The tire production process is a very meticulous and complex one, involving various stages from raw material sourcing to final inspection. Giti’s relentless desire for improvement ensures consistent quality throughout the process.

**Raw Materials QA**
- The main materials to produce tires are natural rubber, carbon black, accelerators, and other additives.
- To obtain a homogeneous mixture, these materials are mixed at high temperatures in a massive mixer.
- Compound & Mixer QA
  - The mixing parameters, first batch output, and quality issues are monitored.
- Curing QA
  - The curing press is where tires attain their final shape and size.
  - The curing process involves high temperatures, time, and pressure of curing machines.
- Overall Tire Building QA
  - The tire building machine pre-shapes radial tires into a form very close to their final dimensions.
  - The pre-shaping process is done before the tires are molded.
- Overall Curing QA
  - Tires are ready to be cured at over 100 degrees Celsius for 12 to 25 minutes, depending on their size.
  - As the press swings open, the tires are popped from their molds.
- The Finished Tire
  - Every finished tire comes with unique barcode where we can perform backward tracing along every step of the manufacturing process for quick response when we spot issues that affect performance, ride, and safety.

**Compounding & Mixing**
- Compounding is the operation of bringing together natural rubber, oil, carbon black, accelerators, and other additives.
- The main materials involved are natural rubber & chemicals.
- Raw material QA
  - Monitor raw material formulas, part numbers, techniques and parameters.
  - Oversee and record production dates, part numbers, techniques and parameters.
  - Oversee and record component QA
  - Ensure high precision and consistency of extruded components.

**Component Preparation**
- Components preparation falls into three classes:
  - Extraction: Process of applying rubber, fabric, and other materials to a compound and additional mixing of the compound.
  - Extrusion QA: Online on-line measurement of tread exhaustion.
  - Overall Component Preparation QA: Overview and record component production dates, machine numbers, techniques and parameters.

**Component & Mixer QA**
- The primary materials to produce tires are natural rubber & chemicals.
- Raw material QA
  - Ensure high precision and consistency of extruded components.
- Component QA
  - Ensure high precision and consistency of extruded components.
- Overall Tire Building QA
  - The tire building machine pre-shapes radial tires into a form very close to their final dimensions. The molds are then engraved with the tread pattern and sidewall marking.

**Curing**
- The curing process is where treads attain their final shape and size. Hot molds like giant waffle irons shape and vulcanize the tire. The molds are then engraved with the tread pattern and sidewall marking.
- Tools: Curing auto-control.
- Tires are cured at over 100 degrees Celsius for 12 to 25 minutes, depending on their size. As the press swings open, the tires are popped from their molds.
- Curing QA
  - Host computer to monitor temperatures, time & pressure of curing machines. Issued set wall sound alarms.
  - Produce the best final treads.
  - Produce the best final tires.
  - Ensure all components are in their proper positions before they are molded.

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