.
3. **S.R.Debbarma**, S.Saha, “Analysis of Instantaneous and Time-dependent deflections in Shape Memory Alloy Reinforced Concrete Flexural Members”, 2012 *International Conference on Technological Advancements in Civil Engineering*, 18-19 Feb. 2012, Coimbatore, India, *IACSIT Press, Singapore*, Vol. 28 pp 154-160
4. **S.R.Debbarma**, S.Saha, “Behavior of pre-stressed concrete bridge girders due to time dependent and temperature effects.” *International conference on Smart Monitoring Assessment and Rehabilitation of Civil Structures*, 8-10 Feb.2011, at *American University in Dubai, UAE*.

PATENT/ COPYRIGHT

Submitted for grant of Copyright in “Process for Stabilization/Solidification of Arsenic Contaminated

CIVIL INFRASTRUCTURES FOR R&D PROJECTS CREATED

1. Extension of Foundry Shed for accommodating Equipments required for AMT Project. (Cost, Rs.16.18 Lakhs)
2. Construction of 1st floor of RMGD Building for creation of laboratory for AMT Project. (Cost, Rs.39.06 Lakhs)
3. External & Internal painting after necessary repair of multistoried building-I, II & IV at CMERI colony, (Cost, Rs.38.4 Lakhs).
4. Construction of boundary wall of Institute and Staff quarters. (Cost, Rs.69.75 lakhs).
5. Modification & Renovation of Ground & 1st floor (right wing) of MERADO building for MST lab at CMERI, Durgapur. (Cost, Rs.20.12 lakhs)
6. Construction of underground water sump at CMERI new colony, (Cost, Rs.17.72 lakhs).
7. Renovation of Administrative and Accounts Section of CMERI, (Cost, Rs.27.72lakhs).
8. Renovation of rooms in HPE Shed for creation of Fuel Cell Lab. at CMERI, (Cost, Rs.2.68lakhs).
9. Construction of front entrance Tower gate structure of CMERI with RCC and covered with granite stone. (Cost, Rs.7.37lakhs).
10. Construction of infrastructure for School of Mechatronics at CMERI, Durgapur., (Cost, Rs.36.26lakhs).