Introduction: REAL-TIME **ERP**®

Dear Sir,

Challenges of Textile Industry are increasing day by day. We are facing cost competition and performance pressures from our competitors. There are many reasons that we are lacking behind in Textile Industry. Out of many reasons one of the reasons is lack of transparent real time data for analyzes and decision making .In Textile Industry we are weak in the methods of collecting data. To overcome this problem we have developed "REAL-TIME **ERP**® solution from fiber to stitched goods.

REAL-TIME **ERP**® is a joint venture, developed by "Technical Textiles" and "INZ".

Technical Textiles was established in 2010 bringing together highly qualified textile professionals working on development of different textile products in their own respective fields. Every new product developed is backed up by long experience of almost 2 to 3 decades. Technical Textiles have vast experience of vertical textiles industry.

INZ Technological Services is serving textile industry since year 2000 and has installed "LOOMDATA WEAVING MONITORING SYSTEM" on more than 10,000 looms in more than 100 textile mills in Pakistan.

Offered "REAL TIME ERP" is divided in to 8 sub modules. All modules can be integrated at any time. List of modules is attached. In most of the cases information/data collection is real time and directly from machines, so that confusions created by delays of feeding or wrong data should be eliminated. Most of the data collection is from the source and through wireless mode without using any wires for sending and receiving data from machine to the server. Summarization of data is presented to management on Customized Dash Board and KPIs are also available on mobile interface.

We have successful history of providing service back up for software and hard ware in the last 15 years in Pakistan in weaving industry. Now we are offering modules for other areas like Spinning, processing, stitching and other textile service departments. List of modules presently we are offering is attached for your study.

At the time of commissioning/ installation training is mandatory part in our package. We believe in selling solutions rather only hardware and software.

Regards

Syed Masroor Hasnain

Founder – Technical Textiles.   **Dated : 12/2/2018   Rev: 07**

#	Module	Sub Module
1	Customer Related Module	Customer Orders management Production Planning Product Library OTBH
2	Machine Management Module	Machine utilization efficiency Deficiency / Stoppages categorization Production Plan V/s Actual. RH % and temperature. Air pressure. Machine Maintenance Energy Management System (EMS) (Optional)
3	Material Management Module	Customer Orders management Raw Material Planning Production Raw Material Yield
4	Quality Control Module	Incoming raw material inspection In process material inspection Outgoing final inspection Online/ Off line
5	Quality Assurance Module	Training Audit Monthly Review report CPA Review meeting
6	Accounts & Cost Control Module	Trial Balance (GL) Accounts receivable (AR) Accounts payable (AP) Cash management Costing (Optional)
7	Supply Chain Module	Purchase Inventory (Raw material , Finish product, waste , Spare parts) Shipping
8	Human Resource Module	Recruitment Employ info Time management System. TMS Pay roll Performance

Machine Management Module

(Spinning, Weaving, Processing, Knitting, Embroidery, Dying, Stitching)
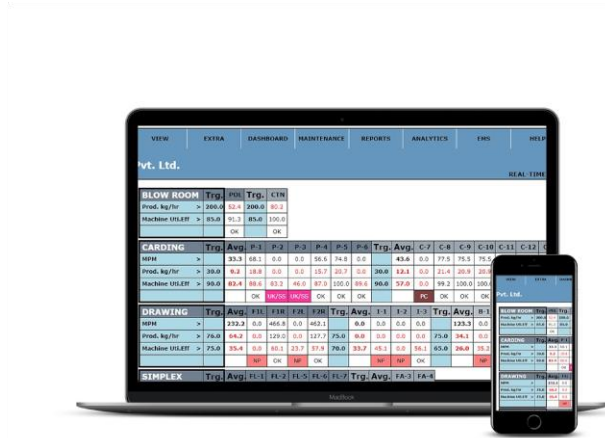
Benefits & Advantages

Improves Machine Utilization Efficiency

- Optimization of every productive machine efficiency which ultimately improves Overall productivity and worker's efficiency

Decrease Stoppages

- Records REAL-TIME machine efficiencies and deficiencies
- Records electrical, pneumatic and mechanical breakdown round-the-clock
- Monitors & controls the stoppages of scheduled overhauling
- Monitors product change of any machine.
- Batcher/ bobbin/ beam change timing monitoring on all machines

Effective Maintenance

- Maintenance software for preventive maintenance scheduling
- Reduces future breakdowns by analyzing through statistical techniques on daily basis
- Preventive maintenance monitoring for excess time with analysis graphs

Raises Alarms & Alerts

- Stoppage and Breakdown alarms/alerts

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Material Management Module

(Spinning, Weaving, Knitting, Processing, dying, Stitching)
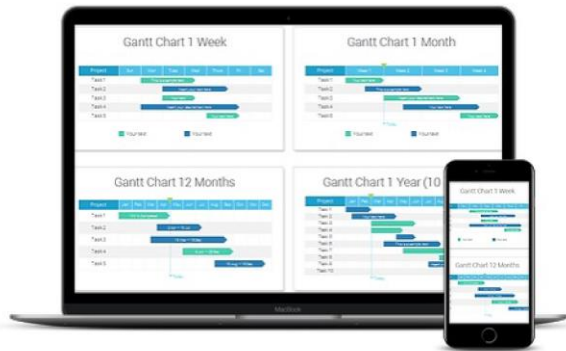
Benefits & Advantages

Order Management

- Maintains record from order booking, to production to dispatch of goods
- Gantt chart shows booking status and completion dates of orders
- Complete work-in-progress visibility on real-time basis
- Capacity against booking visibility
- Shows idle capacity and over capacity
- Auto excess margin calculation which restricts excess feeding of raw material
- Handles buffer order smartly
- Audit checks in system to minimize human errors
- Traceability of real-time order status
- Restricts out of route/invalid route production
- In processing batcher location through RFID (optional)

Production

- Records all production data automatically without any manual input
- Avoids the chances of manipulation of data to prepare production, wastes and yield report
- Maintains product library by customer, code, blend, design etc.

Yield

- Yield report of every order processed available on system.
- Restricts excess feeding of raw material then calculated as per production plan.
- Handles multiple orders at a time.
- Reprocessing of material is records in system

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Fabric Inspection System

Benefits & Advantages

- Real-time production quality data available to all concerned heads
- Auto length measurement and recording of inspected fabric
- Summarization of faults into major and minor and grading of fabric is recorded as per running practices of the company
- Fault nature, classification and mapping are done for further process
- Developed Urdu (keypad) for layman easiness
- 6. Stickers and code are generated to be affixed on fabric roll for easy traceability and identification
- 7. All fabrics placed in warehouse are identified, traceable, locatable, and recorded in server
- 8. Module has flexibility to be integrated to its supply department and its next department
- 9. Auto camera inspection of fabric (optional)

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Human Resource Module

Benefits & Advantages

Recruitment

- Recruitment only against "Approved Strength "
- This enables to control HR budget
- Online recruitments process inside organization
- Maintains data bank for new hiring's
- Track recruitment training and succession planning

Employee Information

- All employ information is maintained in system
- Employee's self-service portal (from managers to work force)
- Manage employee's card
- Total paperless module from recruitment to retirement

Time Management System & Payroll

- Manage attendance in real time. Attendance and time management by Thumb/Hand scanning biometric system/ Face recognition
- Online overtime authorization and approval options
- Loans, advances, awards and deduction on auto
- Payroll Management. Objective is not to use any manual amendment in Pay roll
- Online leave posting/approvals. Summary view is available for management.
- Option to handle bonus, group insurance, Social Security, EOBI and income tax deduction

Performance

- KPI on Management Dashboard
- Increments, benefits and promotions against set KPI. This helps to create employ ownership

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Supply Chain Module

Benefits & Advantages

Inventory

- Inventory includes raw material, finished goods, waste and spare parts store
- IN and out gate pass to be controlled by system
- All inventory reports with min-max level with Alarm/Alert mechanism
- Aging concept on all inventory
- FIFO or LIFO application on raw material and finished goods
- Auto emails for reduced inventory to suppliers
- Return to Stores mechanism
- Filter mechanism to select or search for a particular item

Purchase

- Gantt chart for better planning of raw material purchase
- Defined budgets for purchase and cap on utilization of stores
- Online concept for Indent, Requisition, QC and issue.
- Auto Supplier grading (Quality , Delivery , Service)
- Auto indents when inventory level drops then set level
- Auto PO to Approved Suppliers
- QC report on system
- Buffer purchase mechanism
- Repair and maintenance work orders are maintained

Accounts & Cost Control

Benefits & Advantages

General Ledger, Accounts Payable, Accounts Receivable

- Payable linked with inventory and purchase
- Automatically update GL Journals, Worksheets, Statements, Subcontracts
- Withholding Tax calculation
- Sale from order management booked on auto
- Export and local sales are maintained.
- Tracking of unpaid and non-received invoices
- Auto emails for reduced inventory to suppliers
- Return to Stores mechanism & separate journals for each control account
- Filter mechanism to select or search for a particular item
- All transaction in other modules updated to General Ledger
- Expenses distributed to Job Cost (Labor, Material, Sub contract)
- No need to close prior months before entering activity for current term
- Separate income accounts for quick analysis of source revenue

Asset Management

- Recording of all assets
- Auto depreciation calculations
- Assets value available all the time
- Budgeting and Monitoring
- Classification of assets in fix and movable

Cash Management

- Bank Accounting
- Funds & petty cash management
- Real time cash integration with server

Energy Monitoring System

Benefits & Advantages

Power Generation

- Calculate total energy generation
- Estimate fuel costs per unit , per engine, per section
- Provides data to make decisions concerning power cost generation

Line Loss/Transmission Loss

- High lights Low power factor utilization
- Identifies low or high cable or equipment under use
- Enables to analyze and cut energy waste

Consumption End

- Monitors targeted motors for power consumption
- Generates alarms and alerts for any abnormality against predefined targets
- Units consumed department wise, section wise.
- Identification of culprit motors by alarm and alert mechanism

Dash Board & Data Analysis

- Helps to design and review Energy Monitoring program for entire organization (whole landscape)
- Compare total units v/s fuel consumed
- Comparison with local and international data of power unit required for producing 1 kg of yarn