Basic textile operations

Level -I

Learning Guide -34

Unit of Competence: - Operate Cotton Ginning Machines and Controlling Bale Press Operations

Module Title: - Operating Cotton Ginning Machines and Controlling Bale Press Operations

LG Code: IND BTO1 M09 LO7-LG-34

TTLM Code: IND BTO1TTLM 1217v1

LO 7: Communicate process Information

Instruction Sheet	Learning Guide #-

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

- Completing records and other documentation
- Transferring information between changes in shifts

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to –**

- Complete records and other documentation clearly and accurately
- Transfer information between changes in shifts accurately

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 20.
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” **in page -.**
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #1.
7. Submit your accomplished Self-check. This will form part of your training portfolio.

Information Sheet-1	Completing records and other documentation

1. Completing records and other documentation

A typical cotton ginning facility is divided into five processing areas: unloading system; seed cotton drying and cleaning system; overflow system; ginning and lint cleaning system; and battery condenser and baling system. Each stage is shown in Figure and is briefly described previously. The first three stages are usually referred to as the high pressure side of the plant, while the last two (lint cleaning through baling) are called the low pressure side, reflecting the pressures used in the air conveying systems.

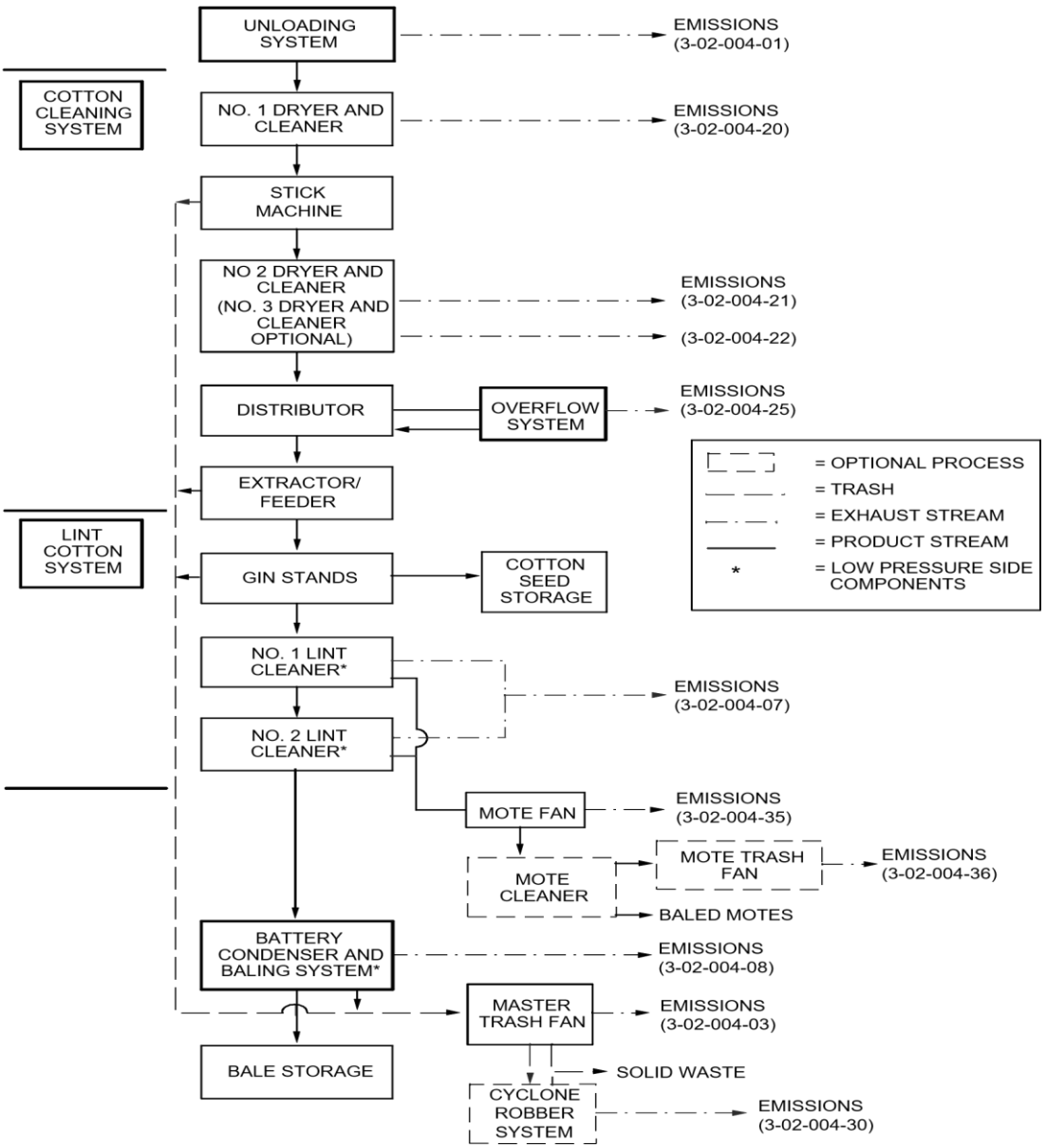

Fig. spinning process flow chart

To screen out unusable test reports, documents, and information from which emission factors could not be developed, the following general criteria were used:

1. Emission data must be from a primary reference:

   a. Source testing must be from a referenced study that does not reiterate information from studies.

   b. The document must constitute the original source of test data. For example, a technical paper was not included if the original study was contained in the previous document. If the exact source of the data could not be determined, the document was eliminated.

2. The referenced study should contain test results based on more than one test run. If results from only one run are presented, the emission factors must be down rated.

3. The report must contain sufficient data to evaluate the testing procedures and source operating conditions (e.g., one-page reports were generally rejected).

A final set of reference materials was compiled after a thorough review of the pertinent reports, documents, and information according to these criteria.

Data Quality Rating System

As part of the analysis of the emission data, the quantity and quality of the information contained in the final set of reference documents were evaluated. The following data were excluded from consideration:

Test series averages reported in units that cannot be converted to the selected reporting units

1. Test series representing incompatible test methods
2. Test series of controlled emissions for which the control device is not Specified.
3. Test series in which the source process is not clearly identified and described;
4. Test series in which it is not clear whether the emissions were measured before or after the control device.
5. Test data sets that were not excluded were assigned a quality rating. The rating system used was that specified for preparing AP-42 sections. The data were rated as follows:

A- Multiple tests that were performed on the same source using sound methodology and reported in enough detail for adequate validation. These tests do not necessarily conform to the methodology specified in test methods, although these methods were used as a guide for the methodology actually used

B- Tests that were performed by a generally sound methodology but lack enough detail for adequate validation.

C- Tests that were based on an untested or new methodology or that lacked a significant amount of background data.

D- Tests that were based on a generally unacceptable method but may provide an order-of magnitude value for the source.

The following criteria were used to evaluate source test reports for sound methodology and adequate detail:

Source operation. The manner in which the source was operated is well documented in the report. The source was operating within typical parameters during the test.

Sampling procedures. The sampling procedures conformed to a generally acceptable methodology. If actual procedures deviated from accepted methods, the deviations are well documented. When this occurred, an evaluation was made of the extent to which such alternative procedures could influence the test results.

Sampling and process data. Adequate sampling and process data are documented in the report, and any variations in the sampling and process operation are noted. If a large spread between test results cannot be explained by information contained in the test report, the data are suspect and are given a lower rating.

> Analysis and calculations. The test reports contain original raw data sheets. The nomenclature and equations used were compared to those (if any) specified by EPA to establish equivalency. The depth of review of the calculations was dictated by the reviewer's confidence in the ability and conscientiousness of the tester, which in turn was based on factors such as consistency of results and completeness of other areas of the test report.

The quality of the emission factors developed from analysis of the test data was rated using the following general criteria:

A—Excellent: Developed from A- and B-rated source test data taken from many randomly chosen facilities in the industry population. The source category is specific enough so that variability within the source category population may be minimized.

B—Above average: Developed only from A- or B-rated test data from a reasonable number of facilities. Although no specific bias is evident, it is not clear if the facilities tested represent a random sample of the industries. The source category is specific enough so that variability within the source category population may be minimized.

C—Average: Developed only from A-, B- and/or C-rated test data from a reasonable number of facilities. Although no specific bias is evident, it is not clear if the facilities tested represent a random sample of the industry. In addition, the source category is specific enough so that variability within the source category population may be minimized.

D—Below average: The emission factor was developed only from A-, B-, and/or C-rated test data from a small number of facilities, and there is reason to suspect that these facilities do not represent a random sample of the industry. There also may be evidence of variability within the source category population. Limitations on the use of the emission factor are noted in the emission factor table.

E—Poor: The emission factor was developed from C- and D-rated test data, and there is reason to suspect that the facilities tested do not represent a random sample of the industry. There also may b

Self-Check -1	**Written Test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. How ginning faults are recorded?

Note: **Satisfactory rating - 3 points** **Unsatisfactory - below 3 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Information Sheet-2	Transferring information between changes in shifts

2. Transferring information between changes in shifts

. **Instructions for Shift Change**:

Take Charge of the Shift

- Come at least 10 - 15 minutes earlier to the work spot.
- Meet the previous shift jobber and understand which are the machines part ready for doffing and discuss regarding the issues faced by them with respect to the quality or production or spare or safety or any other specific instruction etc.
- Understand the trash, lint in kg followed in the bale press for his allocated number bales/ machines for doffing.
- Check and understand the technical details mentioned in the total kg of ginned cotton.
- Check for the availability of the seed cotton (unginned).
- Check the availability for empty materials to press bale for doffing.

Handing over the Shift:

- Properly hand over the shift to the incoming shift bale pressing Doffing team head.
- Provide the details regarding trash, color, average fiber length for ginning and Seed cotton for allocated bale/machine.

Self-Check -2	**Written Test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is the responsibility of a shift for the next shift? (5 pts.)
2. One of following is must be done by employees in ginning process. (2 pts.)
   A) Recording yarn count
   B) Weighing total amount of lint produced
   C) Inspecting fabric faults
   D) None

Note: **Satisfactory rating -above 5 points** **Unsatisfactory - below 5 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____
   _____
   _____
   _____
   _____
   _____
2. _____
3.

Operation Sheet 1	Operation of ginning process

Method of: task 1

Step 1-prepare seed cotton

Step 2- feed the seed cotton

Step 3- checking moisture

Step 4- dry the seed cotton

Step 5- pre-cleaning seed

Step 6- removes stick

Step 7- extracting

Step 8- lint cleaning

Step 9- bale pressing

.

Operation Sheet 2	Operating bale press machine

Procedure of task 2

Step 1- slide lint

Step 2- feed lint

Step 3- press bale

Step 4- bale tying

Steps 5- weigh the bale

Operation Sheet 3	Testing fiber quality parameters

Procedure of task 3

Step 1- material preparation (HVI, fiber, weight balance…)

Step 2- weigh fiber

Step 3- start (power on) HVI tester

Step 4- feed fiber to HVI tester

Step 5- take HVI tester result

Step 6- discuss on result

LAP test	**Practical Demonstration**

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within --- hour.

Task 1. Do ginning process

Task 2. Operate bale press machine

Task 3. Test fiber quality parameter

List of Reference Materials

1. M.Rafiqchaudhry: "harvesting and ginning of cotton in the world", technical information section, international cotton advisory committee, Washington, D.C.1997
2. Cotton ginners handbook, agricultural hand book 503, December 1994.
3. Study of ginning and pressing mills, Dr.V.V prathibha bahrathi, 1234 students of MRCE.
4. UTILIZATION OF COTTON GIN WASTE, Gary Huitink, University of Arkansas Cooperative Extension Service