

LESSON PLAN

Sem./ Branch: 3rd Sem./ Text. Tech.

Duration: 15 weeks

Subject: Spinning Technology-I

Name of Faculty: GF3

| Wee k | Theory Topics (4 Periods/ Week) | Practical (4 Periods/ Week) |
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| 1 st | Objects of ginning, ginning percentage, description and working of Double Knife Roller Gin, Double Macarthy Gin and Saw Gin | To sketch and study the working of different parts of Single Macarthy Gin and to operate it |
| 2 nd | Importance of mixing and blending. mixing and blending techniques in Blow Room, description and working of Auto Mixer and Multi Mixer Principle of opening and cleaning, opening by the action of nails, beaters and air currents. Description and working of Condenser. | Demonstration of Mixing and Blending techniques during with visit/Mill training Practically sketch and describe the passage of material through condenser. Practically sketch and describe the passage of material through condenser. |
| 3 rd | Study of following opening and cleaning machines: Blending Bale Opener, Automatic Bale Plucker, Feeder; Super Jet Cleaner, Mono Cylinder Cleaner, ERM Cleaner, CVT-3 cleaner. | Practically sketch and describe the passage of material through Blending Bale Opener, Hopper Feeder, Step Cleaner, Feed Unit, Porcupine Opener |
| 4 th | Objects of evener motion and its importance, construction and working of Piano Type Feed Regulating Motion, of Cone Drums Objects, construction and working of Two Bladed Beater and Krischner Beater Objects of calendaring in Scutcher and passage of cotton sheet through them | Drums. Study of feed regulating motion and cone Drums To sketch and understand the working of Krischner Beater. - Practice of setting & guages of the openers & beaters in the Blow Room Line Study of exhaust system and Cages in Scutcher - Practice of drawing of gearing to understand drive to various parts. - Study of Lap Forming Unit. - Calculate draft/Production of Blow Room & Maintenance schedule of Blow Room |
| 5 th | Lap rejection and lap variation: their causes and remedies Defects in laps and their removal , Cleaning efficiency of Blow Room line and waste percentage , Work load distribution in Blow Room Automatic lap doffing and its advantages. Necessity & working of Chute Feed System at Blow Room. Main features and advantages of Modern Blow Room Line | - Workload distribution at Blow Room & card machine. - Practical study of Automatic Lap doffing mechanism Practically study of the Chute Feed System during mill visit/mill training |
| 6 th | 1st Sessional test | |
| 7 th | Calculation of different yarn numbering systems and conversion from one to other system and calculation of equivalent count. Gearing diagram of Scutcher and Calculation of lap hank, lap weight, lap length and Scutcher production per shift | Gearing diagram of Scutcher and Calculation of lap hank, lap weight, lap length and Scutcher production per shift |
| 8 th | Calculation of clearing efficiency of blow room line. Calculation of calendar roll and shell roll speeds and tension draft between calendar roll and shell roll | Calculation of production constant of blow room Scutcher. Calculation of calendar roll and shell roll speeds and tension draft between calendar roll and shell roll. |
| 9 th | Mixing and blending cost calculations. Maintenance schedule of Blow Room line. Objects of carding, Passage of material through Revolving Flat Card and functions of various parts i.e. licker-in, mote knives, back plate, front plate, cylinder, flats, doffer and undercasing. | Study of various electronics parts/motion in Blow Room |
| 10 th | Difference between carding action and stripping action. Flexible and metallic card clothing, advantages of metallic card clothing. Objects of stripping, procedure for Plain Roller stripping and Vacuum stripping | Demonstrate the passage of material through the machine and to introduce with different parts of Revolving Flat Card. Stripping of cylinder and doffer of Card |
| 11 th | 2nd Sessional test | |

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| 12 th | Objects of grinding and Types of Grinding. Web doffing by doffer comb, India Roll System and Cross Roll Verga System. General settings and gauges for Semi High Speed and High Speed Card | Grinding of Card with dead roll grinder and Traverse Roller Grinder. Piecing of web and sliver on Card |
| 13 th | Objects principle and working of Auto Levellers at card. Card wastes e.g. motes, fly, strips and sweeps. Salient features of High Production Card. | To Practice the setting and gauging between different parts of Card Machine |
| 14 th | Defects in card web and their removal. Calculation of waste percentage of a card. Cleaning efficiency of Card. Calculation of draft, draft constant, tension draft and tension draft constant | Calculate drafts between various parts, total draft, draft constant, tension draft and tension draft constant |
| 15 th | 3rd Sessional test | |
| 16 th | Calculation of production and production constant. Calculation of time taken to exhaust a lap | Calculate production and production constant of Card. Calculate the time taken to exhaust a lap on Card |