



Bangladesh Technical Education Board
Agargaon, Dhaka

Industrial Attachment Guidelines Yarn Manufacturing

SI No.	Section	Activity
01	Human Resource and Administration Dept.	✓ Company Profile ✓ Company Mission and Vision ✓ Finished Products List ✓ Daily Production Capacity ✓ Different Departments ✓ Physical Infrastructure (Lay Out Plan) ✓ Achievements and certifications ✓ Organogram of Manpower ✓ Organogram of different Section ✓ Management Information System ✓ Job Description of different designated post ✓ Section Wise Manpower Distribution ✓ Observation of Safety Measures ✓ Human Resources Management and Compliance Issues ✓ Skill Development Centre/ Learning Centre
02	Blowroom	✓ Bale Opener/ Bale Plucker: ○ Object of the machine ○ No. of roller, Types of rollers, Roller RPM, Plucking Depth ✓ Metal Detector: ○ Object of the device, working principle, technical specification ✓ Intensive Cleaner: ○ Object of the machine ○ No. of Roller, Types of Roller, Roller setting, Grid bar Setting ✓ Multimixer: ○ Object of the machine, no of chamber, blending/mixing types ○ No. of Roller, Types of Roller, Roller setting ✓ Fine Cleaner: ○ Object of the machine ○ No. of Roller, Types of Roller, Roller setting, Deflector blade setting ✓ Foreign Fiber Detector:

		○ Object of the device Working principle / procedure ○ Machine setting ✓ Condenser: ○ Function of machine ✓ Blending Process: ○ Manual Blending Raw cotton cleaning procedure & bale making for mixing with Manmade fibre, modified blowroom line flow for blend process ○ Automatic Blending Different raw material feeding line to auto blender, observation of dropping of different materials, dropping percentage checking by QC team, problematic material removal technique if required due to power fail or any other mechanical alarm which will affect composition
03	Card	✓ Machine Brand Name, Model, no of machine ✓ Object of the machine ✓ Machine input and output ✓ Machine Parameter Setting ○ Production Speed (kg/hr), Licker In Speed, Cylinder Speed, Flat Speed, Doffer speed, Licker In Diameter, Cylinder Diameter, Doffer Diameter, Total No. of Flat, No. of flat in action, No. of Stationary Flat, All gauge point and the gauge values (Thou/milimeter), Wastage Name, no. of carding m/c, Wastage Name ○ Production Calculation
04	Breaker Draw Frame/ Pre Comb Draw Frame	✓ Machine Brand Name, Model, no of machine ✓ Object of the machine ✓ Machine input and output ✓ Machine Parameter Setting Creel Tension, Table Tension Drafting System, Back Draft, Main Draft, Total Draft, Doubling, Trumpet Size, Condenser Size, Delivery Speed ✓ Production Calculation
05	Lap Former	✓ Machine Brand Name, Model, no of machine ✓ Object of the machine ✓ Machine input and output ✓ Machine Parameter Setting Drafting System, Draft, Doubling, Delivery Speed ✓ Production Calculation
06	Comber	✓ Machine Brand Name, Model, no of machine ✓ Object of the machine ✓ Machine input and output ✓ Machine Parameter Setting Nips/Minute, Feed/Nip, Batt tension, Index Wheel setting Drafting System, Back draft, Total Draft, Doubling/No. of Head, Trumpet size, condenser size, Wastage Name & measuring

		✓ Production Calculation
07	Simplex / Speed Frame	✓ Machine Brand Name, Model, no of machine ✓ Object of the machine ✓ Machine input and output ✓ Machine Parameter Setting Drafting System, Back draft, Total Draft, TPI, no. of flyer, flyer rpm, false twister, hank of roving, Pressure arm specification, Different loads (kg/N) on top rollers, Apron Specification, Spacer, Gearing Diagram analysis, Draft Constant, Study on DCP gear teeth & intermediate draft gear teeth and how to set draft by different gear combination, Twist Constant, Study on TCP gear teeth & intermediate twist gear teeth and how to set TPI by different gear combination ✓ Production Calculation
08	Ring Frame	✓ Machine Brand Name, Model, no of machine ✓ Object of the machine ✓ Machine input and output ✓ Machine Parameter Setting Drafting System, Back draft, Total Draft, TPI, no. of spindle, spindle rpm, Pressure arm specification, Apron Specification, Traveler size and other parts, Gearing Diagram analysis, Draft Constant, Study on DCP gear teeth & intermediate draft gear teeth and how to set draft by different gear combination, Twist Constant, Study on TCP gear teeth & intermediate twist gear teeth and how to set TPI by different gear combination, Doffing system monitoring, Wastage Name ✓ Production Calculation
09	Winding	✓ Machine Brand Name, Model, no of machine ✓ Object of the machine ✓ Machine input and output ✓ Machine Parameter Setting Winding speed (meter/minute), Electronic yarn clearing system (Uster Quantum, Loeffe) and setting, Uster Classimat Fault Analysis ✓ Production Calculation
10	Conditioning	✓ Machine Brand Name, Model, no of machine ✓ Object of the machine ✓ Machine Parameter Setting ✓ Temperature ✓ Time Set ✓ No of packages inserted
11	Packing	✓ No. Cone per Bag, Total Net Weight, Total Gross Weight
12	Recycling	✓ Garments Cutclip Collection ✓ Color wise cutclip segregation ✓ Cutting by cutter if required ✓ Shredding (no of roller, roller types, roller speed, delivery speed) ✓ Quality Checking Report by AFIS machine
13	Store/ Inventory Management	✓ Inventory System for raw material (Material receiving book, Store requisition book)

	System	✓ Inventory system for spare parts (Purchase request book, Quality certificate book, material receiving book, Store issue book) ✓ Inventory system for finished goods (Challan, Gate Pass) ✓ Raw Material & Finished Goods keeping with proper tag ✓ Monthly Fiber consumption ✓ Annual requirement ✓ Consumption calculation
14	Research & Development (R & D)	✓ Swatch analysis ✓ Composition check, shade check, probable composition or recipe (for mélange yarn) declaration & costing procedure ✓ Product development ✓ Proto development by Miniature Machine and decision taking to achieve the same quality in bulk
15	Quality Control	✓ Raw material consumption analysis technique, safety stock quantity declaration procedure, raw material quantity requisition, received material quality checking, claim to supplier if required according to analysis the test report and the deviation found ✓ Product risk factor analysis, raw material selection, bale management, Off grade cotton management ✓ Process controlling, wastage % setting, process parameter setting ✓ Uster HVI, AFIS, EVENNESS Tester report analysis ✓ Different equipment related to Quality Control in Spinning ✓ Data keeping in MIS or manual log book ✓ Off line, On line quality system follow up ✓ Wastage & Yarn realization calculation ✓ Non-conforming product management ✓ Customer claim handling ✓ Calibration of testing equipment
16	Utility	✓ Power source list ✓ Gas generator Brand name, model, origin, capacity, no of engine ✓ Cooling tower Brand name, model, origin, capacity ✓ Transformer Brand name, model, origin, capacity ✓ Pumping Motor Brand name, model, origin, capacity ✓ Reserve Tower Brand name, model, origin, capacity ✓ Demineralization Plant Brand name, model, origin, capacity ✓ Air compressor

		Brand name, model, origin, capacity, no of machine ✓ Air dryer Brand name, model, origin, capacity, no of machine ✓ AC (Air Conditioning) Plant Brand name, model, origin, capacity, no of machine ✓ Generator Control Panel Bus Voltmeter, Bus Frequency Meter, Synchroscope ✓ Generator Temperature & Pressure Condition Hot water temperature & pressure, Cool water temperature & pressure ✓ Chemicals used for Water Jacket measuring ✓ Maintenance Schedule Intercooler, Oilcooler, Plate Heat Exchanger, Tappet Valve, Infill ✓ Section wise RH% & Temperature checking
17	Maintenance	✓ Observation of various activities of individual machine according to Maintenance schedule , maintenance point, oil & greasing schedule, Lubricant Type ✓ Maintenance by Maintenance team Conveyor Belt, Plain Lattice, Spike Bars of Spike Lattice, Pin & Wire Beater, Tension Alignment & Double Chain Sprocket, Overwholing ✓ Maintenance by Utility team Panel Board: Cleaning, Cooling System, All Connection, Display, Key Board, Signal Lamps & Auto Stop, Bearing, Fan & Terminal Inverter: Cooling Fan, Temperature, Magnetic Contact & Cleaning Sensor: Adjustment, Connection & Cable Dressing Limit Switch: Switch position, Connection & Cable Dressing

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