SMOT (SPINNING SECTOR)

INTRODUCTION:

The Textile Industry is the largest manufacturing industry in Pakistan. Pakistan is the eighth largest exporter of textile products in Asia. The textile sector contributes 8.5% to Pakistan's GDP. Also, this sector employs about 45% of the country's total labor force. Pakistan is the fourth largest cotton producer with the third largest spinning capacity in Asia after China and India and contributes 5% to the global spinning capacity. Currently, 1221 Ginning units, 442 Spinning units, and 124 major Spinning units are manufacturing yarn in Pakistan.

Pakistan's Textile Industry has been the nation's heart and soul since its independence. It is the largest manufacturing industry in Pakistan. Pakistan is the eighth largest exporter of textile products in Asia. The contribution to the economy is almost equal to 8.5% of the total GDP. The textile sector employs about 45% of the country's labor force. Pakistan is also the third largest consumer of cotton in the world. The total processing capacity of textiles is 5.2 billion square meters. International brands operating in Pakistan and local textile mills are; Textile businesses such as H&M, Levi's, Nike, Adidas, Puma, Target, etc. are concentrated in Karachi with 38% share and Faisalabad with 28% share. Of 464 textile units, 316 are in Punjab, and 116 are in Sind. The textile value chain consists of multiple industrial subsectors. The value chain is quite long, from cotton picking to a finished garment of the latest fashion. The end product of one sub-sector is the raw material for the other. Each sub-sector in the value chain contributes to value addition and employment generation. The most well-established textile industry is spinning, which contributesto exports in a prominent manner. This industry is facing severe problems due to the lack of availability of skilled labor and the higher turnover rate of workforce. Beside this fact, women involvement in this sector is negligible.

Freedom to work- by choice, in conditions of dignity, safety, and fairness- is integral to human welfare. To guarantee that women have access to this right is an important end in itself. From an economic point of view, reducing the gender gap in labor force participation can significantly boost global GDP. The areas with the largest gender gaps will benefit heavily. When you empower women in the workplace, you allow them to have more control over their lives. Things like training and sponsorship opportunities, equality programs and grants, and even opportunities for advancement in senior-level positions, will allow for the development that is so necessary.

As spinning is the largest sector of textile in Pakistan and women'sempowerment in this sector in inevitable. Through the involvement of women labor, multiple problems of labor shortage, labor turnover will be solved.

Spinning machines operator's training is a type of specialized training program that prepares women individuals to operate machines used in spinning mills, including blow room, carding, drawing frame, comber, roving frame, ring frame, and autoconer. The training typically includes theoretical and practical instruction to develop the necessary skills and knowledge to operate spinning machines effectively.

The training program may cover topics such as machine set-up, control& troubleshooting of modern machines, materials and yarn handling and quality control, safety procedures, and production processes. Participants may also learn about different types of spinning machines, their components, and how to maximize efficiency and productivity.

During the practical training portion, participants may have the opportunity to handle spinning machines themselves under the supervision of experienced instructors. This hands-on experience helps them develop the necessary skills and confidence to operate the machines efficiently.

Technical institutions or textile manufacturing companies often offer spinning machines women operator training. After training, individuals can work as spinning machine operators in textile mills.

OBJECTIVES:

Spinning machine training is helpfulin Pakistan for several reasons:

1. Women Empowerment: Very First objective of this Training Program is to empower women in this field. Obviously, in every value-added sector where there are female workers, their growth rate is more than that of others.
2. Economic Growth: Pakistan has a significant textile industry, with spinning mills playing a crucial role in producing yarn. By providing training on spinning machines, individuals can acquire the necessary skills to work in this sector, contributing to the country's economic growth.
3. Employment Opportunities: The textile industry in Pakistan is a major source of employment. Training programs on spinning machines can help create job

opportunities for individuals, especially those from low-income backgrounds, who can secure stable employment and improve their quality of life.

4. Skill Development: Spinning machine training equips individuals with the technical skills to operate and maintain the machines effectively. This enhances their employability in the textile industry and enables them to earn higher wages due to their specialized knowledge.
5. Modernization of the Textile Industry: Pakistan's textile industry is transitioning towards modernization and automation. By providing training on spinning machines, the workforce can stay updated with the latest technologies and advancements in the field, ensuring the industry's competitiveness on a global scale.
6. Increased Productivity and Efficiency: Proper training on spinning machines can increase yarn production productivity and efficiency. Skilled workers can optimize machine performance, minimize downtime, and produce high-quality yarn faster, thereby enhancing overall operational efficiency in spinning mills.
7. Export Potential: Pakistan is a major exporter of textile products, including yarn. By training individuals on spinning machines, the country can ensure the production of high-quality yarn that meets international standards. This, in turn, helps boost exports and earn foreign exchange for Pakistan's economy.

SCOPE:

Spinning machine training is essential in Pakistan to support the textile industry, provide employment opportunities, enhance productivity, and contribute to the country's economic development.

TARGET:

The SMOT (Spinning Sector) Program will be carried out in reputable Spinning Units in Lahore, Multan, Sheikhupura, Faisalabad, Sawabi, Karachi & Hyderabad, and also in the Spinning Department of NTU& NED Universities, textile units, and Textile Training Institutes. In all 2240 trainees will be trained in one year.

FUNDS REQUIREMENT:

It is estimated that an amount of Rs. **103.48 million** will be required for training 2240 unskilled workers in one year.

Modalities of SMOT (Spinning Machine Operators Training):

i. Course durations = 3 months for both industrial units and Textile related EDF Funded institutes
ii. Trainee to trainer ratio will be 30:1
iii. Trainee's stipend of Rs:10,000/- will be paid by the TSDB Secretariat
iv. Trainers Fee of Rs.3000/- per trainee per month, subject to a maximum of Rs: 90,000/ per trainee per month, will be paid by the TSDB Secretariat. In the case of institutes, Rs.3000/- per trainee per month will be paid to the textile-related EDF Funded institutes to cover overhead expenditure.
v. An advertisement may be published in a newspaper for the participation of units and Textile related EDF Funded institutes in the SMOT program.
vi. Units will provide job assurance.
vii. Training institutes may provide job assurance with the help of respective associationsand training partners.
viii. The participating unit would designate a SMOT Contact Person for coordination.

Criteria for Industrial Unit Selection:

i. The training will be carried out in the textile industry on dedicated ring spinning machines separated from the main production area with adequate capacity for up to 50 to 100 spindles from the ring department.
ii. The unit shall have required models of spinning machines as required by SMOT Training Program
iii. The unit shall have certified trainers available with them otherwise; they shall hire external certified trainers for SMOT Training.
iv. The unit will provide a transport (pick & drop) facility to female trainees.
v. Units will provide 100% Job assurance.

Criteria for Trainer's Selection:

i. Trainers should preferably be B.Sc. Textile Engineer, Graduate with at least 3 years industrial spinning experience, or diploma holders with at least 5 years industrial spinning experience and shall be approved by the TSDB Secretariat.
ii. Trainer should be preferably 25 to 50 years of age.
iii. Trainers should impart training according to the specified/TSDB approved course only.

Criteria for Trainee's Selection:

i. Applications from fresh trainees would be invited through advertisements in newspapers by TSDB Secretariat.
ii. Application forms would be available from TSDB Secretariat, Textile Trade Associations and would also be provided to the training units free of cost. Trainee applicants should send the application to the unit where the program is to be conducted.
iii. Applicants for Textile Skill Development Program will meet the following criteria:
    - The applicant should not have any previous work experience in the field of spinning
    - Women should preferably have qualified Primary Level, and Men should be preferably Middle level.
    - Age should be between 18 to 40 years.
    - Any kind of employment contract between the participating unit and the trainee before or at the time of training commencement will render the applicant ineligible.
iv. The training program would be of 12 weeks duration. 6 days a week (384 hours) (08 hours per day, 48 working hours per week).

FINANCIAL BREAK-UP OF SMOT-III PROGRAM:

FOR TEXTILE UNITS:

● Stipend of trainee @ Rs.10,000/- per month and For (03) months=(Rs.10,000 x 3) = 30000	Rs:30,000/-
● Cost of trainer @ Rs. 50000/- Per month For (03) months=(Rs.50000 x 3) =150,000	Rs:150,000/-

10.2. FOR EDF FUNDED TEXTILE INSTITUTES/ UNIVERSITIES:

● Stipend of trainee @ Rs.10,000/- per month and For (03) months= (Rs.10,000 x 3) = 30000	Rs.30,000/-
● Cost of trainer @ Rs. 90000/- Per month For (03) months= (Rs.90000 x 3) = 270,000	Rs.270,000/-

• Cost of Administrative Expenses, overhead, material etc @ Rs.5000/- Per month/per trainee For (03) months= (Rs.5000 x 3) =	Rs:15,000/-

MONITORING EVALUATION & ASSESSMENT:

Monitoring & Evaluation is an integral part of every new project so as to assess its performance and impact of training & also to learn lessons for future project & fix benchmarks.

MONITORING & EVALUATION TEAM:

It is essential to have an inbuilt mechanism for SMOT (Spinning Machine Operators Training) program. The following monitoring & evaluation team is proposed.

Sr. #	**Name of Post & Qualification**	**Proposal**
1.	Monitoring & Evaluation Officer	Evaluation Officer already working in SMOT-III program will perform the additional duty with 25% increase in salary.
3.	Driver	Driver already working in SMOT-III program will perform the additional duty with 15% increase in salary.

FINANCIAL IMPACT OF M&E TEAM:

The increase in salary of Monitoring and Evaluation Officer & Driver will have following financial impact.

Name of Post & Qualification	**Financial Impact/ Month**	**Financial Impact/ Year**
Monitoring & Evaluation Officer	90,000x 25%= 22500/month	=270000/Rs.
Driver	30,000x15%= 4500/ month	=54000/Rs
Total	**=27,000/Rs**	**=324,000/Rs**

TOTAL COST OF PROGRAM:

SR. NO	FUNDS REQUIRED	AMOUNT
01	For Textile Units	Rs: 78.6 million
02	For Textile Institutes	Rs: 13.8 million
03	Administrative Expenses	Rs:11.08Million
GRAND TOTAL		**103.48 Million**

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Schedule of Training of Spinning Operator

Week	Steps of Training	Assessment
1	Training Introduction and Course and work ethics	
	Orientation of mill or institute and introduction of rules and regulations, SOPs for training places	Can explain different rules on asking
	Importance of each section of spinning process	Recognize each machine and section individually
	Introduction of Health and safety, evacuation plan and measures to take during fire and emergency	Can follow evacuation plan during drill
2	Importance of cleaning and mixing of cotton	Can explain significance of cleaning and mixing on asking
	Ways to clean and mix the cotton	Can clean bigger trash five bale per shift
	How to differentiate the different cotton varieties	Can distinguish different cotton during test
	How to separate the contamination from cotton	Can separate contamination from 5 bales per shift
	How to clean the waste of contamination sorter	Can separate contamination from 10 Kg waste per shift
	Color blindness and its importance	Can pass the test for color blindness
	Safety measures during cotton and waste handling	Can take safety measures and motivate coworkers about its importance
3	Operation of machines of blow room and carding	Can operate the machines without any assistance
	Procedure to start and stop the machines in blow and carding	Can switch on and switch off the machines without any assistance
	Management hierarchy introduction for each step of operation	Can explain the management hierarchy
	Cleaning of carding and blow room section	Can clean the floor of both sections in 20 minutes
	Cleaning of carding sliver cans	Can clean wheels of one can in 5 minute
	Identification/ribbons management in carding section	Can identify and separate the different colors and ribbon bearing cans
	Cleaning of carding and blow room during overhauling	Can clean the machines outer body of both sections in four hours
	Waste room cleaning and waste management	Can clean filter room in 10 minutes. Can shift wastes from filter room to bale press in 20 minutes
	Bale pressing and waste identification.	Can manage one bale pressing in five minutes with one fellow. Can identify the type of wastes on asking

	Safety measures during work in the blow room and carding	Can take safety measures and motivate coworkers about its importance
4 & 5	Operation of machines of drawing frame, comber & simplex	Can operate the machines without any assistance
	Procedure to start and stop the machines in drawing frame, comber & simplex	Can switch on and switch off the machines without any assistance
	Management hierarchy introduction for each step of the operation	Can explain the management hierarchy
	Cleaning of drawing frame, comber, and simplex sections	Can clean the floor of all three sections in 30 minutes
	Cleaning of sliver cans, spools, and simplex bobbins	Can clean wheels of one can in 5 minute
	Identification/ribbons management in drawing frame, comber, and simplex sections	Can identify and separate the different colors and ribbon bearing cans
	Cleaning of all three sections during the overhauling	Can clean the machines outer body of three sections in four hours
	Waste cleaning and waste management	Can clean all drawing frame's waste in 30 minutes. Can shift wastes from machines to bale press in 5 minutes
	Cans and bobbins management in all three sections	Can place empty and filled cans on specified places in good manner
	Safety measures during work in all three sections	Can take safety measures and motivate coworkers about its importance
6&7	Operation of machines of ring frame	Can operate the machines without any assistance
	Procedure to start and stop the machines in ring section	Can switch on and switch off the machines without any assistance
	Management hierarchy introduction for each step of the operation	Can explain the management hierarchy
	Cleaning of machine parts and floor in ring sections	Can clean the floor of ring section in 40 minutes
	Cleaning of ring bobbins	Can clean 100 bobbins in 5 minutes
	Yarn joining after breakage and start of doff	Can handle 5 breakages per minute
	Identification/ribbons/color management of ring bobbins in ring section	Can identify different color bobbins and placethem on specified places and machine hangers in a good manner
	Cleaning of ring sections during overhauling	Can clean the one machine's outer body in 15 minutes
	Waste cleaning and waste management	Can shift wastes from pneumafil room to bale press in 20 minutes
	Ring bobbins management in ring sections	Can place empty and filled bobbins on specified places in good manner
	Safety measures during work in ring	Can take safety measures and motivate

	section	coworkers about its importance
8&9	Operation of machines of winding, doubling & twisting	Can operate the machines without any assistance
	Procedure to start and stop the machines in winding and twisting section	Can switch on and switch off the machines without any assistance
	Management hierarchy introduction for each step of the operation	Can explain the management hierarchy
	Cleaning of machine parts and floor in winding and twisting sections	Can clean the floor of winding section in 20 minutes
	Cleaning of ring bobbins and paper cones	Can clean 100 bobbins in 5 minutes and 20 paper cones in 5 minutes
	Ring bobbin filling in machines	Can fill bobbin tray of 60 spindles in 20 minutes
	Identification/color management of ring bobbins and paper cones in winding and twisting section	Can identify different color bobbins and paper cones and place them on specified places
	Cleaning of winding and twisting sections during overhauling	Can clean the one machine's outer body in 12 minutes
	Waste cleaning, B-grade cones, rejected bobbins, and waste management	Can collect hard waste from all machines and shift wastes to bale press in 30 minutes
	Ring bobbins and full cones management in winding sections	Can place empty and filled paper cones on specified places in good manner
	Compressor's operation and cleaning of compressor and room	Can handle operation of compressors Can clean the compressor room in 5 minutes
	Safety measures during work in winding and twisting section	Can take safety measures and motivate coworkers about its importance
10	Operation of machines for conditioning and packing	Can operate the machines without any assistance
	Procedure to start and stop the machines in the conditioning and packing section	Can switch on and switch off the machines without any assistance
	Management hierarchy introduction for each step of the operation	Can explain the management hierarchy
	Cleaning of machine parts and floor in conditioning and packing sections	Can clean the floor of both sections in 20 minutes
	Loading of cones on a trolley of conditioning machine	Can load one trolley in 5 minutes
	Packing of cones in poly bags as per instructions	Can pack 100 cones in 10 minutes
	Making pallets or bags as per instructions	Can stack one pallet in 30 minutes Can pack one bag in 10 minutes
	Identification/color management of cones during packing	Can identify or distinguish different color of paper cones on asking
	Cleaning of conditioning and packing sections during overhauling	Can clean machine's surface in 10 minute

	Waste cleaning and waste management	Can manage poly bag, paper cone, and cards wastes and place them in identified places
	Stacking of pallets and bags management in the godown	Can place 5 pallets in a godown in 60 minutes Can place 10 bags in godown in 20 minutes on trolley
	Safety measures during work in winding and twisting section	Can take safety measures and motivate coworkers about its importance
11	Operation of air conditioning plants in all sections	Can operate the machines without any assistance
	Procedure to start and stop the air conditioning plants in all sections	Can switch on and switch off the machines without any assistance
	Management hierarchy introduction for each step of the operation	Can explain the management hierarchy
	Cleaning of air conditioning plants, including supply and return ducts in all sections of air conditioning	Can clean the one return duct in100 minutes
	Cleaning of air conditioning sections during overhauling	Can clean showering room etc in 180 minutes
	Safety measures during work in the air conditioning section	Can take safety measures and motivate coworkers about its importance
12	Introduction of textile testing lab and procedures	Can explain testing procedures on asking
	Procedure of taking samples from different machines	Can take samples from 10 cards in 30 minutes Can take samples from 5 drawing frames in 20 minutes
	Procedure to start and stop the testing equipment in the testing section	Can switch on and switch off the machines without any assistance
	Management hierarchy introduction for each step of the testing	Can explain the management hierarchy
	Cleaning of equipment and floor in testing sections	Can clean all equipment and floor in 30 minutes
	Identification management of different testing samples	Can identify different testing samples and keep them separate in specified places
	Waste cleaning and waste management in testing section	Can manage different testing wastes and place them in identified places and shift them all in the waste room in 15 minutes
	Safety measures during work in testing section	Can take safety measures and motivate coworkers about its importance