

# **S.A. ENGINEERING COLLEGE**

**(An Autonomous Institution, Affiliated to Anna University)**

**CHENNAI – 600077**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Centre of Excellence for Coir  
Products**

**Details of  
Equipment  
Available**

# Centre of Excellence for Coir Products

## Name of the available Machines:

1. Coir Fiber Extraction Machine
2. Coir Fiber Willowing Machine
3. Coir Winding Machine

## Photographs:



**Description:** Coir is a natural fiber extracted from the husk of Coconut fruit. The husk consists of Coir fiber and a corky tissue called pith. It is a fiber abundantly available in India the second highest in the world after Philippines. It consists of water, fibers and

small amounts of soluble solids. Coir fibre extraction machine consists of the hopper, crushing, sieving and the power transmission units, which were manufactured using standard manufacturing techniques and this machine is used to extract coir from the coconut husk. Fiber extraction machine specification are 3 phase induction motor with 1440 RPM blade maximum size & extraction of coir is very fast thickness area. The proposed design consists of a power source to drive shaft.

Coir Fiber Willowing Machine is used in the initial stage of processing fibre and it removes wastes separately and pure fibres are used for next process. After their extraction, the coir fibers from the auto feeder will be made to pass through a conveyor belt to a feed roller, then they are opened by the spikes of the Opening Roller. From the Opening Roller they fall on to the inclined lattice. They are then condensed and twisted in to sliver form by the rotating head. Coir winding machine is used for separation of coir as per requirement coir. There is various type of coir small, medium and big size. This machine used to divide the coir as per requirement.

**No of  
Research  
Papers  
published  
using this  
CoE**

**No of Research papers published using this CoE in SCOPUS Journals**  
**(past 3 years alone):**

- [1] Ramkumar S, Duraiselvam M, **Sevel P**, Acoustic Emission Based DeepLearning Technique to Predict Adhesive Bond Strength of Laser Processed CFRP Composites, FME Transactions, Vol. 48, No.3, 2020, pp. 611 – 619. <https://doi.org/10.5937/fme2003611s> (**SCOPUS Indexed Journal**)

**No of  
Workshops  
organized as  
a part of this  
Centre of  
Excellence**

## **No of Workshops organized as a part of this CoE:**

<b>S. No</b>	<b>Title of Project</b>	<b>Duration</b>	<b>Funding Agency</b>	<b>Other Details</b>
1.	DST sponsored 2 Days Awareness Workshop and Hands on Training on “Fabrication of Coir based Products and Employment Opportunities in Coir related Products for SC Students	21 <sup>st</sup> & 22 <sup>nd</sup> September 202	SEED, Department of Science & Technology (DST), Technology Bhavan, New Delhi-110016	3 <sup>rd</sup> Year SC Students
2.	DST sponsored 2 Days Workshop and Hands on Training on “Technology behind extraction of Coir and converting them into useful products for SC People”	22 <sup>nd</sup> and 23 <sup>rd</sup> February 2024	SEED, Department of Science & Technology (DST), Technology Bhavan, New Delhi-110016	2 <sup>nd</sup> Year SC Students
3.	DST sponsored 2 Days Workshop and Hands on Training on “Employment Opportunities in Coir Technology and Coir Products for SC Students”	12 <sup>th</sup> and 13 <sup>th</sup> March 2024	SEED, Department of Science & Technology (DST), Technology Bhavan, New Delhi-110016	1 <sup>st</sup> Year SC Students