

A Manual for Employee Machine Monitoring System

Login Page:

Browser: Login | 10.145.0.193:5000/login/

Login

Username

Password

Login

Not having account? [Register](#)

The first screen is the login screen. The primary user is Admin. The Admin password cannot be changed and it can be modified only from the Database. Admin can create as many users with specific roles as possible. The Admin can specifically create the “IT-Role” role wherein the IT-Role can create all other users.

Dashboard:

Browser: insert title here | 10.145.0.193:5000/dashboard#

AVOCarbon-EMS | Dashboard | Graph | DataHub | Manage | Reports

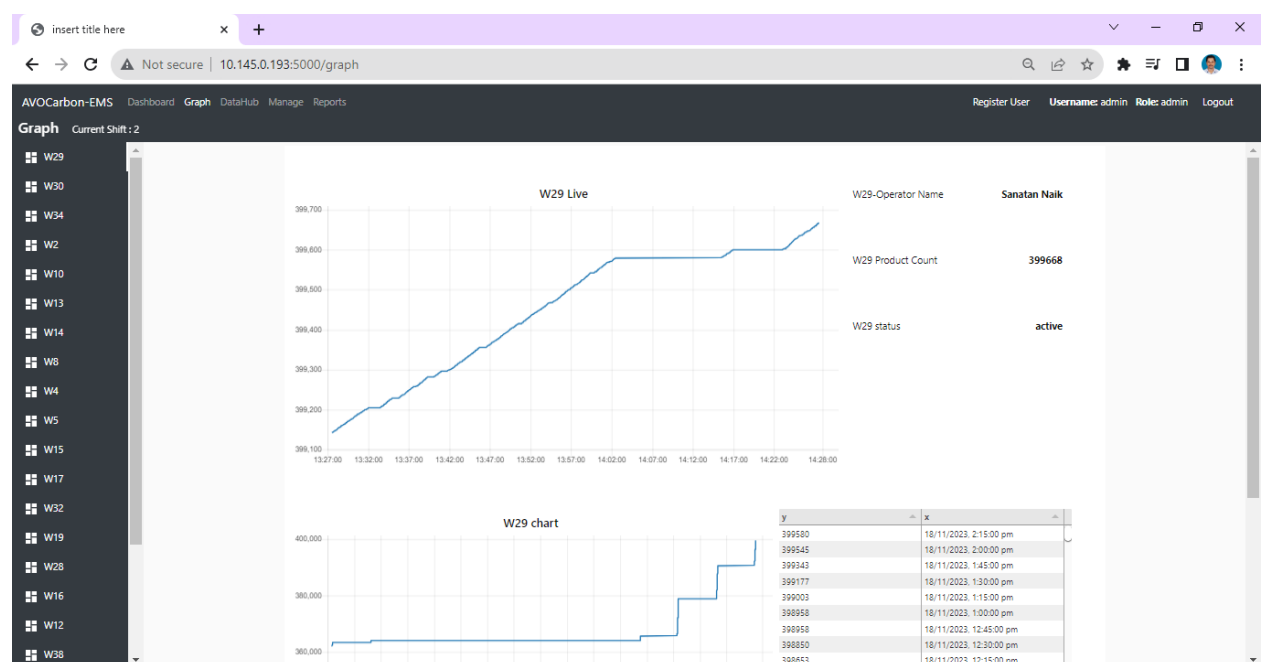
Register User | Username: admin | Role: admin | Logout

Machine list | Current Shift : 2

Sno	Machine	Status	Operator Name	Part	count	Production efficiency	Efficiency color code
1	W22/Resistance Welding	active	Not yet Assigned	No data	262 / No data	157%	
2	W4/Resistance Welding	active	Not yet Assigned	No data	72 / No data	77%	
3	W27/Resistance Welding	active	Not yet Assigned	No data	109 / No data	65%	
4	W15/Resistance Welding	active	Not yet Assigned	No data	30 / No data	41%	
5	W2/Resistance Welding	active	Not yet Assigned	No data	0 / No data	0%	
6	W3/Resistance Welding	active	Not yet Assigned	No data	0 / No data	0%	
7	W32/Inverter Welding	Inactive	Not yet Assigned	No data	67 / No data	92%	
8	W29/Resistance Welding	Inactive	Not yet Assigned	No data	35 / No data	34%	
9	W19/Resistance Welding	Inactive	Not yet Assigned	No data	4 / No data	10%	
10	W16/Resistance Welding	Inactive	Not yet Assigned	No data	7 / No data	7%	
11	W34/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
12	W10/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	

After successful login, the first screen is the Dashboard that has the Current shift, Serial Number, Machine name, Status of the machine (Active / inactive), the operator name, if it is assigned by the supervisor, the part number, the count that the operator is performing in a particular shift, production efficiency and the efficiency color code based on the current shift as indicated in the webpage. The “Active” machines will be displayed at the top and then the “Inactive” machines. They are sorted based on the higher efficiency levels. For every five minutes, this dashboard will get auto refreshed. The page will get auto scrolled for every 10 second and it can also be manually scrolled by pressing the top, right and left buttons.

Graph:



The tab next to dashboard is the Graph tab. The graph shows the Live data and the left corner of the Graph screen shows the number of machines that are currently in use. The right top corner shows the machine count and the machine status. The right bottom shows the legend that shows the historical data / value from the start time of the machine on a hourly basis to till this hour.

Data Hub:

insert title here

10.145.0.193:5000/machine

AVOCarbon-EMS Dashboard Graph DataHub Manage Reports Register User Username: admin Role: admin Logout

Machines Employees Parts Tools Shifts Product Lines

Add New Machine

Machine No.

Machine Name

Machine Category

Machine Manufacturer

Controller Details

Date Of Constructions

Machine KVA

Save

Upload Excel File

machine_master

Choose File No file chosen

Upload

Show 10 entries

Search:

Machine No.	Machine Name	Machine Category	Machine Manufacturer	Controller Details	Date Of Constructions	Machine KVA	Action
W10	Resistance Welding	Welding	KIRPEKAR	Miyachi	2002/03	75	edit delete
W12	Resistance Welding	Welding	KIRPEKAR	Miyachi	2004/05	75	edit delete
W13	Resistance Welding	Welding	KIRPEKAR	Miyachi	NaN	40	edit delete
W14	Resistance Welding	Welding	KIRPEKAR	Miyachi	NaN	75	edit delete
W15	Resistance Welding	Welding	KIRPEKAR	Miyachi	NaN	75	edit delete
W16	Resistance Welding	Welding	KIRPEKAR	Miyachi	NaN	75	edit delete
W17	Inverter Welding	Welding	SMD	REXROTH	NaN	40	edit delete
W19	Resistance Welding	Welding	KIRPEKAR	Miyachi	NaN	40	edit delete
W2	Resistance Welding	Welding	AVO INDIA	Miyachi	NaN	25	edit delete
W22	Resistance Welding	Welding	KIRPEKAR	Miyachi	2002/03	75	edit delete

Showing 1 to 10 of 25 entries

Previous 1 2 3 Next

The datahub tab has six internal tabs such as machines, employees, parts, tools, shift and product line. In the machine, employees, parts, tools and the product line both manual entry and upload from Excel file is also made possible. But the excel file should be in a specific format only. To know the format, navigate to the help documents tab under the sample templates you can find the templates. Each sub tab can be filled with the respective numbers, names, categories and the details as per the individual requirement of the tabs.

The “Part” tab will contain the usual fields that is to be filled and after filling the same, it has an exclusive tolerance value. The tolerance value has to be fixed by the Supervisor. The default tolerance value specified is 5. For example, if the tolerance value is given as 10, then the range between 90 – 110 will have an Orange color and above 110% it will give the Green color and below 90% it will show the Red color.

Shift (Sub Tab):

insert title here

10.145.0.193:5000/shift

AVOCarbon-EMS Dashboard Graph DataHub Manage Reports Register User Username: admin Role: admin Logout

Machines Employees Parts Tools Shifts Product Lines

Add New Shift

Shift Code

Shift Name

Shift Timing:
Starting Timing:
... ..

Closing Timing:
... ..

Break/Lunch

Save

Show 10 entries

Search:

Shift Code	Shift Name	start Timing	closing Timing	Break/Lunch	Action
1	first shift	06:00:00	13:59:00	07:30 AM	edit delete
2	second shift	14:00:00	21:59:00	07:00 PM	edit delete
3	thrid shift	22:00:00	05:59:00	02:00 AM	edit delete

Showing 1 to 3 of 3 entries

Previous 1 Next

The Shift tab is one of the critical tab, which means the IT-Role have to give the input correctly. For example, if the Shift 1 is between 6 AM and 2 PM, then he has to give the values between 06:00 AM and 1:59 PM and the second shift should be given as, 02:00 PM and 09:59 PM and likewise.

Manage:

Operator Assignment:

Supervisor Input

Upload Excel File

machine_operator
Choose File No file chosen
Upload

Add Details

Product line:
Select Product line

Date:
mm/dd/yyyy

Shift:
Select

Machine No:
Select

Operator Id:
Select

Table Data:

Sno	Product line	Date	Shift	Machine No	Operator Id	Part No	Shift supervisor name	Time	Operator change	Change Reason	Action
3017	Carbon Brush	2023-11-18	1	W15	5078	21 series	M.Murugavel	07:09:00	N	None	Change operator delete
3018	Carbon Brush	2023-11-18	1	W34	SP155	6608	M.Murugavel	07:09:00	N	None	Change operator delete
3019	Carbon Brush	2023-11-18	1	W30	5020	7696	M.Murugavel	07:10:00	N	None	Change operator delete
3020	Carbon Brush	2023-11-18	1	W16	5029	9227E/F	M.Murugavel	07:11:00	N	None	Change operator delete
3021	Carbon Brush	2023-11-18	1	W29	SP175	10series	M.Murugavel	07:11:00	N	None	Change operator delete
3022	Carbon Brush	2023-11-18	1	W17	5018	104	M.Murugavel	07:12:00	N	None	Change operator delete
3023	Carbon Brush	2023-11-18	1	W32	RA200	63	M.Murugavel	07:12:00	N	None	Change operator delete

It is the responsibility of the Supervisor to enter the details of operators such as the part number, product line, machine number, operator name and the shift details.

Tool change:

Tool Change

Machine Id:
Select

Tool Id:
Select

Reason For Change:
Reason

Update

Table Data:

Machine No.	Machine Name	Machine Category	Machine Manufacturer	Current Tool	Tool Name	Tool Life Permissible Count	Reason For changed
W10	Resistance Welding	Welding	KIRPEKAR	2	tool2	2000	Idk
W4	Resistance Welding	Welding	KIRPEKAR	1	tool1	1000	Initial

Showing 1 to 2 of 2 entries

Previous 1 Next

This sub tab will be under the Manage tab which will shows the details of “Tool Change”. This tab shows the details of what tool is used and in which machine that particular tool is used.

Report:

The Report tab contains two sub tabs. One is the Report Generation tab and the other is the Hourly Tab.

Report Generation:

The screenshot shows the AVOCarbon-EMS web application. The top navigation bar includes links for Dashboard, Graph, DataHub, Manage, and Reports. The Reports section is active, showing sub-tabs for Report Generation and Hourly Report. The Report Generation tab is selected, displaying a filter sidebar and a data table.

Set Filter

- Operator Id: ALL
- Machine Id: ALL
- Tool Id: ALL
- Supervisor Id: ALL
- Part Id: ALL
- From Date: 11/18/2023
- To Date: 11/18/2023
- Shift: ALL
- ☐ Show Not Assigned data

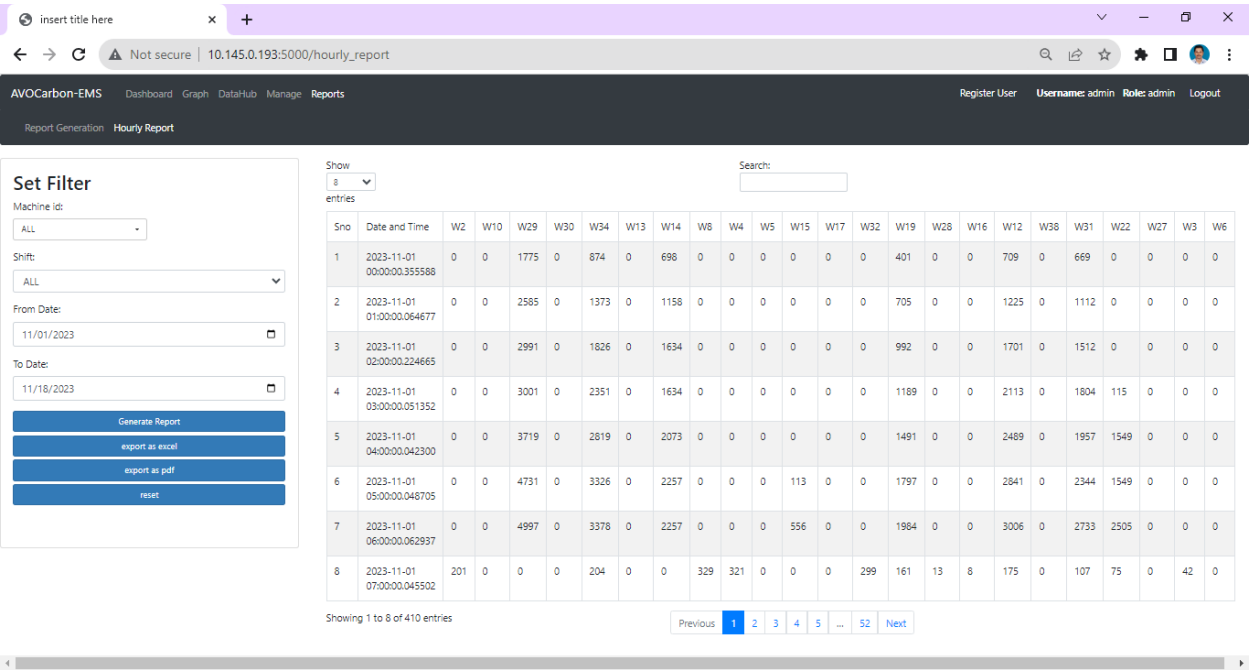
Table Data:

Sno	Employee Code	Employee Name	Shift	Date	Part No	Part Name	Actual Output	Efficiency(%)	NPC Standard	Machine No	Machine Name	Start Time	Product Line	Supervisor	Tool Id	Tool Name
1	SP110	Bholanath Tudu	1	2023-11-18	5896	End Fusion	None	None	8000	W3	Resistance Welding	None	Carbon Brush	M.Murugavel	None	None
2	SP125	Mithun	1	2023-11-18	85	End Fusion	None	None	8000	W27	Resistance Welding	None	Carbon Brush	M.Murugavel	None	None
3	SP155	Dilip Soren	1	2023-11-18	6608	Bolt Welding	None	None	3300	W34	Resistance Welding	None	Carbon Brush	M.Murugavel	None	None
4	5020	Pramila Deva kumari	1	2023-11-18	7696	Assembly Welding	None	None	2000	W30	Resistance Welding	None	Carbon Brush	M.Murugavel	None	None
5	5078	Thara V (5078)	1	2023-11-18	21 series	Bolt Welding	None	None	3500	W15	Resistance Welding	None	Carbon Brush	M.Murugavel	None	None
6	5029	Archana M (5029)	1	2023-11-18	9227E/F	End Fusion	None	None	2000	W16	Resistance Welding	None	Carbon Brush	M.Murugavel	None	None
7	SP175	Sanatan Naik	1	2023-11-18	10series	Assembly Welding	None	None	5000	W29	Resistance Welding	None	Carbon Brush	M.Murugavel	None	None
8	5018	M.Nagammal (5018)	1	2023-11-18	104	Assembly Welding	None	None	1500	W17	Inverter Welding	None	Carbon Brush	M.Murugavel	None	None
9	RA200	D.Roselin (RA200)	1	2023-11-18	63	Terminal weld	None	None	3500	W32	Inverter Welding	None	Carbon Brush	M.Murugavel	None	None

The Report Generation screen has the Filter option and it contains details about operator Id, machine ID, Tool ID, Part ID, From_Date, To_Date and the Shift details. When all these details are inputted, the desired report will be obtained. This page contains the Show drop down button option that will contain details such as how many records need to be shown, viz., 1, 10, 100, 1000, All. Further, Search option is kept to search the required fields. The Previous page and the Next page navigation buttons are kept at the center bottom of the page.

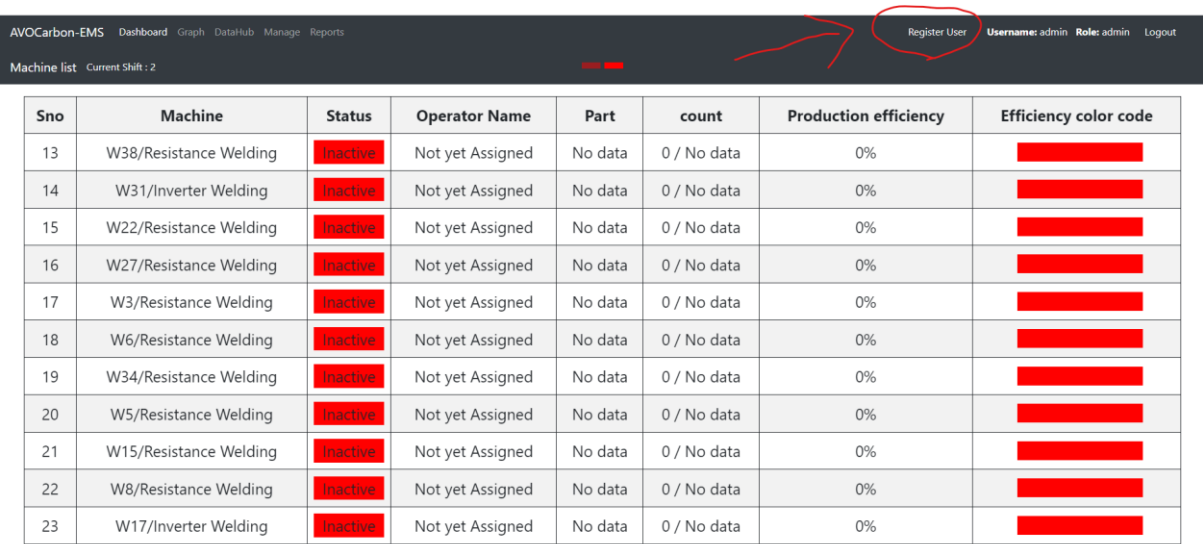
The report will also display the respective Color codes based on the performance and efficiency of the operators.

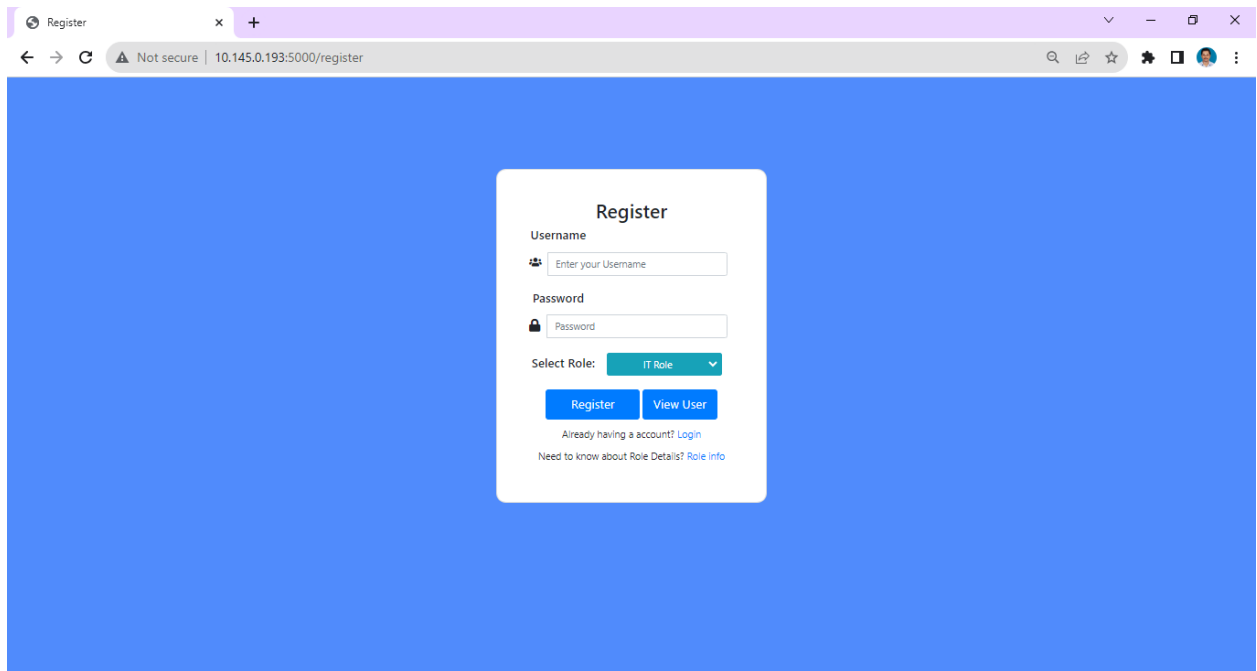
Hourly Report:



This tab “Hourly Report” shows the per hour data. This screen has filters such as machine ID, Shift, From_Date, To_Date can be selected. This Hourly report can be exported in the form of Excel or PDF formats as per the need of the user.

Register User:





This is a specific tab which is enabled only for Admin and IT-Role and others cannot access the same. The admin can create as many users as possible. The Admin is the super user who can create the IT – Role and the IT-Role user can create other users such as IT-Role, Hr, Supervisor and Viewer.

View User:

The View User button will display all the users associated with the system. Any user other than the Admin could be deleted from this page.

Role Info:



Roles Details

Sno	Role Name	Access Level
1	Admin	<ul style="list-style-type: none"> 1. Having access to all pages 2. Can able to delete operator assignment data 3. Create,delete users 4. Restricted to create, delete, modify admin account 5. Admin account be the only one account that not be deleted or modify or change password
2	IT-Role	<ul style="list-style-type: none"> 1. Having access to all pages 2. Can able to delete operator assignment data 3. Create,delete users 4. Restricted to create, delete, modify admin account
3	Hr	<ul style="list-style-type: none"> 1. Having access to Dashboard 2. Having access to Employee Report
4	Supervisor	<ul style="list-style-type: none"> 1. Having access to Dashboard 2. Having access to Operator Assignment 3. Having access to Tool Change 4. Having access to Employee Report
5	Viewer	<ul style="list-style-type: none"> 1. Having access to Dashboard

The Role Info which is kept below the View User button will give details about the Roles and Responsibilities of each user.

Logout:

AVOCarbon-EMS

Dashboard

Graph

DataHub

Manage

Reports

Register User

Username: admin

Role: admin

Logout

Machine list

Current Shift : 2

Sno	Machine	Status	Operator Name	Part	count	Production efficiency	Efficiency color code
13	W38/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
14	W31/Inverter Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
15	W22/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
16	W27/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
17	W3/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
18	W6/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
19	W34/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
20	W5/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
21	W15/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
22	W8/Resistance Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	
23	W17/Inverter Welding	Inactive	Not yet Assigned	No data	0 / No data	0%	

The Logout button when pressed logs out from the web page.