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PROJECT CONSULTANCY WORK

- Title of the project work : Production of Sustainable Tooth brush (changeable head and/or body) using Macaúba (Acrocomia Aculeata) Fiber-Reinforced up Composite
- Year of award : 2019-2020
- Granting Agency : M/s Metro Composites Research and Development Centre Chennai- 66
- Total Grant Received : Rs 5000
- Project Duration : 3 Months
- Principal Investigator : 1. Dr. V R Arun Prakash., M.E.,Ph.D.,
Associate Professor,
Department of Mechanical Engineering,
J.N.N Institute of Engineering,
- Work Details : The proposed toothbrush changeable head and/or body could be prepared using abundant macaúba (Acrocomia aculeata) natural fiber and low cost unsaturated polyester resin. Since the fiber addition is proposed with slow cure thermosetting polymer, the final product could be used as toothbrush building material. Thermosetting polymers are non-reusable, thus the toothbrush changeable head and/or body (finger grip and handle) is proposed for reducing the waste index. In this, the fiber is procured form macaúba forms and processed with acid treatment. Dirt and soft cellulosic content will be removed during the treatment, freeing the fiber surface from defects. After that, the fiber may be surface treated using silanes for better adhesion with matrix medium.