Abstract

Jute is a bast fibre and is obtained from the stems of the two cultivated species of the genus Corchorus, viz., C. capsularis and C. olitorius, of the Tiliaceae family. C. capsularis is commonly called white jute and C. olitorius is commonly called tossa jute, though the two species from which the jute fibre is obtained are similar in general appearance. Jute ranks next to cotton as the most important natural fibre in products on besides its high tensile strength, low extensibility, high frictional resistance, etc. It is easily renewable, biodegradable and eco-friendly. India contributes about 65% of world production of jute fibre. Natural fibres are greatly elongated substances produced by plants that can be spun into filaments, thread or
rope. Woven, knitted, matted or bonded, they form fabrics that are essential to society. Like agriculture, textiles have been a fundamental part of human life since the dawn of civilization. The Fibre Sector occupies an important place in the economy of the country in general and eastern region in particular. In spite of being so cheap and easily available, in terms of usage, global consumption, production, and availability, Fibre sectors are mostly ignored and almost vanishing from the production point of view. This is due to a number of problems including the non-availability of sufficient quantity of superior quality raw material because of the absence of proper grading of the fibres. The worst sufferers in the occurrence are the Farmers. They failed to judge the best quality of jute and are deprived in the hand of the sellers. In the earliest grading system 'Place of origin' was the basic guideline for grading of jute fibre. The grades had also link with commercial classification in accordance with the place of origin of the fibre, such as, Selected Assam, Ordinary Assam, Assam Bottom, Murshidabad Middle, Nadia Top etc. It was very disadvantageous and inconvenient for the growers to follow such a system of grading. As a result, a cultivator was unable to find out the quality of his produce. So the previous grading system was obviously very unscientific and arbitrary and acted against the interest of the growers. To remove that defective procedure, ISI now BIS introduced eight grade grading system based on six quality parameters i.e., strength, fineness, color, root content, defects and density. Different score marks are assigned to each character according to the level of these characters. The score marks for different characters, however, vary from one grade to another according to the gradations of characters. This grading system is found to be more acceptable and helpful to jute growers. The quality of jute fibre (Corchorus capsularis and Corchorus olitorius) is usually judged by its suitability for the production of different types of yarns and its behavior in the manufacturing process. The BIS grading of jute envisages a scorecard system of grading that aims at eliminating personal bias as far as practicable. The six physical parameters viz., strength, fineness, color, root content, defects and density of jute fibres are assessed for sorting out the fibre into eight different grades. Relative weightage is given to each physical parameter by standard scoring system and the grade of fibre is determined by total score of the six parameters.

References

- Jute in India – A Monograph (Indian Central Jute Committee, Calcutta), 1959
- Hand Book on Grading of Jute Fibre by Dr. Subhas Chandra Saha and Dr. Swapan Kumar Bhaduri.
- The International Jute Commodity System, By Chhabilendra Roul

Index Terms

Computer Science
Computing, Communication
And Sensor Network
Keywords
Image Processing  Color  Fineness  Defects  Jute Fibre