



CRC

for

Premium

Quality

Wool

Latest Developments in Spinning

Produced for the CRC for Premium Quality Wool undergraduate program by;
Dr. Peter Lamb, CSIRO Textile & Fibre Technology.



Customer Needs

- **CONSUMER**

- **Comfort**
 - lighter weight
 - softer
- **Price & Performance**
- **Fashion**
 - colour
 - appearance
- **Easy-care**

- **SPINNER**

- **Comfort**
 - top specifications
- **Price & Performance**
 - top specifications
 - blended yarns
 - alternate technology
- **Fashion**
 - novel yarns
 - fast turn-around
- **Easy-care**
 - shrinkproofing or blends

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Processing Needs

- **GARMENT MAKER**

- fabric faults

- **DYER / FINISHER**

- colour
- contamination

- **FABRIC-MAKER**

- fewer stops
- faster production

- **SPINNER**

- yarn evenness & tenacity
 - few stops
 - same appearance
- yarn hairiness
 - appearance
- yarn faults
 - very expensive

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Relative Processing Costs

- **Topmaking** **\$1.50**
- **Spinning** **\$8.50**
- **Weaving** **\$5.50**
- **Finishing** **\$4.00**

- **Spinning**
 - relatively expensive
 - source of significant cost saving
 - higher efficiencies

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Developments in Spinning

- **Top Specifications**
 - finer fibres, or lower CV_D
 - longer fibres
 - lower fibre curvature
 - CV_H limits
 - fibre colour
 - less contamination
 - **Global Benchmarking**

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New Technology

- **SIROCLEAR**
 - yarn faults
- **SIROSPUN**
- **SOLOSPUN**
- **Alternate Technologies**
 - air-jet
 - friction
- **Improved ring spinning**
 - “compact” yarns
 - higher speeds & production
 - on-line quality control
 - fewer steps
 - linking
 - automation

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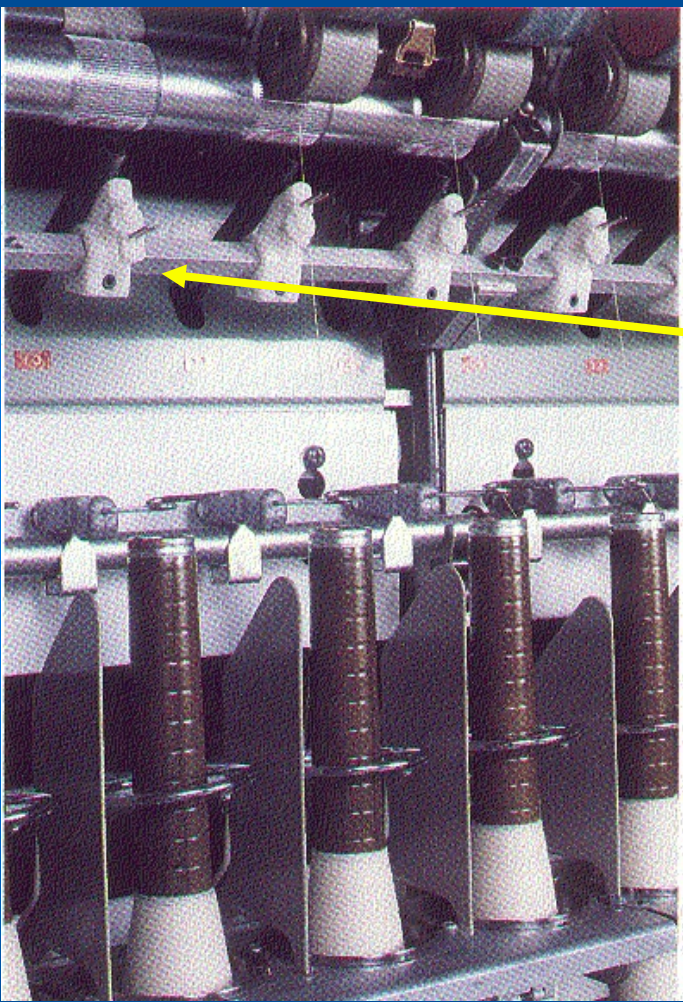
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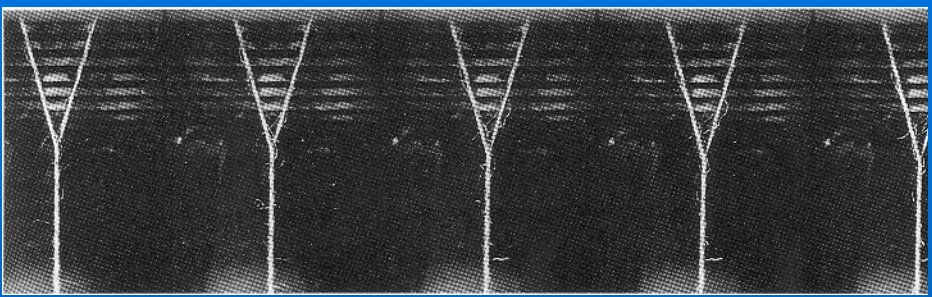


SIROSPUN



Break-out devices positioned above revolving spindles

Device on the left in the 'down' position after interrupting a fault

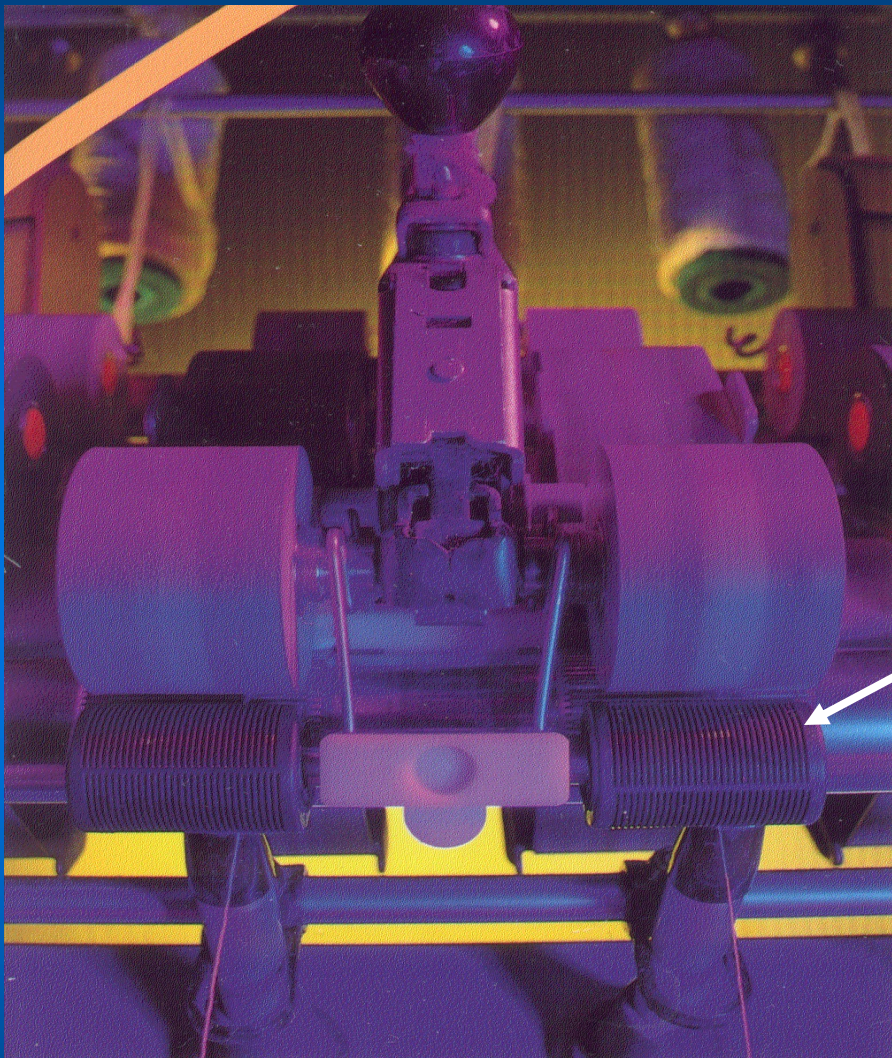


Sirospun spinning showing the binding of surface fibres into the structure

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SOLOSPUN



Finely Grooved Solospun Rollers

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SIROCLEAR

- detects yarn faults during winding
 - dark fibres
 - VM & non-VM faults
- cuts yarn, removing fault
- yarn is spliced
- works on undyed yarn
- expensive in terms of production efficiency
 - better to remove faults at source (farm)

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