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ANALYSIS AND EVALUATION OF COTTON PROCESSING TECHNOLOGY.

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Annotation

Medium fiber cotton: Length: in the range of 28-33 mm. Popular varieties:" S-6524"," Namangan-77","Bukhara-6". Mainly designed for spinning, it is widely used in cotton-textile clusters. Products: bedding, succulent fabrics, knitwear.

Thin fiber cotton Length: 35 mm and longer. Popular varieties:" glossy-4"," An-Bayaut-2","glossy-1". It has a thin, strong, large crystal structure and is useful in the production of high-quality yarn and fabrics. Products: high grade fabrics, shirt fabric, sparse and thin fabrics, products for export..

Keywords

Tarash (carding), Preliminary cleaning, Spark and thread spinning (ring spinning / rotor spinning), Painting and preparation of gauze, Sewing and finished product, "S-6524", "Namangan-77", "Bukhara-6", "Porloq-4", "An-Bayaut-2", "Porloq-1".

Cotton fiber is an extremely hygroscopic, that is, a raw material that absorbs moisture easily, requiring the application of special rules and technologies in its storage. As a result of improper storage of cotton, rotting, yellowing, mold, increased fiber fracture, increased moisture and dust content, the appearance of harmful insects can occur in the fiber. Therefore, it is important to keep it in the right conditions, on the basis of protective technologies.

Ready condition of fiber before storage

Cotton should be cleaned and brought to the state of fiber; Humidity level: no more than 8-9% ; Maximum purification from foreign substances (dust, seed residues, poxol) ; The density of the fiber should be the same.

Requirements for storage space

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Dry, ventilated, enclosed warehouses; Temperature: 5°C-25°C; Relative humidity: up to 50-60% ; Direct sunlight should not fall; At a height of 15-20 cm from the floor surface, special diapers (paddles) are placed; The floor is concrete, easy to clean and should not absorb moisture. Pressed storage (baq Cotton) Cotton is compacted (400-500 kg li) using special presses; each press will have a separate identification number; presses are stored on the basis of different varieties, batches; pressed cotton is designed for more export and long-term storage.

Empty (not pressed) cotton storage

It is allowed only for short-term (30-45 days) storage; there will be a new crop of cotton, which is mainly brought to cleaning enterprises; more vulnerable to poison, dust and pests.

Ventilation storage systems

In warehouses, automatic air circulation (ventilation) is provided; air temperature and humidity are constantly controlled through sensors; an optimal microclimate is maintained through the computer control system.

Moisture control technologies

Real moisture in the fiber is measured using hygroscopic sensors; Moisture is balanced through dry air-supplying devices (designers; Most clusters have automated moisture stabilizers. Pest control Disinfection: during the pre-season, the warehouse is periodically subjected to chemical processing (fumigation); Insect monitoring is carried out using Pest control systems; In clean and dehydrated conditions, mold is obtained when cotton is stored.

Warehouse management and monitoring systems

Through ERP (Enterprise Resource Planning) applications in modern clusters and enterprises: Source of origin of each cotton batch; Humidity, weight, shelf life, storage temperature; Movement (from warehouse to warehouse, production) is monitored automatically. Through RFID (radio-tag) technology, an individual tracking chip is attached to cotton presses. When storing cotton, temperature, humidity and air circulation should be in balance. In warehouses, modomy cleanliness, disinfection, and Inter-Press space should be maintained. Modernization and automation of storage technologies ensures that the quality of cotton is preserved. Special attention should be paid to storage technologies to bring the quality of cotton fibers to the requirements of the ICA (International Cotton Association), which is recognized in export. Due to the fact that cotton fiber is a highly moisture-absorbing, physico-chemical volatile substance, it is necessary to comply with special technical and sanitary hygiene rules in its storage

1. Open warehouses (fields) storage

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2. Storage in closed (indoor) warehouses

Each of these two forms has its own requirements, advantages and disadvantages.

2. Storage of cotton in open warehouses

Definition 1

Open warehouses-storage of cotton presses or loose cotton bales on specially prepared grounds, under the air, but with protective measures (awning, concrete floor, base).

2-requirements

The area should be in a high place, where water does not accumulate. Floor-compacted with concrete, asphalt or gravel; A wooden base (poddon) is placed under each press or ballad; Over cotton wool is covered with dust, wet and sun protection awning (tarpaulin or polyethylene coating; It is advisable to have wind and dust protection walls around the area.

3-advantages

Low construction cost, suitable for temporary storage; Can be established in close proximity to manufacturing enterprises; Loading and unloading is easier.

4-disadvantages

Open to atmospheric influences: rain, sun, wind, moisture spoil the quality of cotton; The fiber turns yellow, the risk of mold is high; Pests and dust particles are impressive; Suitable for short-term (30-60 days) storage only.

Storage of cotton in closed warehouses

Definition 1

Closed warehouses-the storage of cotton presses or unprocessed cotton in special premises, under climate control, on the basis of the established technical regulation.

2-requirements

Buildings should have a good ventilation system; Temperature: 5°C – 25°C, relative humidity of air up to 50-60% ; Cotton is kept 15-20 cm above the ground; Intervals: there must be a gap of at least 0.5 m between each party; The warehouse is constantly cleaned, disinfected, moisture and temperature controlled.

3-advantages

Fiber quality is maintained for a long time (6-12 months); Complete protection from the external environment: rain, sun, wind, insect; The most suitable option for export and high grade fine fiber cotton; Integrated with digital monitoring systems.

4-disadvantages

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1. Construction and service costs are high; Storage capacity may be limited; Requires special equipment and climate control systems.

2. Comparison table

Table-1.1

Score	**Open warehouses**	**Closed warehouses**
Cost	Cheap	Expensive
Maintaining fiber quality	Low (yellowing, pollination)	High (clean, solid)
Shelf life	1-2 months	6-12 months
Pest risk	High	Low
Moisture protection	Low	Good
Compatibility with the fiber variety	Medium fiber	Thin fiber, for export

Open warehouses are suitable only for short-term, high-turnover production; it is recommended only in places with a dry climate, low precipitation. Closed warehouses, on the other hand, are important for stable quality and long-term storage. Especially thin fiber cotton, which is being prepared for export, should only be stored in closed warehouses. The only recommendation: the introduction of ventilation, hygiene, humidity control systems in both ways will preserve the quality of the cotton.

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