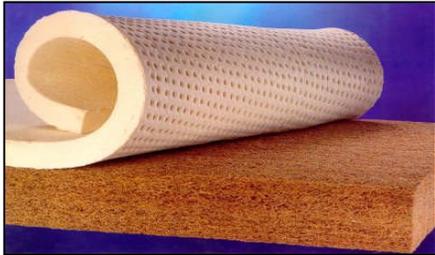


TESTING AND SERVICE FESILITIES

YEAR	ACTIVITIES	ACHIEVEMENTS
1970-71	<p>Chemical compositions containing borax, boric acid and ammonium salts improved the fire resistance of the coir materials to a considerable extent</p> <p>109 tonnes of coir yarn was dyed in different shades to meet the dyed yarn requirements of Hindustan Coir. Rubberised coir and yarns were tested and reports issued.</p>	
1972-73	<p>Dyeings taken with sulphonated fish oil revealed that sulphonaed oil is not compatible with basic dyes and does not produce any glossy effect on the dyed material.</p> <p>Sulfamic acid used as Dye bath assistant in place of sulphuric acid during application of acid dyes to coir showed that the dye uptake was satisfactory but not recommended, as sulphamic acid is easily hydrolysable.</p> <p>Revised the IS specification for coir rope.</p>	
1973-74	<p>Softened mattress fibre of grade I on treatment with 10 % (w/v) solution of caustic soda.</p> <p>320 kg coir yarn was bleached with a bath containing sulphuric acid [3 ml/litre for 45 minutes] in cold for eliminating the dull grey shade of coir yarn commonly marketed. A model shade card with a total number of 190 shades was prepared by depicting samples of the different shade and detailing the receipe of dye stuff combinations, dyeing methods etc.</p> <p>Samples of dyestuffs received from different parties were tested for tinctorial value and bulk dyed 173 MT of coir in different shades for Hindustan Coir.</p>	<p>1. A model shade card from 190 shades were developed.</p>

YEAR	ACTIVITIES	ACHIEVEMENTS
<p>1974-75</p>	<p>A total of 243.6 tonnes of coir yarn was dyed in different shades for meeting the dyed yarn requirements of Hindustan Coir and facilities for bulk dyeing was increased to meet the growing requirements of the power loom factory.</p> <p>Field level peroxide bleaching was conducted for popularisation and 4.55 tonnes of coir yarn was bleached for trade in batches in the Lab. as part of extending service facility.</p> <p>A treatment of commercial grade of Anjengo yarn in a solution containing 3 g/litre of sulphuric acid and 5g/litre of sodium sulphite for a period of one hour at room temperature was observed to give satisfactory levelling of shade variation in the natural tint of coir yarn.</p> <p>Formulated a draft Indian standard specification for rubberized coir products.</p>  	<ol style="list-style-type: none"> 1. Formulated draft Indian standards for rubberised coir. 2. Popularised Peroxide bleaching of coir in the field level.
<p>1975-76</p>	<p>Experiments were conducted in softening of different types of coir yarn such as Anjengo, Quilandy and Beypore.</p> <p>Conducted bleaching with a solution containing 10 g/litre of sodium per borate and 5g/l of sodium silicate in the hot (60-70⁰C) imparted a bright creamy yellow colour to the material and 4 shaft twill carpets were woven from it.</p> <p>Evolved techniques for bleaching of coir with peroxide in the cold for greater flexibility in adoption of the bleaching process to industrial application.</p> <p>The pH for bleaching was 10.5 – 11.0 which decreased to 8.5 with the progress of bleaching.</p> <p>A total quantity of 324 tonnes of coir yarn was dyed in different shades for Hindustan Coir.</p>	

YEAR	ACTIVITIES	ACHIEVEMENTS
<p>1976-77</p>	<p>Study was conducted in softening of coir yarn in a solution containing 5% caustic soda (w/v) at 80-85^oc for 2 hours resulted in 40% saving in chemicals compared to the cold treatment. Softened 530 kg coir fibre, 836 kg carnatic yarn and 225 kg medium spun yarn and woven fancy coir products and displayed at International Seminar on Coconut Research organized by the Central Plantation Crops Research Institute, Kasargode. Thin Anjengo yarn was dyed in four fancy shades for preparation of special badges for distribution at the seminar.</p> <p>Studies were conducted in a coir factory using a bleaching receipe containing 5 g/l of sodium perborate, 5ml/litre of Hydrogen peroxide and 5 g/litre of sodium silicate. A pretreatment with a solution containing 5g/l of soda ash in the cold for ½ hour led to improve the variation in tint of the yarn and in getting uniform bleach. Attempts to reduce the cost of bleaching with a solution containing 3.75 g/l sodium carbonate, 6.5 g/l of sodium silicate and 4.5 g/l of hydrogen peroxide gave duller shade. Two shades were matched on softened/ bleached coir fibre to produce special effects on use of dyed fibre in the manufacture of fibre mats.</p> <p>Rubberised coir products were tested for conformity set forth in the Defence specifications. Details of test method for determination of Indentation Hardness index were finalised and write up with drawing of the testing instruments was forwarded to the ISI, New Delhi for publication of the standard specification for rubberised coir products. Spring reinforced rubberised coir cushions were tested in the laboratory for determination of loss in thickness on repeated flexing which was found to be within 3.5%.</p> <p>Technical assistance was extended to an industrial establishment for adopting softening treatment of coir on a commercial scale. A total quantity of 3 tonnes of coir yarn was peroxide bleached and 236 tonnes of coir yarn and 600 kg of sisal in different shades were dyed for Hindustan Coir.</p> <p>A paper on “Use of Coir in Building Construction” was presented at the National Seminar on Development and Utilisation of New Materials in Building Technology, held at Trivandrum during 21st to 25th September 1976.</p> <p>A paper on “Studies in Coir Extraction, Spinning, Softening, Bleaching and Dyeing” was presented at the seminar in Coir processing, forming part of the 12th Session of the FAO Inter Governmental Group on Hard Fibers held at New Delhi during 14-19, March 1977.</p>	

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1977-78	<p>Use of 0.5% formic acid in place of acetic acid yielded dyeings of improved penetration and better levelling during dyeing with basic dyes.</p> <p>Hypochlorite bleaching observed to level off the variation in tint of the commercial grades of vycome coir yarn.</p> <p>42 designs were evolved for coir products and 178 copies of design cards were distributed to the coir industry.</p> <p>A recipe was evolved for bleaching vycome coir yarn and field tested by treatment of the material in a sodium hypochlorite solution with a strength of 10 g available chlorine per litre at a pH of 9 to 10 for half an hour in the cold followed by antichlor treatment of 3g/litre of hydrochloric acid solution for 15 minutes, washing and drying. The studies on break load indicated that there was limited variation in the break load of hypochlorite treated coir yarn from that of the unbleached (control).</p> <p>250 samples of rubberised coir were tested. A shade matching was taken on aloe yarn. 120 tonnes of coir yarn was dyed in different shades for Hindustan Coir.</p>	<p>1. Hypochlorite bleaching was studied and demonstrated.</p>
1978-79	<p>A recipe for bleaching yarn from brown fibre to a natural tint equivalent to that of Quilandy / Bypore yarn were evolved and recommended for field use.</p> <p>Fifty one samples of dyes were tested to examine their suitability for application on coir.</p> <p>69 novel designs were evolved for different types of coir mats, matings, carpets and wall hangings. Copies of 299 selected designs were prepared and distributed to the industry.</p> <p>Copies of sixty selected designs were evolved in duplicate for preparation of a design folder.</p> <p>On the spot technical advice in bleaching, bulk dyeing and shade matching was extended by 144 visits covering 34 coir processing units</p> <p>49 samples of rubberised coir were tested. 154 tonnes of coir yarn was dyed in different shades for Hindustan Coir.</p> <p>The National Institute of Occupational Health was assisted in organising a study on the occupational health of coir workers.</p>	<p>1. Bleaching method was developed for yarn from brown fibre</p>

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1979-80	<p>54 novel designs for fibre mats/ stencilled mats and other coir products in different colour shades were evolved. 201 design cards in selected design were prepared and issued to the industry.</p> <p>On the spot technical advice extended to 55 coir processing units. Evolved the details of dyestuff formulation for 25 selected shades of better fastness. Extended assistance in bulk bleaching of 125 MT coir yarn. 368 nos of rubberised coir samples were tested. Formulated a draft standard specification for moulded rubberised coir cushion. A coir rope specimen was tested for break load and issued the test report. A total of 179 tonnes of coir yarn was dyed in different shades for Hindustan Coir. 3 Shade matchings were taken for coir.</p>	
1980-81	<p>Discoloured yarn and sun burnt yarn were treated for improving the brightness and lightening the tint. Developed a two bath process for bleaching of Beach Yarn. Thirty one dyestuff samples were assessed for suitability in dyeing of coir shades with improved fastness to water and rubbing were developed on coir using acrylic dyes with 2% acetic acid as dye bath assistant. 40 dyestuff samples of different classes were tested for evaluating its suitability for dyeing of coir. A total quantity of 172 tonnes of coir yarn was dyed in different shades for Hindustan Coir.</p>	