

## Quadrant 4 - Learn More / Web Resources / Supporting Materials

### Reference Books

1. Glock, R. E., & Kunz, G. I. (2004). Apparel Manufacturing Sewn Product Analysis (4th ed.). Prentice Hall.
2. Solinger, J. (1988). Apparel manufacturing handbook- Analysis, Principles and Practices. (2nd, Ed.) Bobbin Blenheim Media Corp.
3. Chuter, A (1995). Introduction to Clothing Production Management, Wiley
4. Carr & Latham (1994) Technology of Clothing Manufacture, Blackwell Publishing

### Reference Magazines

1. Asian Textile Journal
2. Stitch World
3. Apparel Online

### Glossary of Terms

**Acceptance Number** - The number of faulty garments or parts in a sample.

**Adda Work** - Hand embroidery with a lot of bead work.

**Apparel Engineering** - Simple Industrial Engineering applied specifically to the apparel industry.

**Assets** - Any item that is capable of being controlled or owned to produce value.

**Break Point** - The point that marks the end of one element and the beginning of the next.

**Bundles** – The garment parts that are needed to complete a specific operation or garment component.

**Capacity Study** - A study that times the operator, but the purpose is not to develop a time standard, but rather find out the operator's potential performance level.

**Clearance** - A process that brings the operator under close scrutiny to check for defects.

**Clearance Number** - The number of lots that must be accepted in succession to take the operator out of the clearance procedure.

**Clock Time** - The time available to an operator for doing work during the day, excluding lunch time.

**Contour Drawing** - A drawing that shows the different levels of the ground.

**Dependent Operation** - An operation that cannot be performed without completing its preceding operations.

**Diversification** - The running of a business in more than one product category.

**DPR** - The Daily Production Report is a production summary that helps a Supervisor's work.

**Drill Training** - A system in which jobs to be taught are analysed and broken down into job parts.

**Edge Finishing** - Stitching that encompasses the cut edge or provides a finish for a single ply of fabric with a folded edge configuration.

**Efficiency** - The work done by an operator during the time available to him in a day.

**Elements** - The small components into which an operation is divided for the purpose of time study.

**Ergonomics** - The scientific discipline concerned with the understanding of interactions among humans and other elements of a system.

**FIFO** - First-in, First-out.

**Finishing Quality Audit** - An examination of small number of garments passed by the Checkers from finished stock.

**Follow-up Study** - A means of measuring exactly what is happening performance wise to an individual operator or a group of operators.

**Four Point System** - A system that lays down standards that are proven, easy to understand and implement in the garment business.

**FOB** - Freight-on-Board.

**FSI** - Floor Space Index.

**Independent Operation** - An operation that can only be performed after the completion of its preceding operations.

**Industrial Engineering** - The engineering approach applied to all factors, including the human

factor, involved in the production and distribution of products and services.

**Input** - Resources used in producing the Output.

**Kanban** - A system that uses a designated work space between operations to balance supply with demand.

**Leasing** - A contract under which the owner of a property gives the right to some other person to use his property in return of a definite consideration.

**Line** - A group of operators under the control of one Production Supervisor.

**Lot** - The collection of garments / parts from where the sample is to be taken.

**Major Defect** - A defect that, if conspicuous on the finished product, would cause the item to be a 'second'.

**Minor Defect** - A defect that would not cause the product to be termed a second, either because of severity or location.

**Method Analysis** - The procedure of studying methods used to determine the best way of job.

**MMF Yarn** - Man-made Fiber yarn.

**Modular Production System** - A contained, manageable work unit that includes an empowered work team, equipment with work to be executed.

**Motion Study** - The process of finding the best way to do a job.

**Off Standard Time** - The time spent during the day during which no productive work is done.

**OHMS** - Overhead Material Handling System.

**On Standard Time** - The time made available to the operator for producing productive work.

**Operating Capital** - The capital available for the operations of a firm, such as manufacturing or transportation.

**Ornamental Stitching** - The stitching used on a single ply for decorative purposes.

**Output** - Goods or services produced.

**Performance** - A tool used to quantify the work content of an operator during the day.

**Performance Levels** - The levels at which operators were capable of achieving.

**PBS** - The Progressive Bundle System that is popularly used by apparel manufacturers to efficiently move bundles of garment parts sequentially, from operation to operation.

**PBU** - Progressive Bundle Unit.

**PMTS** - Pre-determined Motion Time Systems.

**Production** - Output.

**Productivity** - The ratio of output to input.

**Quality Audit** - An examination of a small number of garments from the finished stock from sewing.

**Quick Iron** - The process of lightly ironing garments, usually before inspection.

**Rating** - The process used by the industrial engineer to compare the actual performance of the operator with his/her mental concept of normal performance.

**RTW** - Ready-to-wear garments.

**Routing** - A system that helps identify the basic operations, sequence of production, and the skill centers where those operations are to be performed.

**SAM** - Standard Average Minutes or the time taken by a 100% normal operator to do a particular operation.

**SAM Produced** - The standard minutes produced by an operator in a particular day.

**Sample size** - The number of garments or parts to be taken for inspection from the lot. For example, 6 garments from one bundle of 25 pieces.

**Sampling** - The process where the factory develops garment samples according to a buyer's specified design.

**Seam** - A joint consisting of a sequence of stitches uniting two or more pieces of material(s) and is used for assembling parts in the production of sewn items.

**Seam Allowance** - The measurement from the cut edge of the fabric to the main line of stitches.

**Seam Depth** - The thickness or compressibility (flatness) of a seam.

**Seam Length** - The total distance covered by a continuous series of stitches, such as a side seam or shoulder seam.

**Seam Width** - The width of a seam allowance, the seam heading of a lapped or a top stitched seam and the width of a line of stitches relative to the seam.

**Serging** - The process of finishing a single ply of fabric to prevent raveling.

**Short Rolls** - Fabric rolls that are 20 meters or less.

**Splicing** - To join together by the interweaving of strands.

**Statistical Quality Control** - A means of sample inspection that is designed to measure and control quality, without having to inspect each and every unit produced.

**Stitch** - One unit of conformation of thread resulting from repeatedly passing a strand or strands and / or loop or loops of thread into or through a material at uniformly spaced intervals to form a series of stitches.

**Stitch Consistency** - The uniformity with which each stitch is formed in a row of stitches.

**Stitch Depth** - The distance between the upper and lower surface of the stitch.

**Stitching** - A sequence of stitches for finishing an edge or for ornamental purposes or both in preparing parts for assembling.

**Stitch Length** - The number of stitches per inch (SPI).

**Stitch Width** - The horizontal span (bight) covered in the formation of formation of one stitch or single line of stitching.

**Swatch** - A sample of cloth or material.

**The Rating** - The numerical value used to denote the rate of working.

**Thread Trimming** - The process of cutting all hanging threads with a hand trimmer or auto cutting machine.

**Time Study** - The process of finding the best way to do a job.

**Trims** - Items, such as buttons, zippers, labels and thread.

**TSS** - Toyota Sewing System.

**Unit Production System** - A type of line layout that uses an overhead transporter system to move garment components from one work station to another for assembly.

**WIP** - Work in Progress.

**Work Zone** - A group of sequential operations.

**Working Capital** - The assets available for use in the production of further assets. It is the capital that is required for financial transactions and long-term improvements capital.