

## **Progress Report of R&D Projects**

Project Title : Jute-Thermoplastic Composites for Green Product Development  
Duration : 24 Months  
Date of Start : 5<sup>th</sup> April, 2016  
Principal Investigator : Dr. Md. S. Rahman

### **Activities carried out so far as on 31<sup>st</sup> May, 2016**

#### **Administrative**

- a) Tendering process for purchase of machinery (under CAPEX head) has been completed.
- b) Recruitment of project specific manpower has been in progress. Mr. Pritam Chatterjee, B.Tech in Polymer Technology (CU) has been selected for the post of Polymer Engineer

#### **R&D Activities**

##### **A) Designing & fabrication of required ‘mould’ and accessories-**

A new test ‘mould’ has been designed & Purchase Order has issued to CIPET, Haldia for fabrication job

##### **B) Identification of Mills for supplying of segregated jute caddies -**

Five prospective jute mills have been identified for supplying of segregated Jute caddies:

- 1) Gloster Ltd.
- 2) Ganges Manufacturing Company Ltd.,
- 3) Caledonian Jute Mill,
- 4) Ladlow Jute Mill
- 5) Hukumchand Jute Mill

- Required quantity of material has been collected from two mills

##### *Criteria for segregation-*

- Minimum possible thread waste content
  - % dust / dirt content
  - Oil content
- Property evaluation is in progress

### **C) Filing of Patent –**

Indian Patent on this development has been filed jointly with Patton Int. Ltd, industrial collaborator of the project.

### **Planned Activities upto 31<sup>st</sup> August 2016 –**

- i. Procurement and installation of composite processing machines (CAPEX items) and initial trial run (expected date of start of work 31.07.2016)
- ii. Performance evaluation of developed composites will be initiated (after fabrication of the test mould by CIPET, Haldia) [expected date 16.08. 2016]
- iii. Formation of required specification for Jute caddies and identification of prospective mills for sustained supply (expected date 30.06. 2016)
- iv. Follow up for commercialization with Patton International Ltd. (expected date 30.06. 2016)

### **Activities carried out so far as on 20<sup>th</sup> April, 2016**

The activities as per the approved DPR have been initiated. An experimental trial for incorporation of waste jute fibre (caddies) in thermoplastic polymer has been carried out at shop floor of industrial collaborator i.e. Patton International Ltd. Moulding of composite products out of composite granules reinforced with waste jute fibre could be demonstrated successfully. Based on the pre-project activities, IJIRA has filed a joint patent (provisional) on 'Process for manufacturing jute fibre reinforced Linear Low Density Polyethylene (LLDPE) composite product' jointly with Patton International Ltd. The processes for procurement of CAPEX items and recruitment of man power under the project have been initiated.