Press Release

IIT Bhubaneswar conducts research on Iron Beams of Konarka Sun Temple as part of a project under Indian Knowledge System

Bhubaneswar, 17 December 2023: Indian Institute of Technology (IIT) Bhubaneswar is thrilled to announce that its groundbreaking research project, titled "Forging the Past: Investigating the Manufacturing of Iron Beams Used in Konarka Sun Temple and Analyzing Their Socio-Economic Impact on the Local Community," has been selected by the Indian Knowledge System (IKS), under the Ministry of Education, Government of India.

Under the esteemed Bharatiya Gyan Samvardhan Yojana's Competitive Grants Program for 2022-23, the project led by Dr. Soobhankar Pati, Associate Professor at IIT Bhubaneswar, has secured funding for its exploration into unraveling the manufacturing methods of the iron beams at the Konarka Sun Temple, shedding light on India's rich but forgotten technological prowess.

This initiative, as part of IKS's mission to promote interdisciplinary research and revive lost technology, aligns seamlessly with the vision of Bharatiya Gyan Samvardhan Yojana. Dr. Pati, the project lead, highlighted that the study conducted will be non-destructive in nature, emphasizing that no physical changes would be made to the historic iron beams of Konarka. He stated, "This project involves studying ancient technical knowledge, analyzing archaeological aspects, and socio-economic evaluations, leading to the recreation of an ancient iron-making laboratory in the future. Past records will also be revisited to find any missing links."

Dr. Naresh Chandra Sahu and Dr. Parthasarathi De from IIT Bhubaneswar; Dr. Siva Shankar Panda from the Archaeological Survey of India (ASI) have joined this project as the co-investigators. Additionally, Prof O.N. Mohanty, Ex-Professor, IIT Kharagpur, and Dr. D.B. Garnayak from the ASI have joined as collaborators in this research.

In a noteworthy update on the project's progress, corrosion studies conducted on-site using a portable machine have yielded promising results. The Konarka iron beams demonstrated corrosion resistance almost two orders higher than contemporary steel beams. Even though the iron beams may lack certain properties like ductility and weldability, Dr. Pati highlighted that invaluable lessons can be learned from the technological advancements of India's past.

This research not only contributes to IKS's mission but also showcases the potential for India to reclaim its historical technological glory. The IIT Bhubaneswar team, along with co-investigators and collaborators, is dedicated to preserving and disseminating this invaluable knowledge.
