



IoT, Industry 4.0 and Factory Digitization Service
Provider

SWAELITE SOLUTIONS
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Introduction

We are IoT, Connectivity and Software products and solution provider to Process and Manufacturing Industries.

IoT allows industries to connect physical devices and systems to the internet, collect data in real time, and analyse it to improve efficiency, productivity, and quality.

We help Industries by providing the best solutions for this using the latest technologies combinations like IoT, VPN, Drivers, ERP and Integrations.

Core Team Strength

Our core strength is that we have expertise in both IT [**Information Technology**] and OT [**Operation Technology**]. Expertise in industrial protocol and web technologies like Modbus, Profinet, MQTT, Dashboard, Security which make unique combination required for any system integrator.

Expertise – Industrial Protocol (OT Integration)

We have expertise in understanding and implementing Industrial protocols and web technologies.

Major Industrial Protocol we use to collect data from machines or process plants

- **Modbus**
- **Profinet**
- **OPC**
- **Bacnet**
- **Ethernet IP**
- **SLMP**
- **IEC 104**
- **CAN**
- **Raw data or custom protocol over serial or TCP**

Server side we use the latest web technologies to provide fast, secure and user friendly solution to manage manufacturing process.

Expertise – Information Technology

We have also expertise in Web and Desktop based software which can provide you best user experience, data analytics and reporting tools.

We focus below major aspects of IT solutions

- Integration with OT (Machine / Field data)
- Security (TLS, Data security at rest and on transit, 2FA Authentication)
- Performance (Uses the fastest framework to provide result at blazing speed)
- Use Experience (Balanced combination of easy operation and features)
- Database (SQL, Timescale, Cassandra etc)
- REST API and Integration with other systems
- Startup and Backup utility
- Rich visualization widgets
- Detailed and customized reporting and analytics

Industries we serve



Manufacturing

Product and Machine manufactures



Process plants

Water treatment, Chemical treatment, Pharma



Power plants

Hydro, Windmills, Thermal



Oil and Gas

Flow, pressure and various parameters monitoring on Pipe networks



Smart Cities and BMS (building management system)

Smart traffic & parking, Smart metering, Security and Surveillance



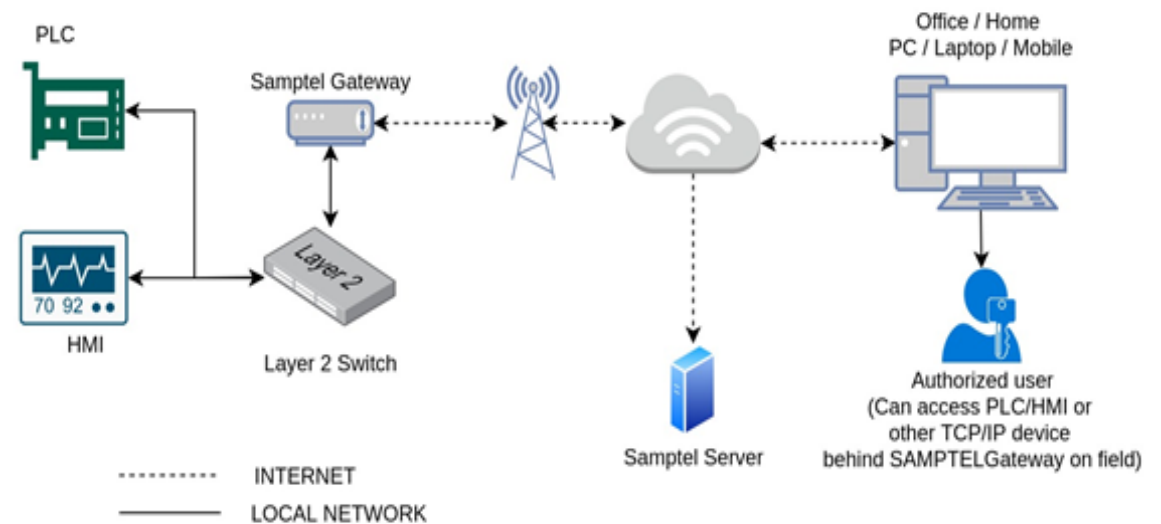
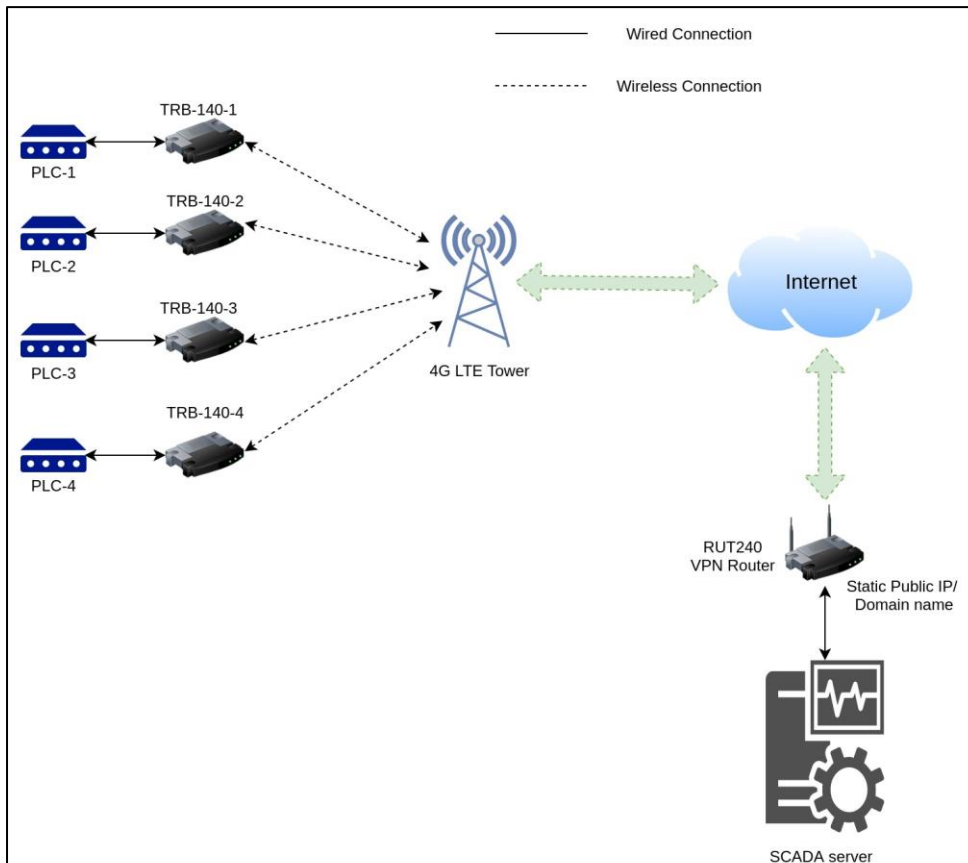
Automobiles

Vehicle and asset tracking, Drones

PLC & SCADA Connectivity

Our VPN services enables communication between field devices and office PC. Use cases :

- Remotely access field device for debug
- SCADA can connect to field device to poll them to read / write
- Read / Write between multiple remote field devices



Add Batch

Batch Name:

Brand Name:

Product Name:

Item Name/Code:

Length (MTR):

Average Weight (KG):

Minimum Weight (KG):

Maximum Weight (KG):

Description:

Manage Batch

Sr. No	Batch Name	Brand Name	Product Name	Item Name/Code	Minimum Weight(KG)	Maximum Weight(KG)	Info	Edit	Status
11	PVC	PVC Pipe	Rajan	RT45		52			Active
12	Samptel	PVC Pipe	Rajan	PVC		5.652			Active
13	Rajan	PVC Pipe	Samptel1	PVC		0			InActive

Manage Report

Assembly Name: Shift Name: Operator Name:

Brand: Product: Item/Code:

Time Duration:

Start Time: End Time:

NO	SR NO	SHIFT	OPERATOR	BRAND	PRODUCT	ITEM/CO	ITEM SIZE	QUALITY CONTROL	HELPER	BATCH(LENGTH)	ACTUAL WEIGHT	RANGE	LENGTH DEVIATION	WEIGHT DEVIATION	DATE
1	541	day	jay	PVC Pipe	Rajan	PVC	12	Samptel	KALESH	5	5.7	5.650-5.652	-5	0.048	2022-11-04 11:42:15
2	542	day	jay	PVC Pipe	Rajan	PVC	12	Samptel	KALESH	5	5.7	5.650-5.652	-5	0.048	2022-11-04 11:52:21

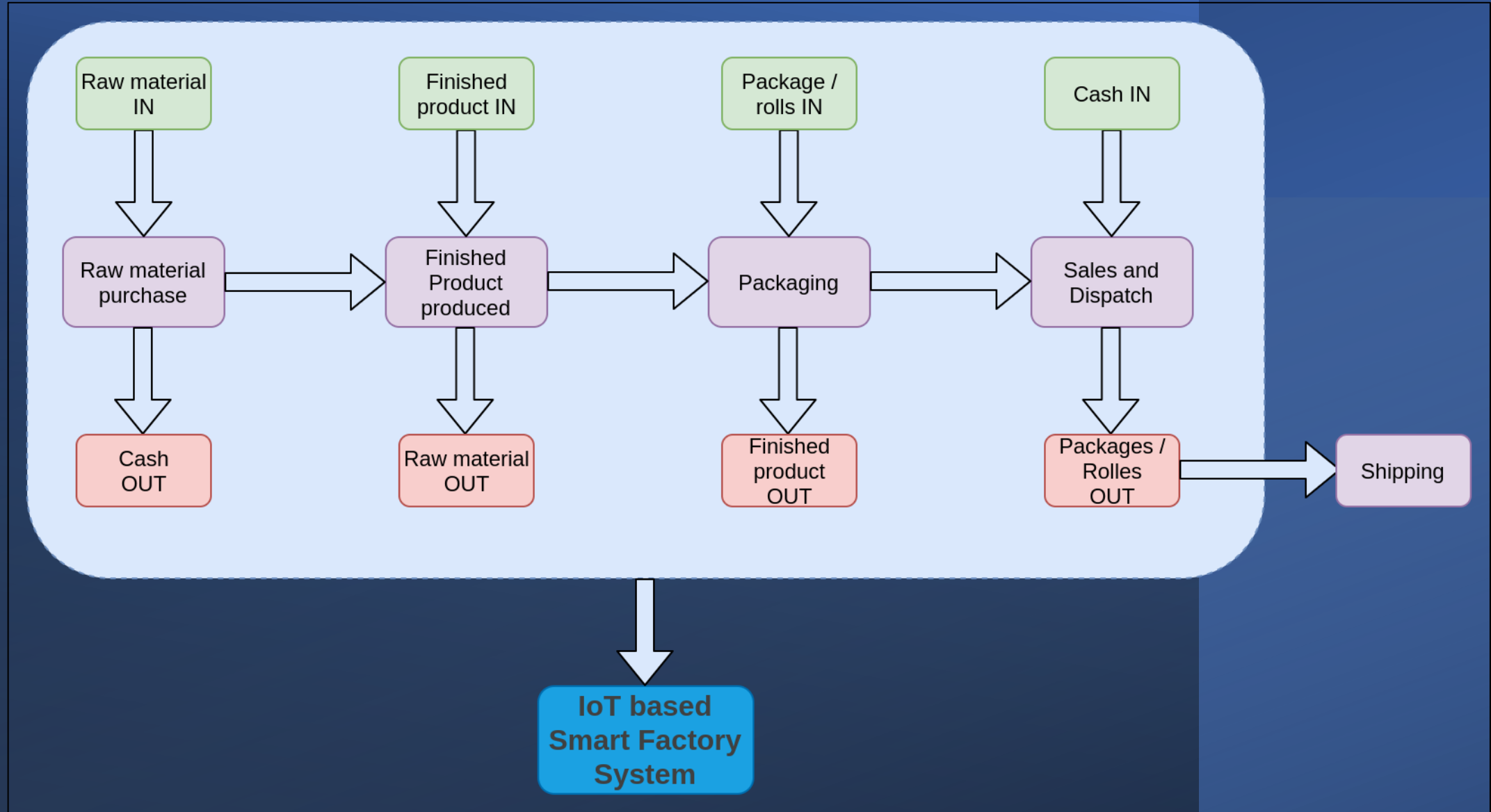
Digital manufacturing solution

Using IoT technologies to get data from manufacturing machines and use data to implement inventory management, cost calculation, worker efficiency, product variants management, label sticker management

- Sticker printing for identify manufactured rolls.
- Reporting

Digital manufacturing solution - Ongoing

- Different stages to collect data from various system
 - Purchased raw material (From Accounting system)
 - Cash Out, Raw material In
 - Semi finished product manufactured (IoT, From Machines)
 - Raw material Out, Semi finished product In
 - Finished product manufactured (IoT, From machines)
 - Semi finished and raw material Out, Finished product In
 - Finished product dispatched to customer (From dispatch application using barcode, and accounting system)
 - Finished product Out, Cash In



IT and OT integration for manufacturing plant

Provided IoT solution to customer to read data from manufacturing plants.

Read data from machines using industrial protocols

Store and manage data coming from machine

Provide data visualization for monitoring manufacturing parameters

Provide valuable data to customer's IT system for further processing

Waste water treatment plant monitoring and control

Read data from various PLC, RTOM and HMI from control panel

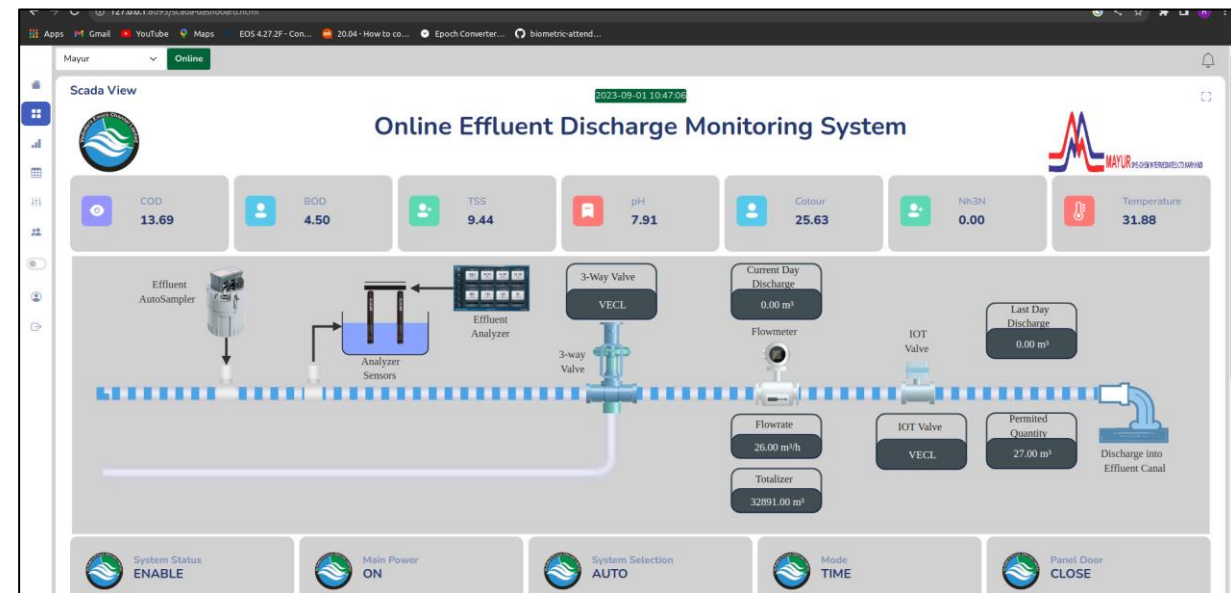
Process data locally in edge gateway and send to server for monitoring and reporting

Server front end for users to monitor and control

Role based permission to user for various operation like admin, company users, monitor and control access etc

Manual and Auto report using email, customized report with excel formula and company logo

Remote control operations for controlling valves and alarm rules



Alarms Time Window: Last 7 Days 2023-09-01 10:58:02

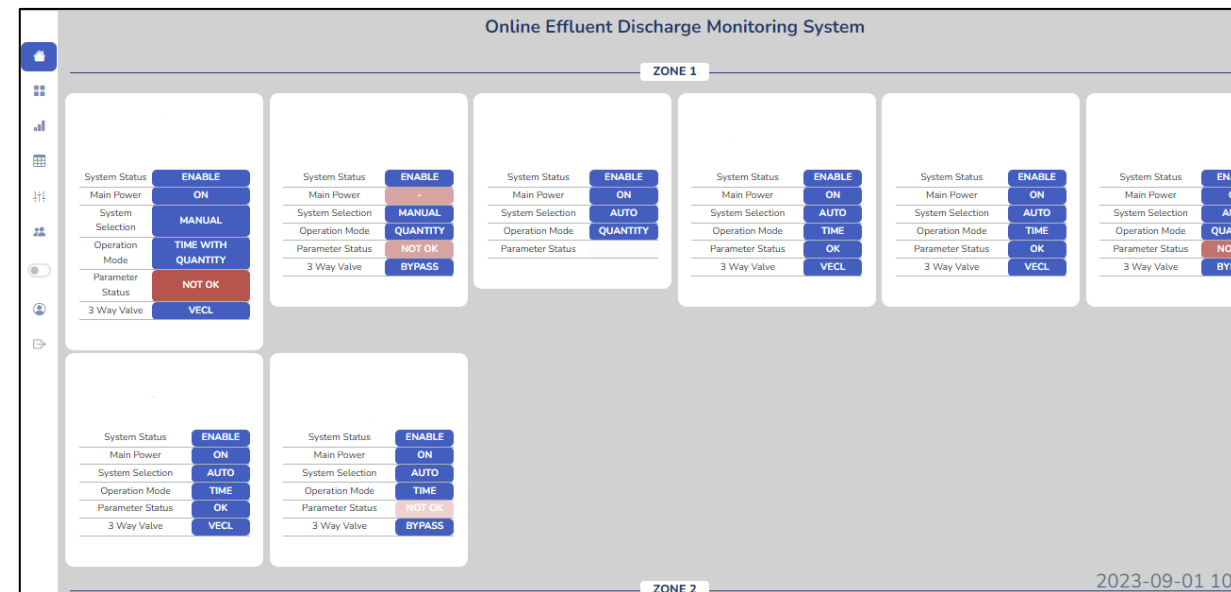
Icon	Alarm Title	Time	Message	Action
!	ThreeWay Valve V...	2023-09-01 10:43:05	3 way valve position - ...	View More
!	ThreeWay Valve By...	2023-08-31 11:29:04	3 way valve position - ...	View More
!	ThreeWay Valve V...	2023-08-31 10:43:05	3 way valve position - ...	View More
!	ThreeWay Valve By...	2023-08-31 00:38:05	3 way valve position - ...	View More
!	IOT Valve Error	2023-08-31 00:37:05	IOT valve error	View More
!	ThreeWay Valve Er...	2023-08-31 00:37:05	3 way valve error	View More
!	ThreeWay Valve By...	2023-08-30 11:28:05	3 way valve position - ...	View More
!	ThreeWay Valve V...	2023-08-30 10:43:05	3 way valve position - ...	View More

Search:

Created Time	Type	Severity	Status	Message
2023-09-01 10:43:05	ThreeWay Valve VECL	Indeterminate	Active Unacknowledged	3 way valve position - discharge to VECL
2023-08-31 11:29:04	ThreeWay Valve Bypass	Indeterminate	Cleared Unacknowledged	3 way valve position - Return to Treatment
2023-08-31 10:43:05	ThreeWay Valve VECL	Indeterminate	Cleared Unacknowledged	3 way valve position - discharge to VECL
2023-08-31 00:38:05	ThreeWay Valve Bypass	Indeterminate	Cleared Unacknowledged	3 way valve position - Return to Treatment
2023-08-31 00:37:05	IOT Valve Error	Indeterminate	Cleared Unacknowledged	IOT valve error
2023-08-31 00:37:05	ThreeWay Valve Error	Indeterminate	Cleared Unacknowledged	3 way valve error
2023-08-30 11:28:05	ThreeWay Valve Bypass	Indeterminate	Cleared Unacknowledged	3 way valve position - Return to Treatment
2023-08-30 10:43:05	ThreeWay Valve VECL	Indeterminate	Cleared Unacknowledged	3 way valve position - discharge to VECL
2023-08-30 00:46:37	Monitoring Parameter Not OK Offline	Indeterminate	Active Unacknowledged	Out of range Effluent parameter detected
2023-08-30 00:46:37	Auto Selected Offline	Indeterminate	Active Unacknowledged	Auto selected Feedback detected

Show entries

Showing 1 to 10 of 53 entries



Mayur Online Window Last 1 hour 2023-09-01 11:02:05

Search: Excel

Date/Time	Flowrate (m ³ /h)	Totalizer (m ³)	Current Day Discharge (m ³)	COD (mg/l)	BOD (mg/l)	TSS (mg/l)	PH (pH)	Colour (Pasec)	NH4N (ppm)	Temperature (°C)
2023-09-01 11:02:05	32.50	32891.00	0.00	13.89	4.50	8.88	7.88	27.88	0.00	32.00
2023-09-01 11:03:04	32.50	32891.00	0.00	13.89	4.50	8.88	7.88	27.88	0.00	32.00
2023-09-01 11:05:05	32.50	32891.00	0.00	13.89	4.50	8.88	7.88	27.88	0.00	32.00
2023-09-01 11:05:05	32.50	32891.00	0.00	13.89	4.50	8.88	7.88	27.88	0.00	32.00
2023-09-01 10:59:05	32.50	32891.00	0.00	13.89	4.50	8.88	7.88	27.88	0.00	32.00
2023-09-01 10:58:05	32.50	32891.00	0.00	13.89	4.50	8.88	7.88	27.88	0.00	32.00
2023-09-01 10:57:05	26.00	32891.00	0.00	13.89	4.50	9.44	7.91	25.63	0.00	31.88
2023-09-01 10:56:04	26.00	32891.00	0.00	13.89	4.50	9.44	7.91	25.63	0.00	31.88
2023-09-01 10:55:05	26.00	32891.00	0.00	13.89	4.50	9.44	7.91	25.63	0.00	31.88
2023-09-01 10:54:05	26.00	32891.00	0.00	13.89	4.50	9.44	7.91	25.63	0.00	31.88

Show: 10 entries Showing 1 to 10 of 61 entries Previous 1 2 3 4 5 6 7

Panel Data History Time Window Last 1 hour 2023-09-01 11:02:05

Search: Excel

Date/Time	System Status	Parameter Status	3 Way Valve	IDT Value	System Mode	Operation Mode	Main Power	Server Connectivity
2023-09-01 11:02:05	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 11:03:04	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 11:05:05	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 11:05:05	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 10:59:05	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 10:58:05	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 10:57:05	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 10:56:04	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 10:55:05	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE
2023-09-01 10:54:05	ENABLE	OK	VECL	VECL	AUTO	TIME	ON	ONLINE

Show: 10 entries Showing 1 to 10 of 61 entries Previous 1 2 2023-09-01 11:11:14

Search: Excel PDF Add New User

Name	Email	Customers	Roles	Edit	Details	Status
rajan						Enable
shreya						Enable
jigna						Disable
jay						Disable

User Roles

☒ all ☐ read ☐ write

Decline Change Apply Change

Search: Excel PDF

User Name	User Type	Event	Status	Details
shreya	admin	User Login	Success	---
rajan	admin	User Login	Success	---

Showing 1 to 2 of 2 entries Previous 1 Next 2023-09-01 11:10:08

User Profile Last Login 2023-09-01 10:53:49

User Name

Email

Details

Customer

Login

Change Password

Current Password

New Password

Confirm New Password

Change Password

User Timeline Time Window Last 1 Day

2023-09-01 10:54:12 User Login View Details

Mayur Online

Effluent Alarm Control 2023-09-01 11:08:05

Parameter	Flowrate (m ³ /h)	COD (mg/l)	BOD (mg/l)	TSS (mg/l)	PH (pH)	Colour (Pasec)	NH4N (ppm)	Temperature (°C)
Status	Healthy	Healthy	Healthy	Healthy	Healthy	Healthy	Low	Healthy
LL Alarm	0	0	0	0	6.5	0	0	0
L Alarm	0	0	0	0	6.5	0	0	0
H Alarm	250	250	100	100	8.5	100	50	100
HH Alarm	250	250	100	100	8.5	100	50	100
L Band Alarm	0	0	0	0	0	0	0	0
H Band Alarm	0	0	0	0	0	0	0	0
Online/Bypass	Online	Online	Online	Online	Online	Online	Online	Online

Control Logs Time Window Custom From 2023-06-01 09:08:11 To 2023-09-01 11:08:11

Search:

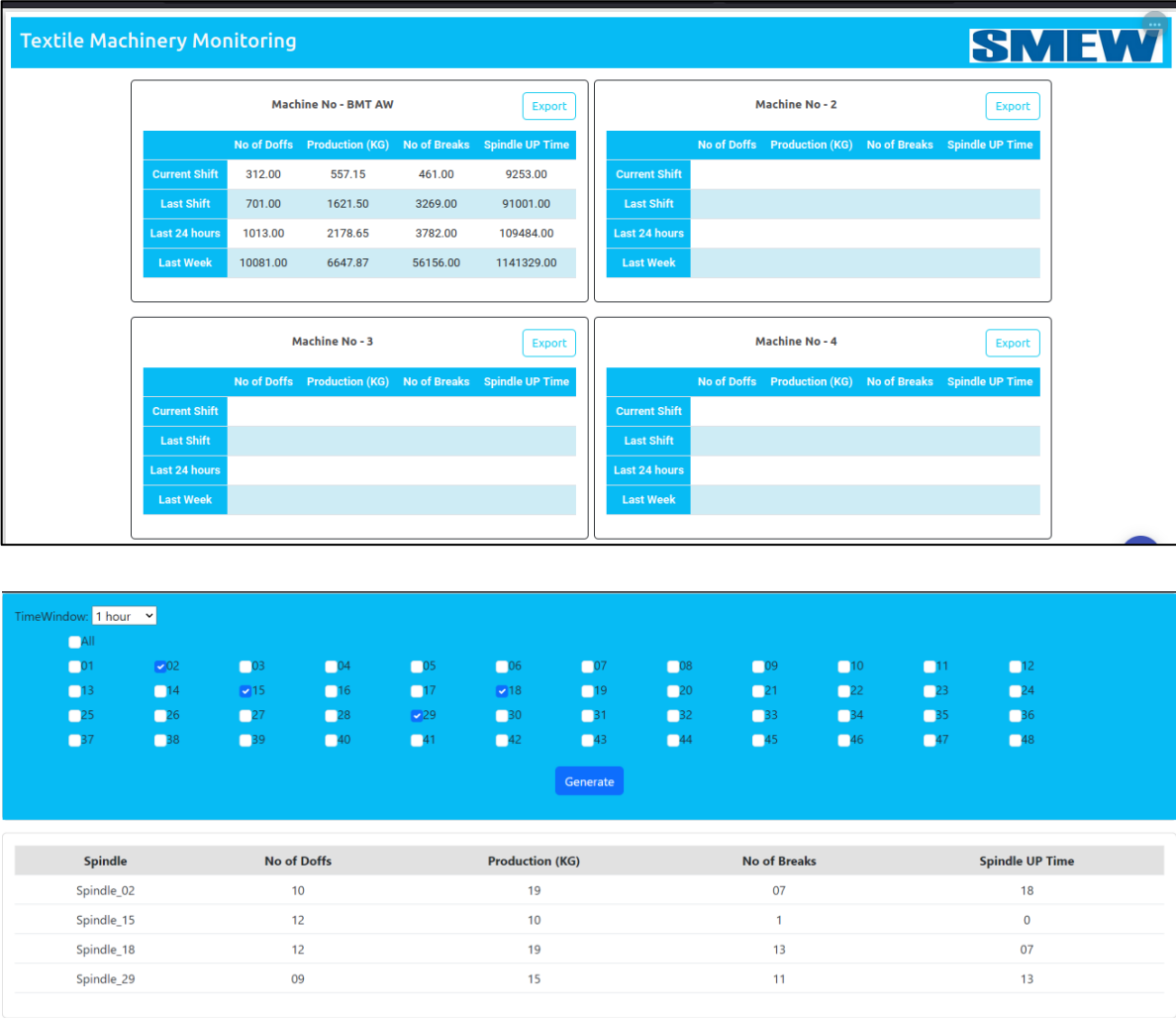
Date Time	User name	Parameter	Old value	New value	Message	Status
No data available in table						

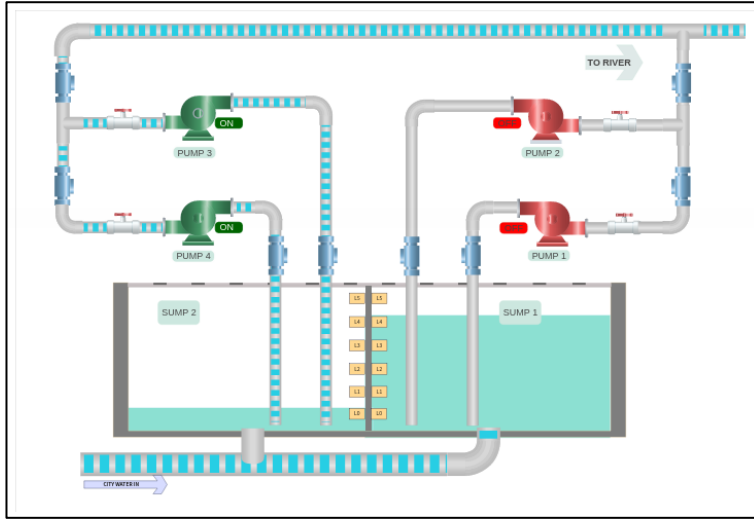
Show: 10 entries Showing 0 to 0 of 0 entries Previous 2023-09-01 11:11:14

Textile machine production data monitoring

Shift wise over all
production in kg,
from no of doff, set
length

Spidle wise
production
calculation for given
date time range





Auto Manual Mode

Auto

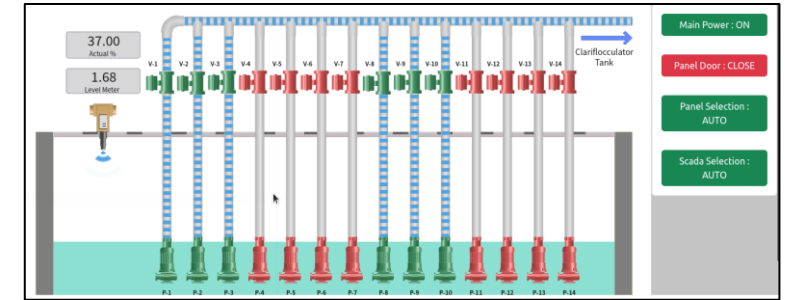
Manual

Valve Pump Start/Stop

Pump No.	Start/Stop
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	

Pump Limit

Pump No.	High limit	Low limit
1	45	30
2	47	32
3	50	34
4	51	42
5	52	36
6	40	37
7	45	30
8	47	32
9	50	34
10	51	35
11	52	45
12	53	37
13	0	0
14	0	0



Pumping station monitoring and Control

- Remotely monitor various pumps and valves for city pumping stations
- Provide control options to set manual / auto operation
- In manual mode provide options to turn on / off pumps and valves and for auto mode provide options to set limits

Firmware Projects

IoT Gateway firmware

Industrial protocol
converter

Data logger

Remote PLC / HMI /
IPC / Field instrument
connection for debug
and firmware update

Battery management
System for
automobiles

Protocol converters

THANK YOU

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