

[Tech Note 994](#)

Configuring and Using Certifications with MES

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Topic#: 002824

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Introduction

Certification allows the system to define certifications and qualify individual users for those certifications. Two certification types can be used:

- An **Audit** type, which is a Certification that requires a signoff.
- A **Non-Audit** type, which restricts access to an operation.

For more information refer to the MES User Guides.

This *Tech Note* describes using Certifications within the MES Client and how they are used in Operator.

Application Versions

- MES 2012 and all other versions.

Audit

This section is for the Audit and will require a signoff to complete.

Create/Configure the Audit Users.

1. The first step is to open Configurator and go to the **Users** tab and click **Certifications**.

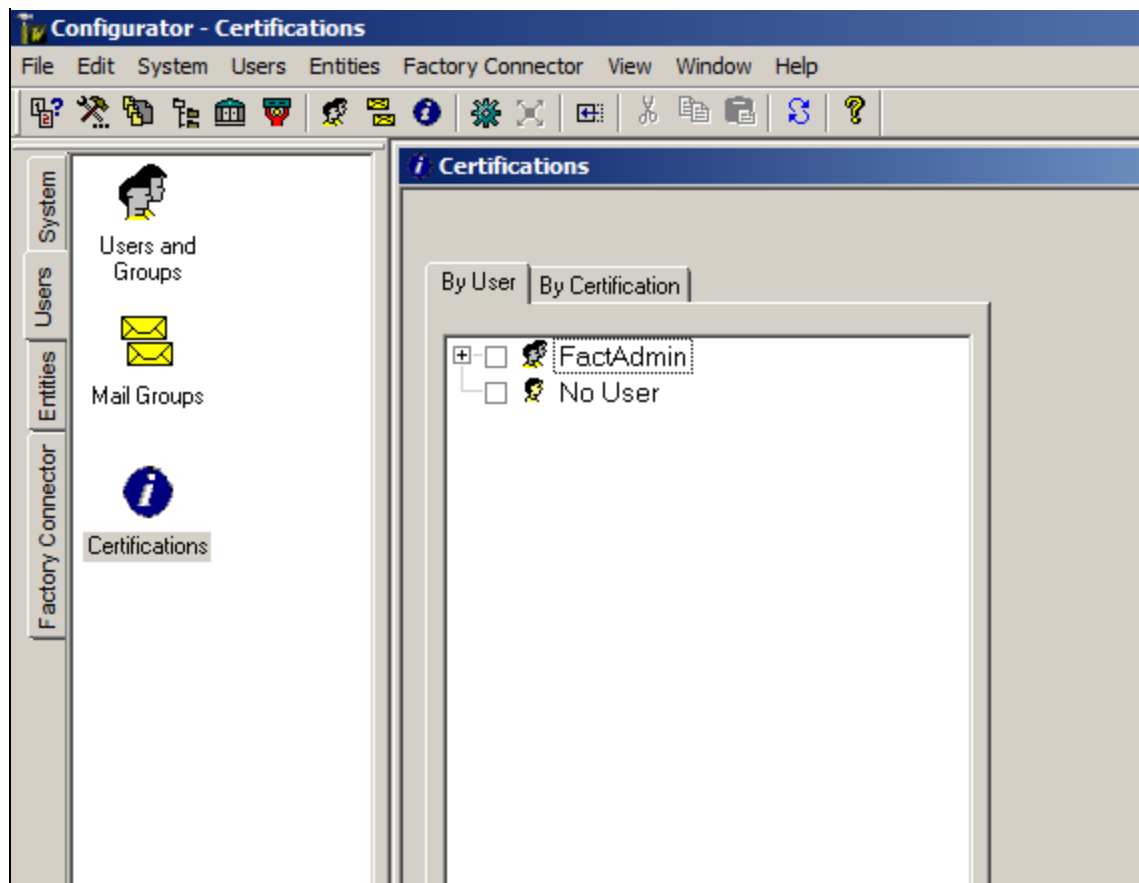


FIGURE 1: CERTIFICATIONS ITEM

Configure the **User** first.

2. In the Certification window select the **By User** tab. This example shows two groups in the MES Client:
 - An **Operators** group with a user Oper_1.
 - A **Supervisor** Group with a user Super_1. The Supervisor group will have the signoff

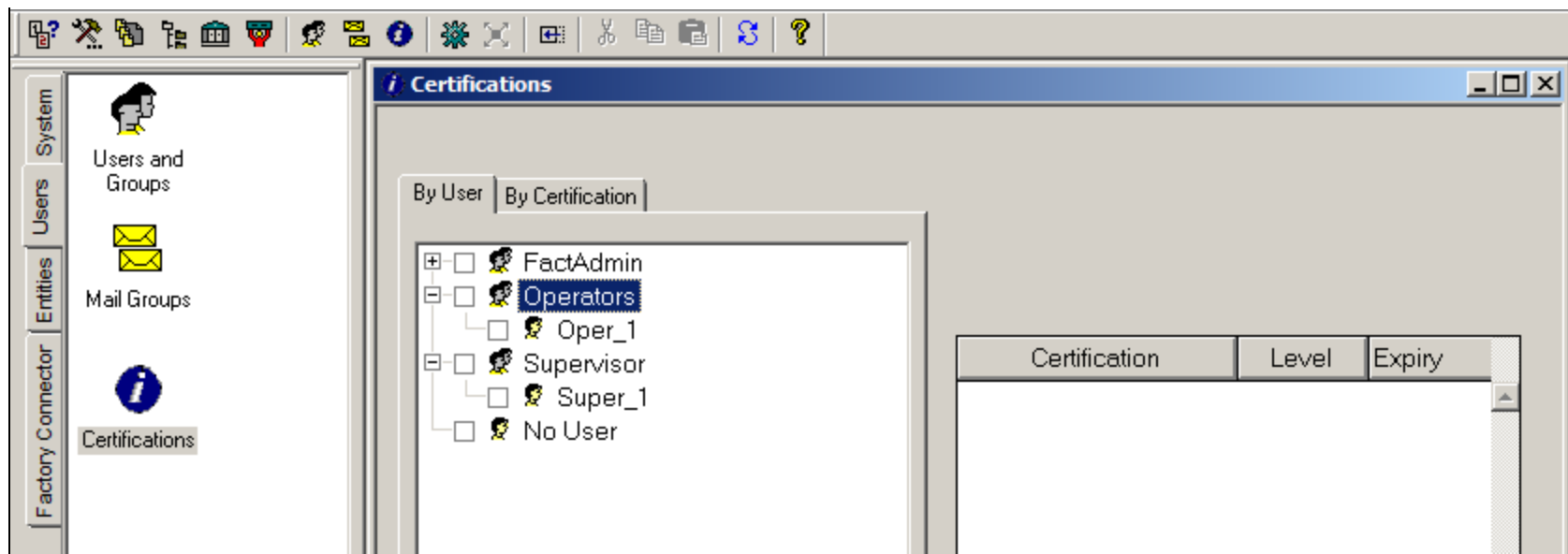


FIGURE 2: BY USER TAB SHOWING OPERATORS AND SUPERVISOR GROUPS

Create a Certification

1. Right-click on the Oper_1 and click **Insert Certification**.

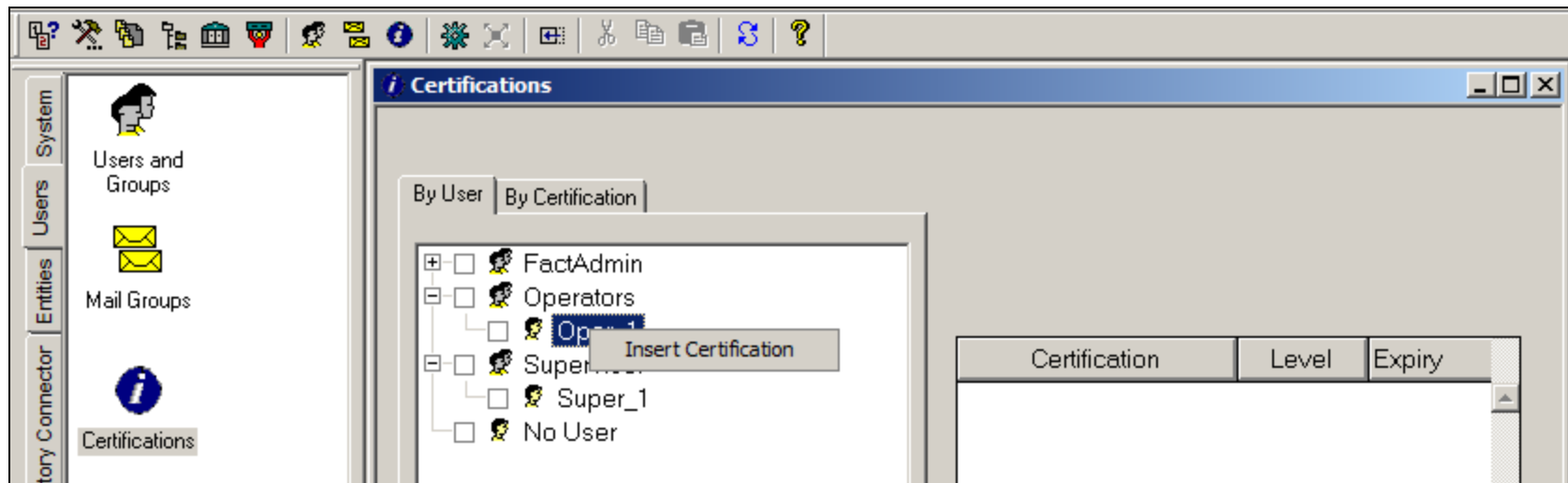


FIGURE 3: INSERT CERTIFICATION

After you click **Insert Certification** the **Certifications** window opens. Give the Certification a name. This example uses **Welding**.

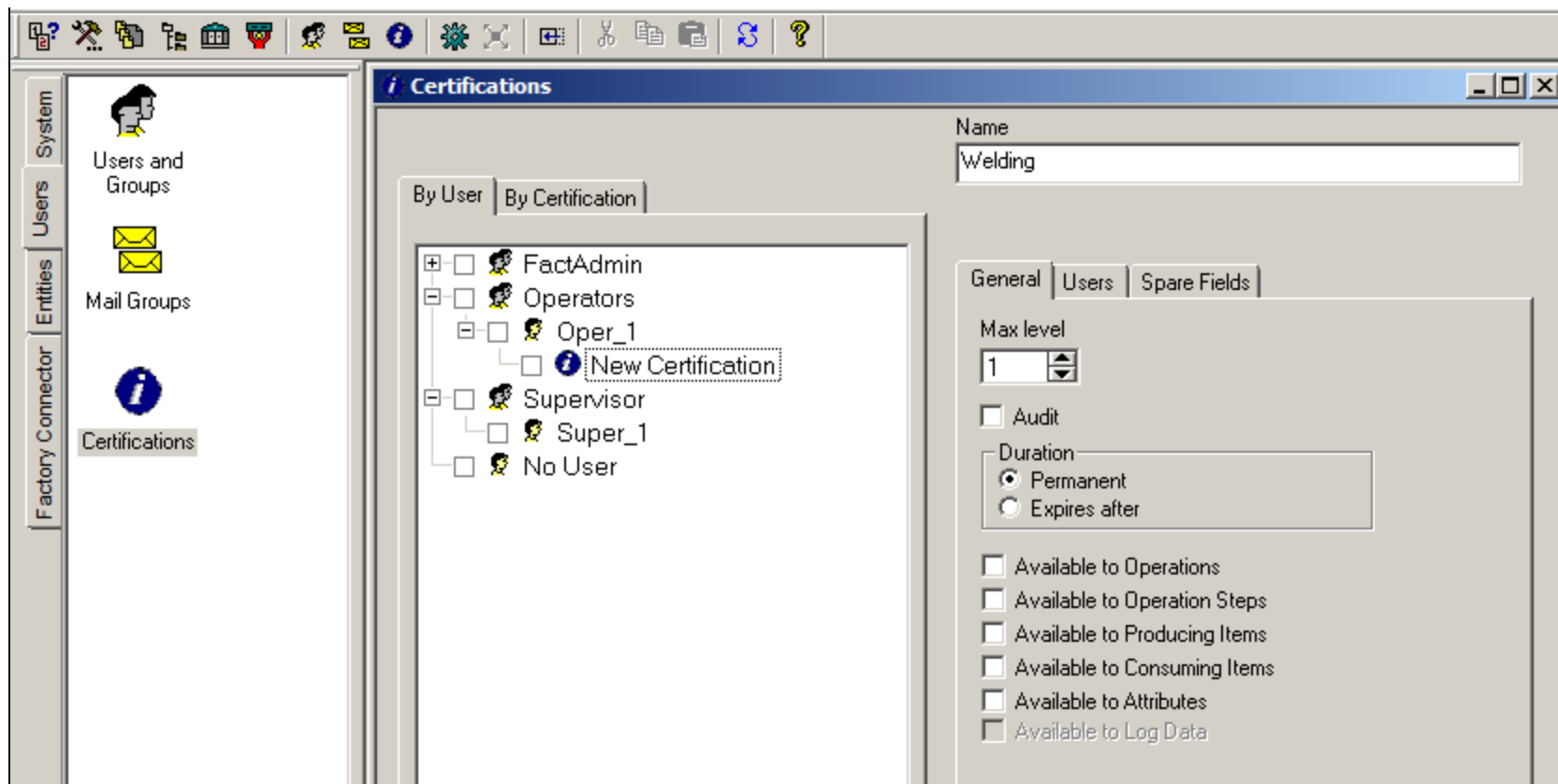


FIGURE 4: WELDING CERTIFICATION

Configure the Certification

1. Set the Max level to **10**. This means only users who have a level 10 can do anything with this certification.
2. Check the Audit option because we require a sign off by the **Super_1**.
3. Check **Available to Operations** and **Available to Operation Steps**. The following content shows both examples.

The first one is for **Operation Steps** with the **Audit** option enabled.

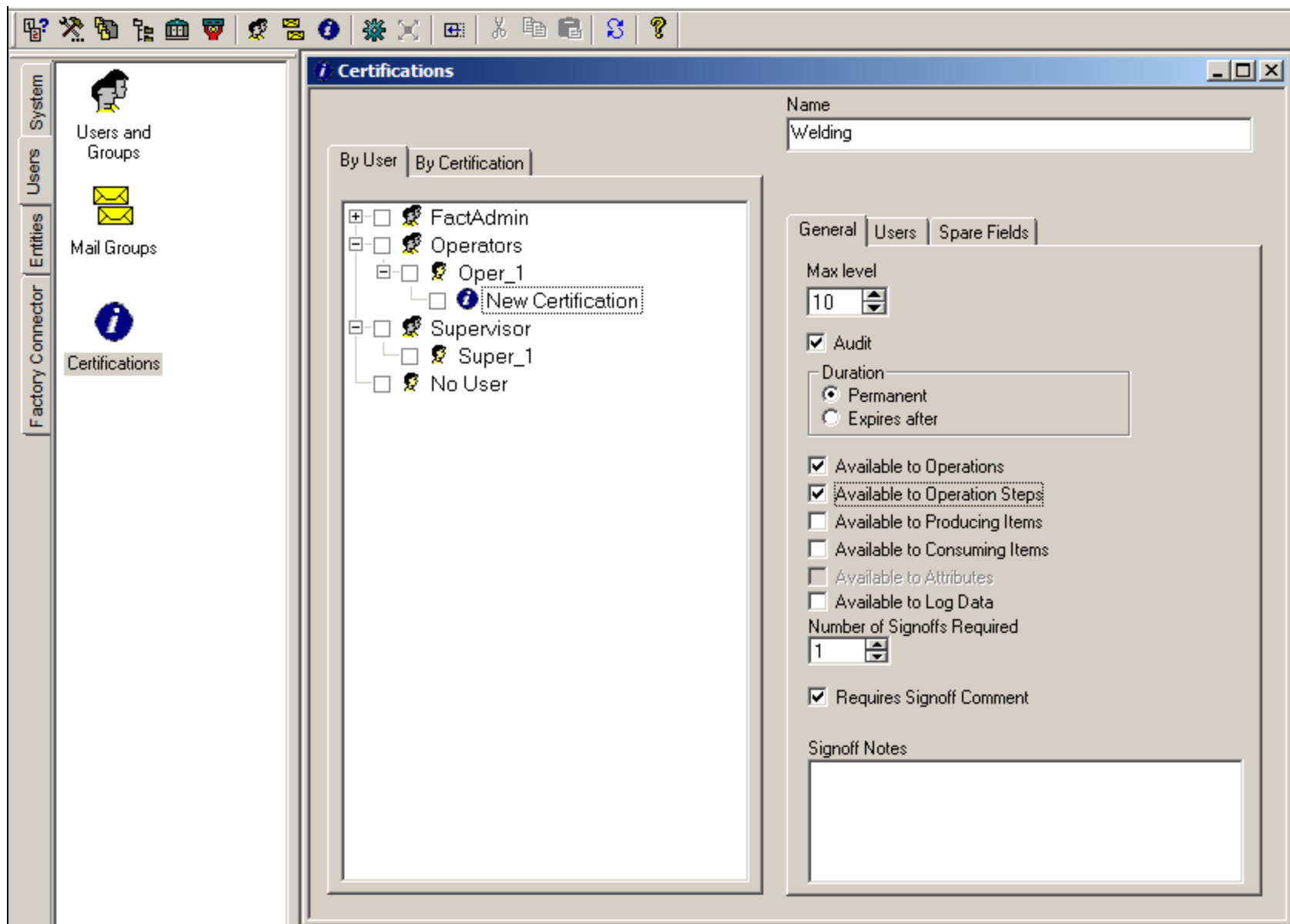


FIGURE 5: AUDIT AVAILABLE TO OPERATIONS AND TO OPERATION STEPS

Set the Operator Group and Supervisor Group User Levels

In this example, **Oper_1** has a level of 2. This means that he cannot sign off on the certificate.

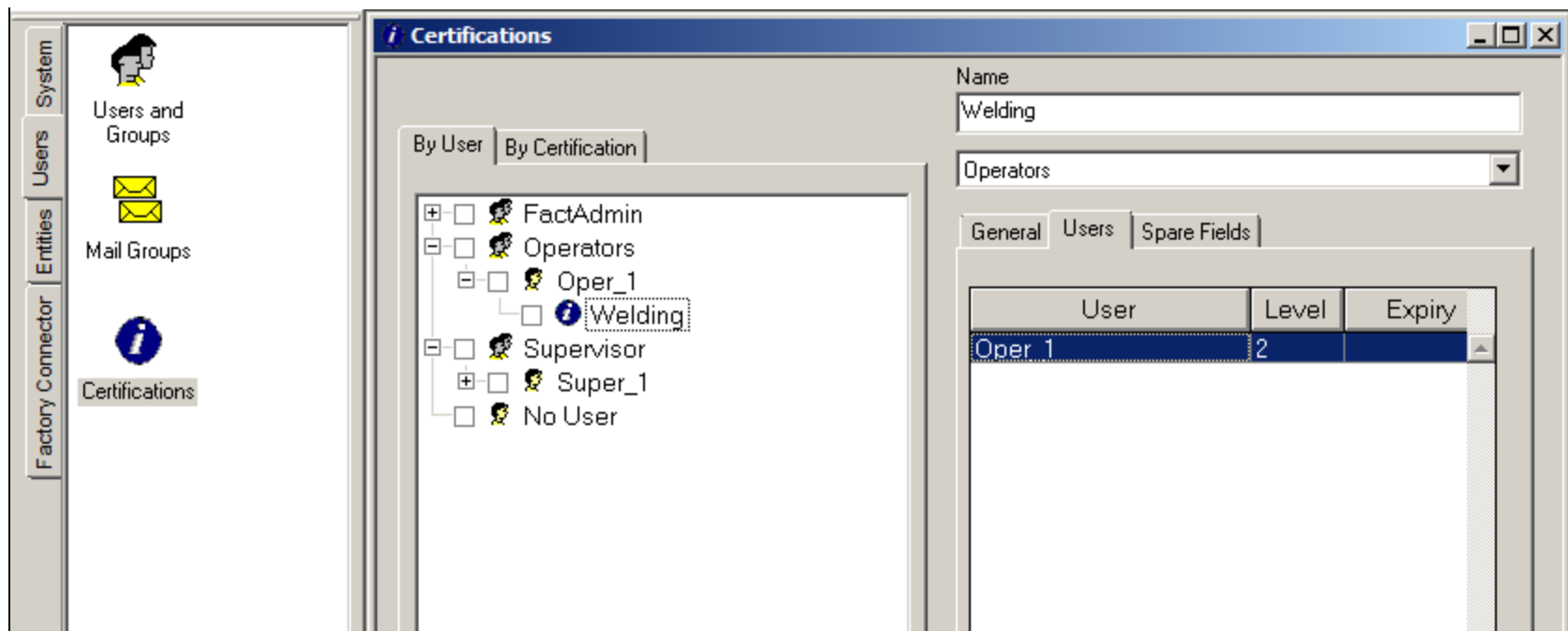


FIGURE 6: LEVEL 2 FOR OPER_1 USER

1. Set the Super_1 level to **10**. This is because we set the Welding certification level to 10, and will allow **Super_1** to do the signoff.

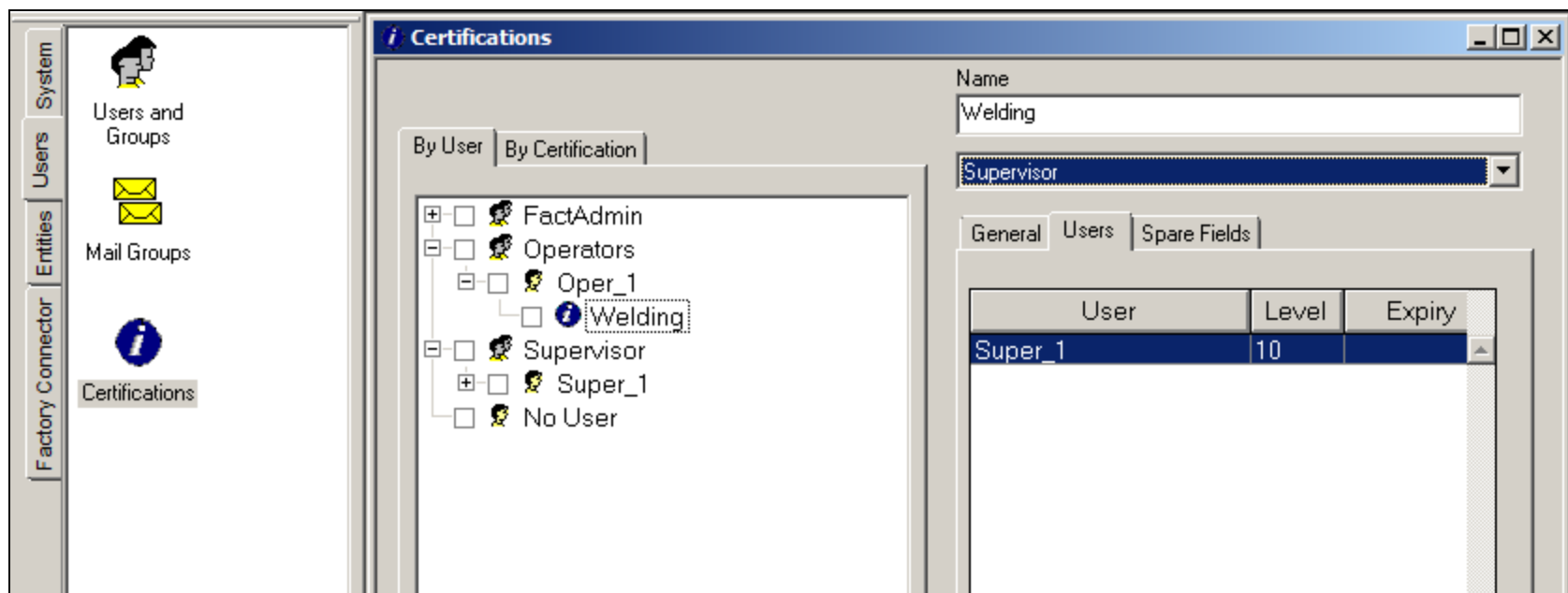


FIGURE 7: SET SUPER_1 LEVEL TO 10

2. Click the **By Certification** tab to see the Certification and the Users assigned to it.

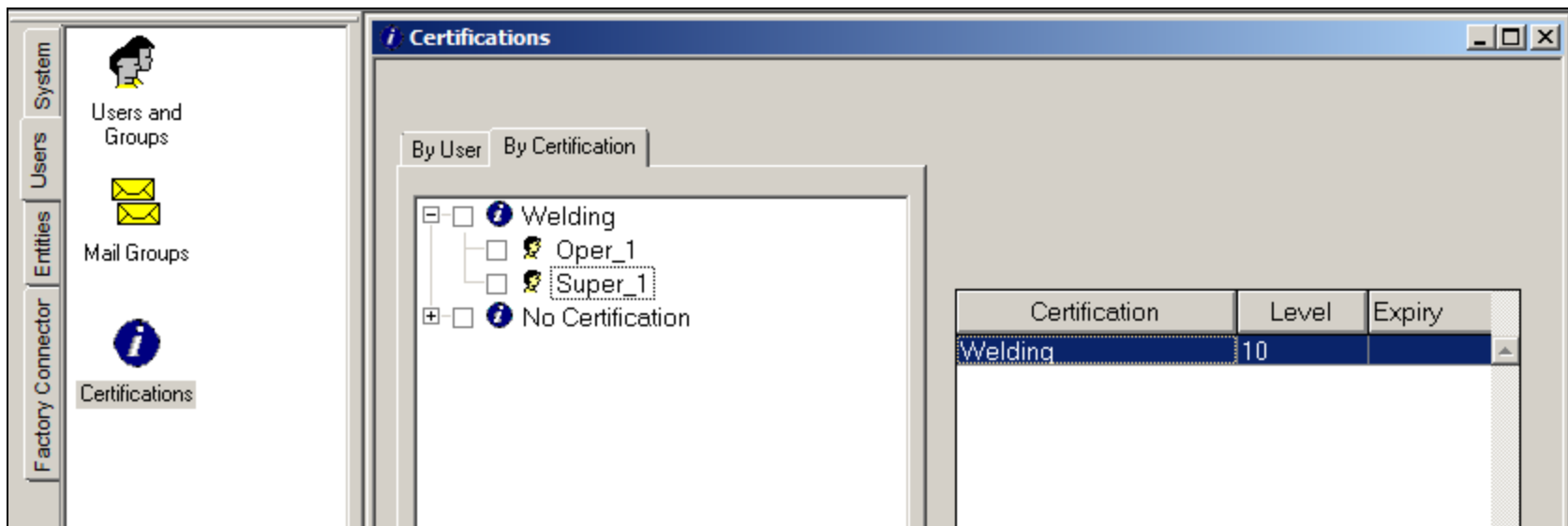


FIGURE 8: CERTIFICATION LEVEL AND ASSIGNED USERS

3. Click the **By User** tab to see the users and all of the certifications assigned to them.

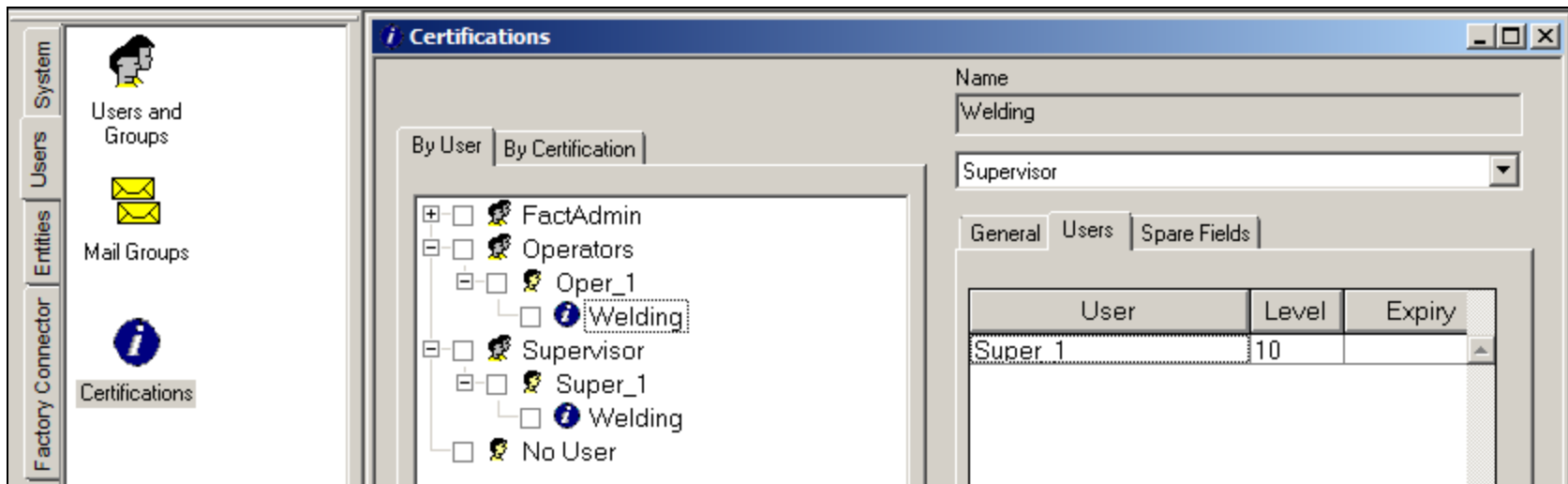


FIGURE 9: BY USER TAB

4. Close the Configurator and open **Wonderware MES Client**.
5. Choose the process that you want to assign the Certification to. In this example, the **Utilz** Process is used.

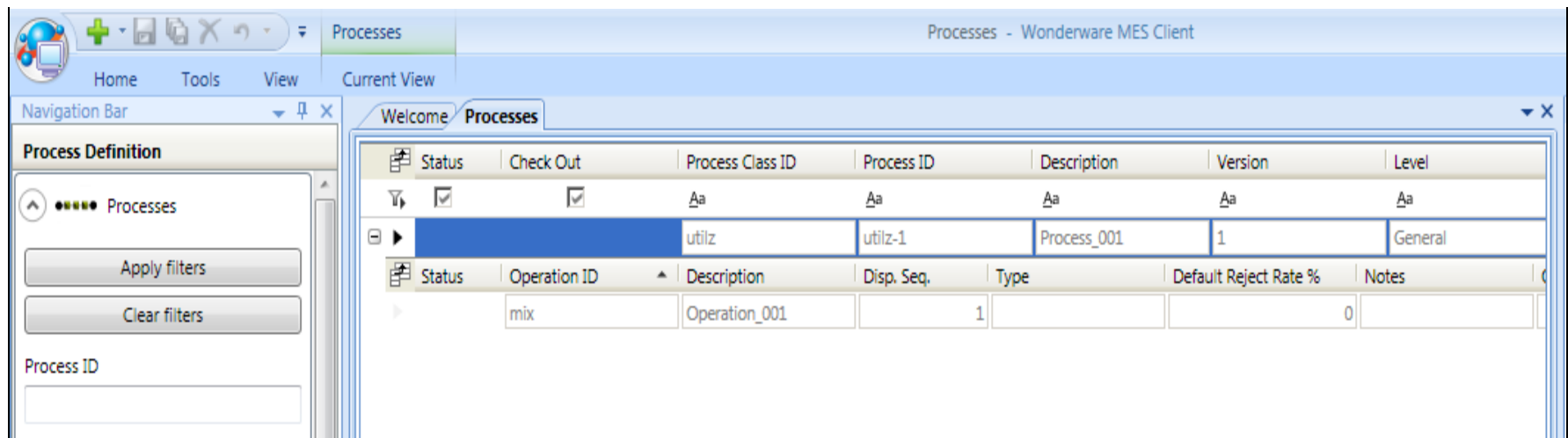


FIGURE 10: UTILZ PROCESS

6. Check out the process and choose the operation where you want to add Certifications to Steps.
7. Go to the **Steps** tab, right-click and add a new Group of steps. In this example we are going to call the group **welding**.

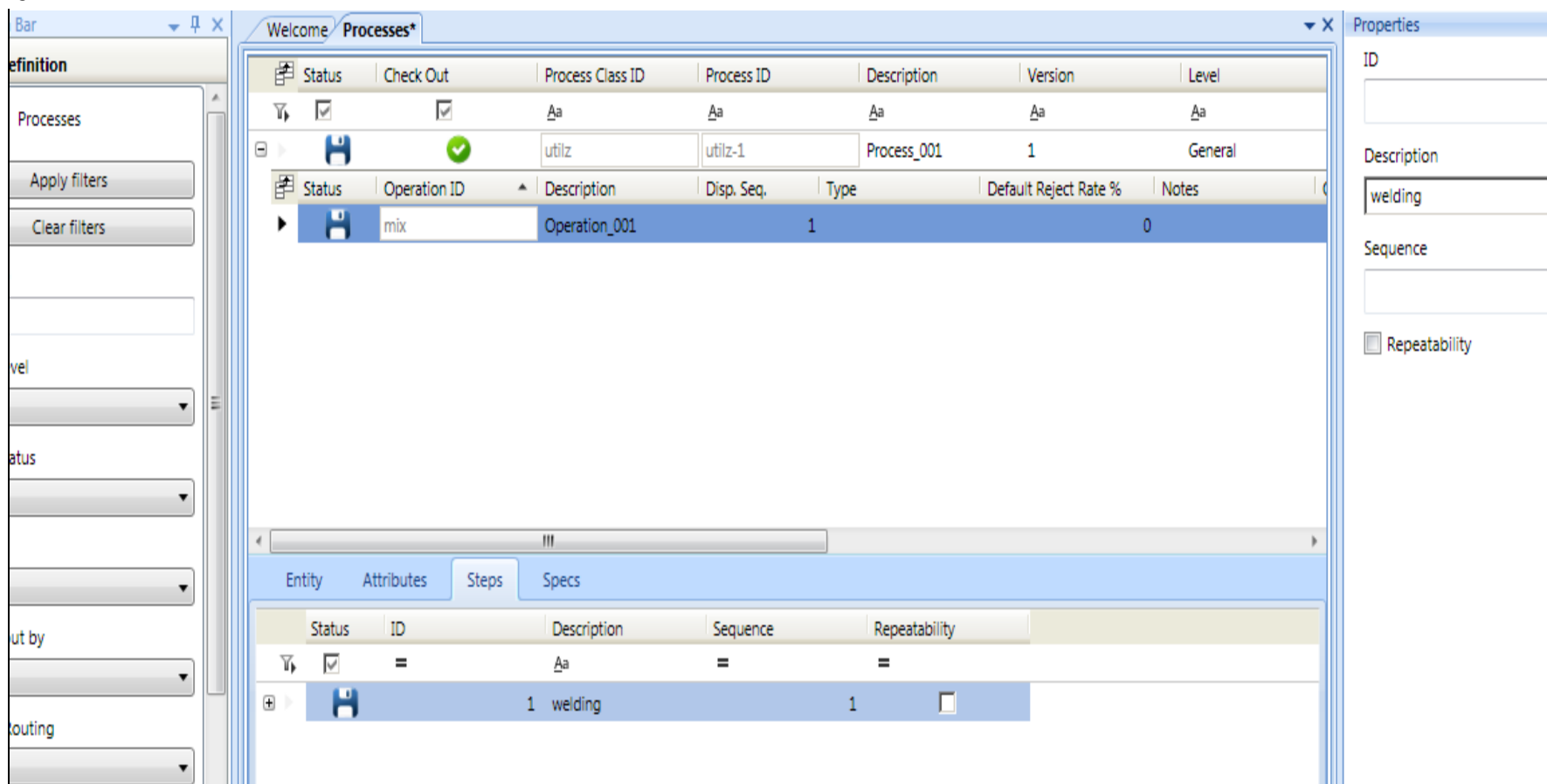


FIGURE 11: ADD GROUP OF STEPS

8. Add a step called **Inspect Weld**.

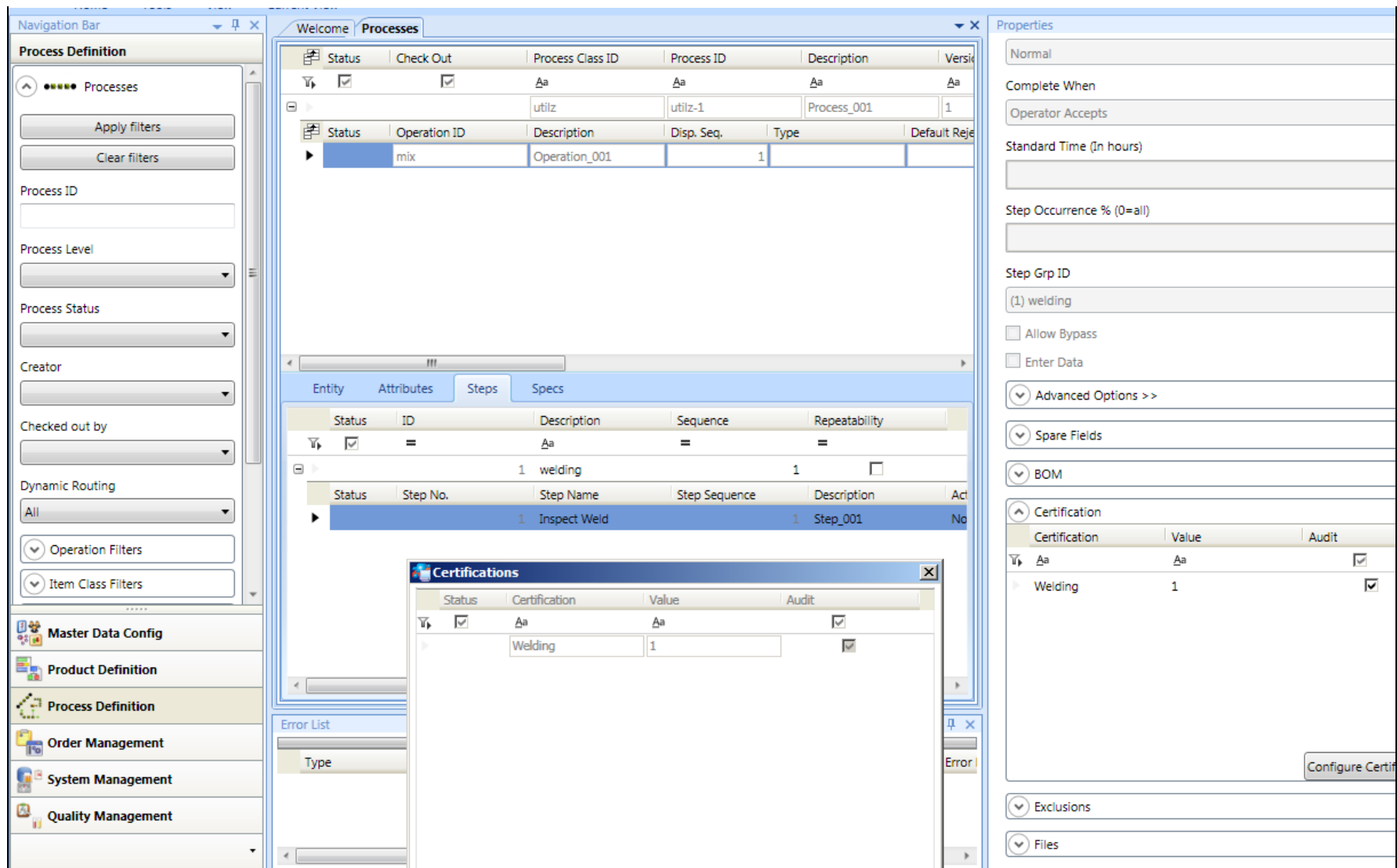


FIGURE 12: ADD INSPECT WELD STEP

9. Assign a Certification to this step by clicking **Properties** and selecting the **Welding** certification.

You have now added the **Welding** certificate to that step.

10. Set the value for the Certifications to the correct level using **10** for **Super_1**.

Navigation Bar

Process Definition

Apply filters

Clear filters

Process ID

Process Level

Process Status

Creator

Checked out by

Dynamic Routing

Operation Filters

Item Class Filters

Master Data Config

Product Definition

Process Definition

Order Management

System Management

Quality Management

Welcome Processes Work Orders And Jobs Queue Processes

Status	Check Out	Process Class ID	Process ID	Description	Version
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	utilz	utilz-1	Process_001	1

Status	Operation ID	Description	Disp. Seq.	Type	Default Rejection
▶	mix				

Status	ID
<input checked="" type="checkbox"/>	=

Status	Step No.
▶	

Properties

Normal

Complete When

Operator Accepts

Standard Time (In hours)

Step Occurrence % (0=all)

Step Grp ID

(1) StepGroup_001

Allow Bypass

Enter Data

Advanced Options >>

Spare Fields

BOM

Certification

Certification	Value	Audit
▶ Welding	10	<input type="checkbox"/>

Configure Certif

Exclusions

Files

Certifications

Status	Certification	Value	Audit
<input checked="" type="checkbox"/>	Welding	10	<input type="checkbox"/>

1
2
3
4
5
6
7
8
9
10

Close

Error List

group by area Drag a field here to group by that field

Type	Instance	Description
------	----------	-------------

FIGURE 13: SET THE CERTIFICATIONS LEVEL

11. Check in the process and create a Work order from the process.

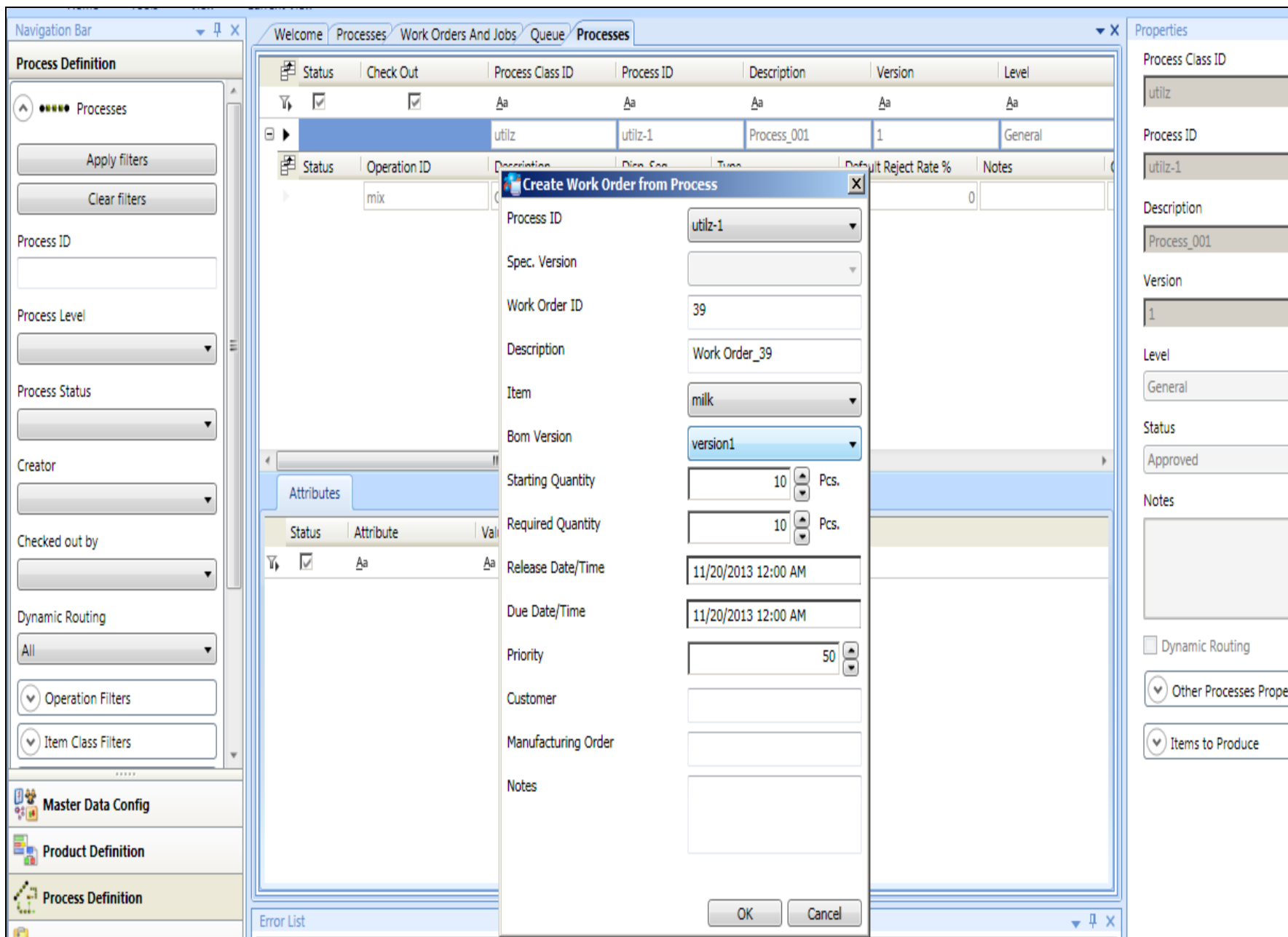


FIGURE 14: CREATE WORK ORDER FROM PROCESS

12. Save your changes and open Operator.

Test the Certification Level

1. Login to Operator as **Oper_1** and start the Work Order. Then click the **Steps** tab.

Job Summary: Mixer1
Current User: oper_1

WO ID	Oper ID	Part Number	Start Qty
39	mix	mlk	10
Job State	Job Desc	Part Desc	Batch Size
RUNNING	Operation_001	mlk	1
Machine Status	WO Desc	Reqd By	Estimate
RUNNING	Work Order_39	11/20/13 12:00:00 AM	

Notes

Route | Work Queue | Production | BOM | Genealogy | Util/OEE | Folders | **Steps** | Specs | Data Log | Audit | Inventory

Operator: oper_1 | Serial Number: -

Step No	Step Desc	Grp Seq	Seq	Document	View	Data
1	welding	1	1			

Step Desc: welding

Data Edit

Status: READY | Action: Normal | Start: | Finish: | Cert Name: Welding

FIGURE 15: STEPS TAB

2. Try and start the steps. You will not be able to because the **Oper_1** user does not have the correct level.

Job Summary: Mixer1

Current User: oper_1

WO ID 39	Oper ID mix	Part Number milk	Start 10
Job State RUNNING	Job Desc Operation_001	Part Desc milk	Batch 1
Machine Status RUNNING	WO Desc Work Order_39	Reqd By 11/20/13 12:00:00 AM	Estim

Notes

Route | Work Queue | Production | BOM | Genealogy | Util/OEE | Folders | **Steps** | Specs | Data Log | Audit | Inventory

Operator: oper_1 | Serial Number: -

Step No	Step Desc	Grp Seq	Seq.
1	welding	1	1

Information

oper_1 certification level (Welding) is less than the required certification level (Welding').

OK

FIGURE 16: CANNOT START STEPS

3. Login as **Super_1** to complete the steps with Audit.

Job Summary: Mixer1

Current User: oper_1

WO ID 22	Oper ID mix	Part Number milk	Start Qty 10	Reqd Qty 10
Job State RUNNING	Job Desc Operation_001	Part Desc milk	Batch Size 1	Good Qty 0
Machine Status RUNNING	WO Desc Work Order_22	Reqd By 11/20/13 12:00:00 AM	Estimated Finish	Reject Qty 0

Notes

Route **Work Queue** Production BOM Genealogy Util/OEE Folders Steps Specs Data Log Audit Inventory

Accessible Entities: Mixer1

Entity Name	WO ID	Job Desc	Item ID	Reqd Qty	Good Qty	act_start_time_Jo...	Job State
Mixer1	11	Operation_001	milk	10	0	11/18/13 2:58:55...	COMPLETE
Mixer1	12	Operation_001	milk	10	0	11/18/13 3:14:53...	COMPLETE
Mixer1	13	Operation_001	milk	10	0	11/18/13 3:30:58...	COMPLETE
Mixer1	14	Operation_001	milk	10	0	11/18/13 3:58:57...	COMPLETE
Mixer1	15	Operation_001	milk	10	0	11/18/13 4:01:03...	COMPLETE
Mixer1	16	Operation_001	milk	10	0	11/18/13 4:03:29...	COMPLETE
Mixer1	18	Operation_001	milk	0	0	11/19/13 7:14:27...	COMPLETE
Mixer1	19	Operation_001	milk	10	0	11/19/13 7:18:14...	COMPLETE
Mixer1	20	Operation_001	milk	10	0	11/19/13 7:27:36...	COMPLETE
Mixer1	21	Operation_001	milk	10	0	11/19/13 8:09:46...	COMPLETE
Mixer1	22	Operation_001	milk	10	0	11/19/13...	RUNNING
Mixer1	cert_Oper	Operation_001	milk	10	0	11/19/13 6:59:29...	COMPLETE

FIGURE 17: LOG IN AS SUPER_1

- Click the **Steps** tab and login to the step.

Wonderware MES Operator-oper_1

Job Summary: Mixer1

Current User: oper_1

WO ID 23	Oper ID mix	Part Number milk	Start Qty 10
-------------	----------------	---------------------	-----------------

JOB State RUNNING	JOB Desc Operation_001	Part Desc milk	Batch Size 1														
Machine Status RUNNING	WO Desc Work Order_23	Reqd By 11/20/13 12:00:00 AM	Estimated Finish														
Notes																	
<div style="border: 1px solid gray; height: 20px;"></div>																	
<div style="display: flex; justify-content: space-between; border-bottom: 1px solid gray;"> Route Work Queue Production BOM Genealogy Util/OEE Folders Steps Specs Data Log Audit Inventory </div>																	
Operator oper_1		Serial Number -															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Step No</th> <th style="width: 20%;">Step Desc</th> <th style="width: 5%;">Grp Seq</th> <th style="width: 5%;">Seq.</th> <th style="width: 40%;">Document</th> <th style="width: 10%;">View</th> <th style="width: 15%;">Data</th> </tr> </thead> <tbody> <tr style="background-color: #cccccc;"> <td>1</td> <td>Step_001</td> <td>1</td> <td>1</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Step No	Step Desc	Grp Seq	Seq.	Document	View	Data	1	Step_001	1	1			
Step No	Step Desc	Grp Seq	Seq.	Document	View	Data											
1	Step_001	1	1														
Step Desc. Step_001			Docum														
Data Edit			Form I														
Status READY	Action Normal	Start	Cert Name Welding														
Required for Step Completion		Finish															
<div style="display: flex; justify-content: space-around; align-items: center;"> </div>																	

FIGURE 18: STEPS TAB

After you login to the step it will change from **READY** to **RUNNING**, and the login button will be disabled.

WO ID 23	Oper ID mix	Part Number milk	Start Qty 10
Job State RUNNING	Job Desc Operation_001	Part Desc milk	Batch Size 1
Machine Status RUNNING	WO Desc Work Order_23	Reqd By 11/20/13 12:00:00 AM	Estimated Finish
Notes			

Route | Work Queue | Production | BOM | Genealogy | Util/OEE | Folders | **Steps** | Specs | Data Log | Audit | Inventory

Operator: oper_1 | Serial Number: -

Step No	Step Desc	Grp Seq	Seq.	Document	View	Data
1	Step_001	1	1			11/19

Step Desc.
Step_001

Data Edit

Status: RUNNING | Action: Normal | Start: 11/19/13 10:55:01 AM | Cert Name: Welding

Required for Step Completion: Operator accept | Finish:

FIGURE 19: LOGIN BUTTON DISABLED

5. Try to complete the Step.

You will see a popup that lets you know some certifications are not signed off. Since Oper_1 only has a level of **2**, he can't complete this step.

We need to login as Super_1, since he has the level needed to complete the step.

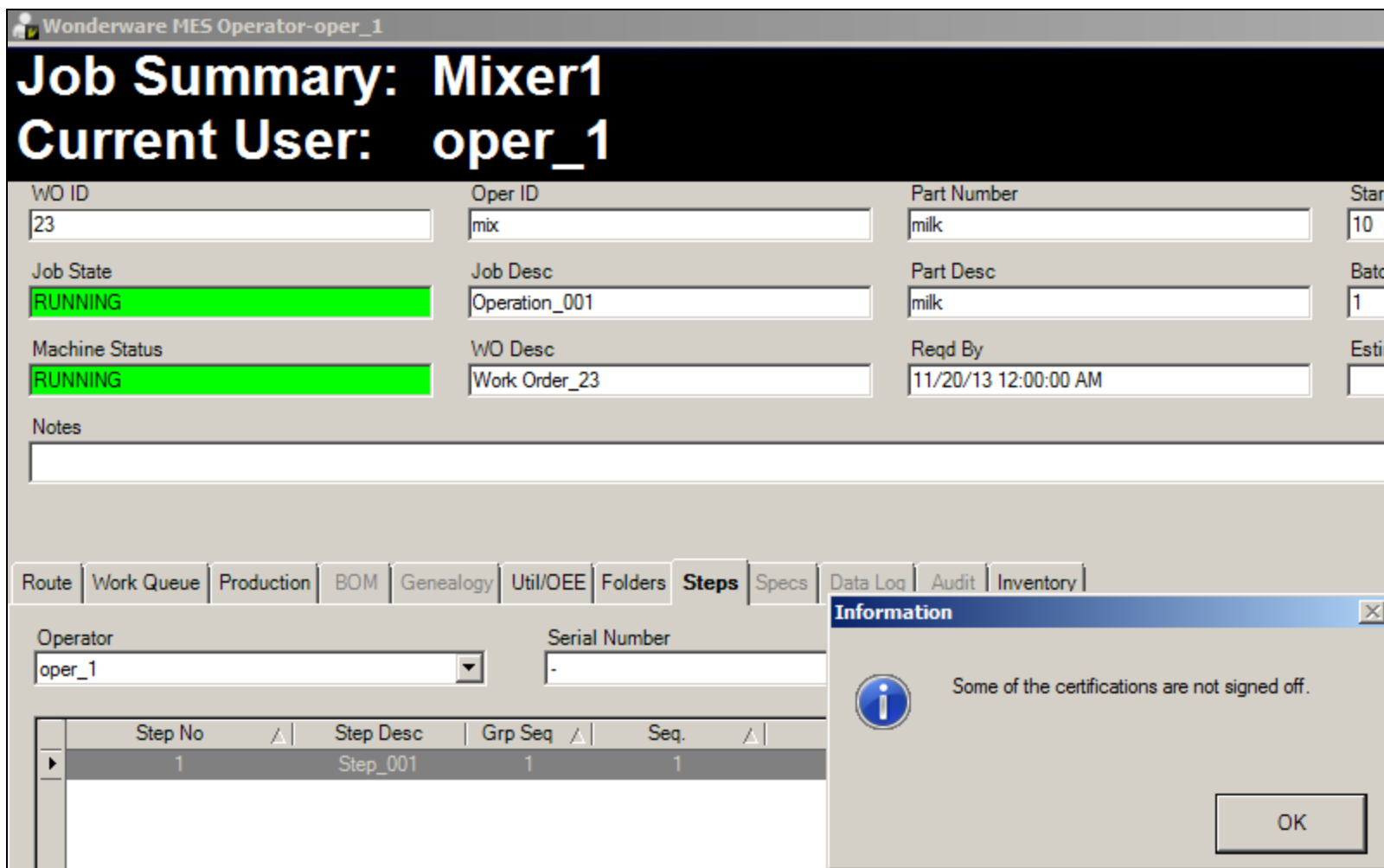


FIGURE 20: OPER_1 CANNOT GET SIGNOFF

6. We need to either Log off as Oper_1 and Login as Super_1 or switch to another User session.

Login to Another User Session

We will show switch to another user session.

1. Click the **Switch to Another User** button (3rd from Left).

Step Desc.
Step_001

Data Edit

Status
RUNNING

Action
Normal

Start
11/19/13 10:55:01 AM

Cert Name
Welding

Required for Step Completion
Operator accept

Finish

Switch to another users's session

FIGURE 21: SWITCH TO ANOTHER USER BUTTON

2. Login as **Super_1** by clicking the **Add new user** button.

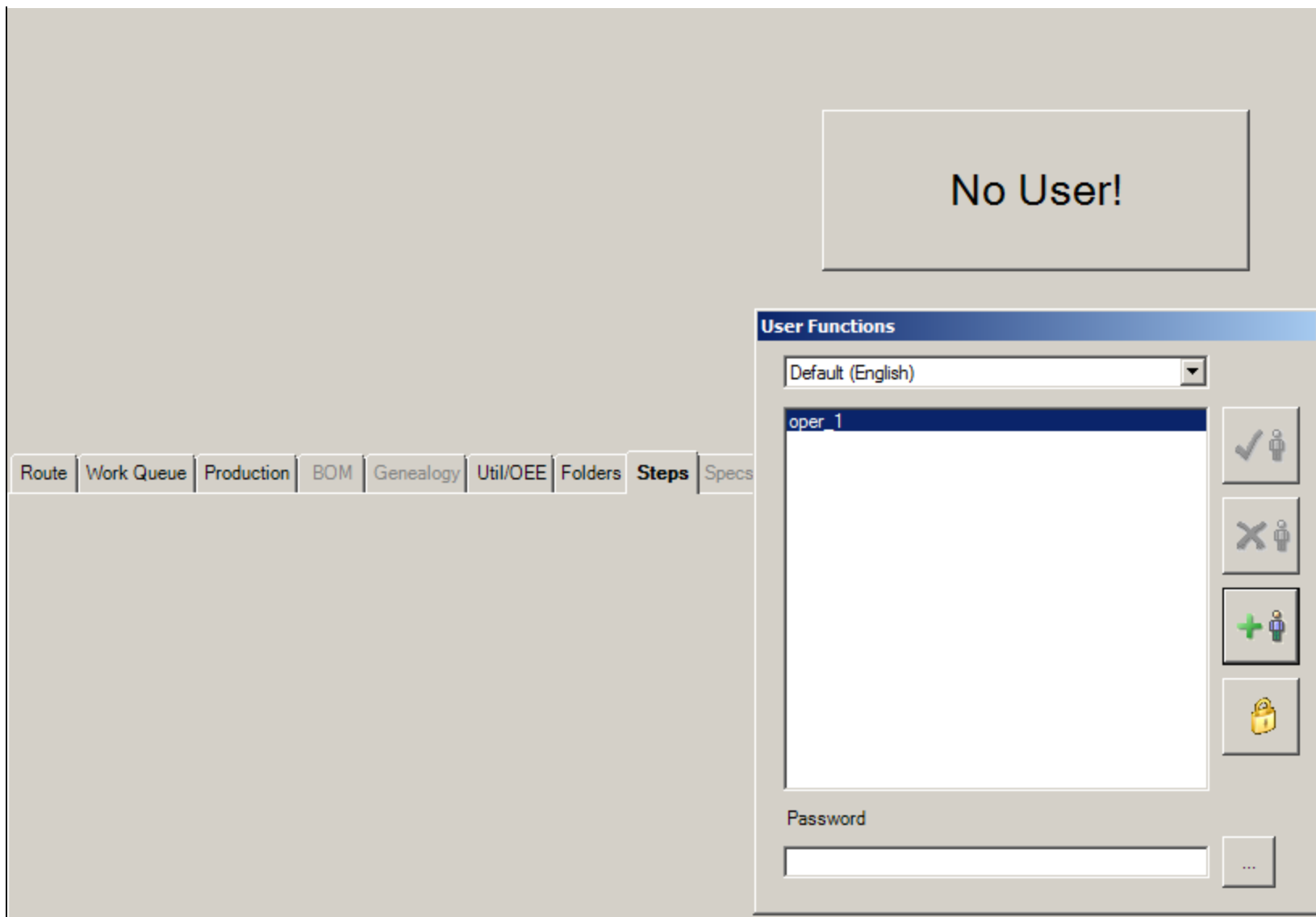


FIGURE 22: ADD NEW USER

After you select the new user you will get the login for Operator so Super_1 can login.



FIGURE 23: LOGIN AS SUPER_1 USER

3. After you are logged in as Supr_1 you can clear the certification required before the Step can be completed.
4. Click the **Authorize** button and you will be prompted to complete the certification.
5. Login and add your comments.

Wonderware MES Operator-Super_1

Job Summary: Mixer1

Current User: Super_1

WO ID 23	Oper ID mix	Part Number milk	Start Qty 10
Job State RUNNING	Job Desc Operation_001	Part Desc milk	Batch Size 1
Machine Status RUNNING	WO Desc Work Order_23	Reqd By 11/20/13 12:00:00 AM	Estimated Fin

Notes

Route | Work Queue | Production | BOM | Genealogy | Util/OEE | Folders | **Steps**

Operator: Super_1 | Serial Number: -

Step No	Step Desc	Grp Seq	Seq.
1	Step_001	1	1

Step Desc.

Inspector Login

Certification

Comments

inspected

User Name: Super_1 ...

Password: ***** ...

Login **Cancel**

FIGURE 24: COMPLETE THE CERTIFICATION

Now the Authorize button (3rd from right in Figure 25 below) is grayed out and the certification has been logged.

Wonderware MES Operator-oper_1

Job Summary: Mixer1

Current User: oper_1

Wonderware MES 2012

WO ID 23	Oper ID mix	Part Number mlk	Start Qty 10	Reqd Qty 10
Job State RUNNING	Job Desc Operation_001	Part Desc mlk	Batch Size 1	Good Qty 0
Machine Status RUNNING	WO Desc Work Order_23	Reqd By 11/20/13 12:00:00 AM	Estimated Finish	Reject Qty 0

Notes

Route | Work Queue | Production | BOM | Genealogy | Util/OEE | Folders | **Steps** | Specs | Data Log | Audit | Inventory

Operator: oper_1 | Serial Number: | Step Group: - All -

Step No	Step Desc	Grp Seq	Seq	Document	View	Data	Start	Finish	State	Insp
1	Step_001	1	1				11/19/13 10:55:01 AM		RUNNING	Sup

Step Desc: Step_001

Data Edit

Documents

Form Name

Status: **RUNNING** | Action: Normal | Start: 11/19/13 10:55:01 AM | Cert Name: Welding

Required for Step Completion: Operator accept | Finish:

Buttons: [Icons for navigation and actions]

FIGURE 25: AUTHORZE BUTTON IS DISABLED

Now the step needs to be completed by Oper_1 . Super_1 needs to log out of Operator now. Using the **Select a User** button to switch to another user.

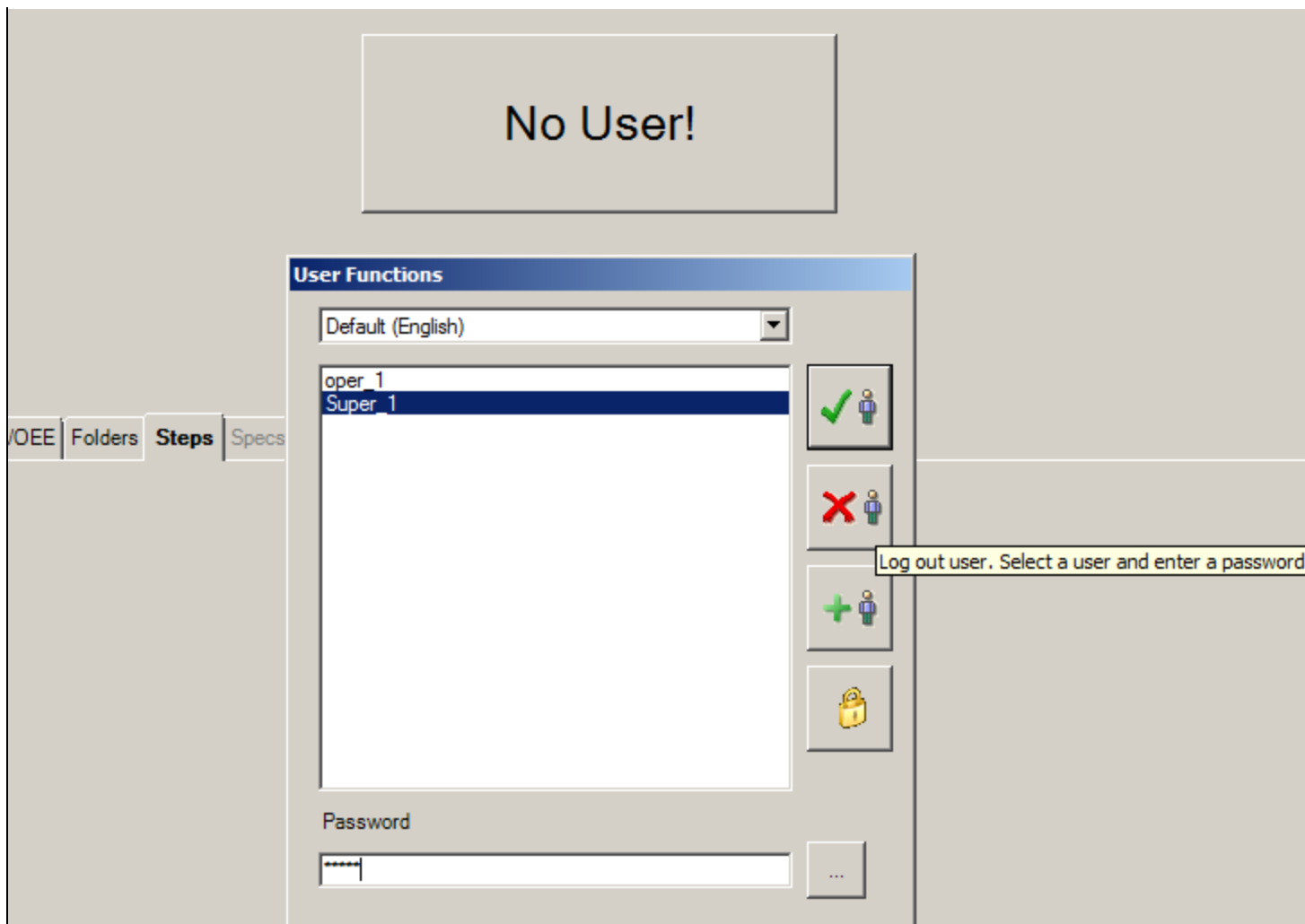


FIGURE 26: LOG OUT USER TO LOGIN AS OPER_1

6. Login as **Oper_1**.



FIGURE 27: LOGIN AS OPER_1

7. Now that you are logged back in as Oper_1 you can complete the step.

Wonderware MES Operator-oper_1

Job Summary: Mixer1

Current User: oper_1

WO ID 23	Oper ID mix	Part Number milk	Start Qty 10	Reqd 10
Job State RUNNING	Job Desc Operation_001	Part Desc milk	Batch Size 1	Good 0
Machine Status RUNNING	WO Desc Work Order_23	Reqd By 11/20/13 12:00:00 AM	Estimated Finish	Rejec 0

Notes

Route | Work Queue | Production | BOM | Genealogy | Util/OEE | Folders | **Steps** | Specs | Data Log | Audit | Inventory

Operator: oper_1 | Serial Number: | Step Group: - All -

Step No	Step Desc	Grp Seq	Seq	Document	View	Data	Start	Finish
1	Step_001	1	1				11/19/13 10:55:01 AM	11/19/13...

Step Desc: Step_001

Data Edit

Status: **COMPLETE** | Action: Normal | Start: 11/19/13 10:55:01 AM | Cert Name: Welding

Required for Step Completion: | Finish: 11/19/13 11:27:21 AM

Documents

Form Name

Icons: [Checkmark] [X] [Group] [Refresh] [Group] [Magnifying Glass] [Play] [Checkmark] [Play] [Group] [X] [Group]

FIGURE 28: COMPLETE THE STEP

WITHOUT Audit

This part describes using certification without any Auditing on steps. The user will not be prompted for any Certificates.

1. Using Configurator, by check the **Audit** option (Figure 29 below). The certification is now changed so the user will not be prompted.

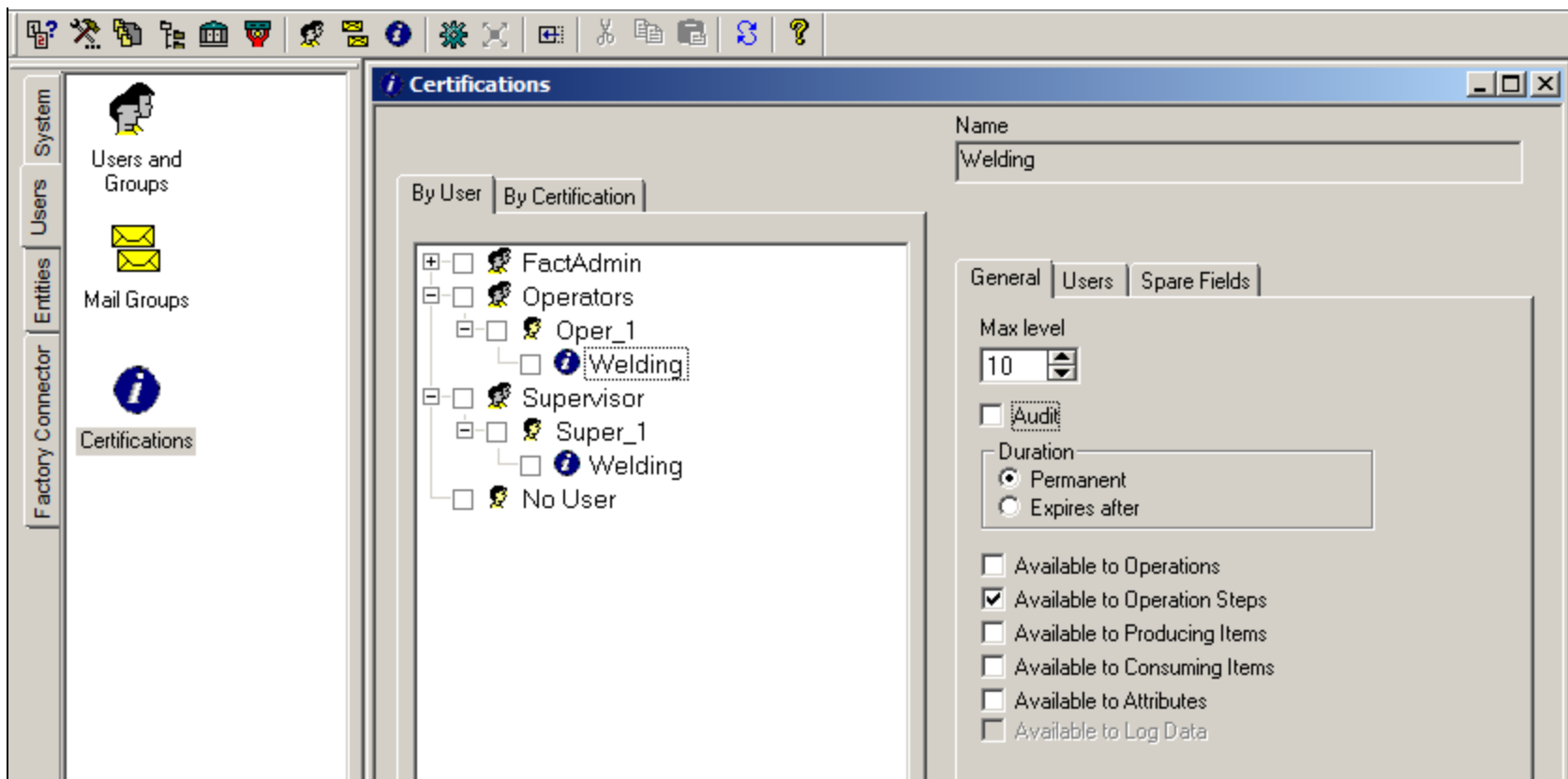


FIGURE 29: UNCHECK THE AUDIT OPTION

2. Go to **MES Client** and select the Utiliz process, then check it out.

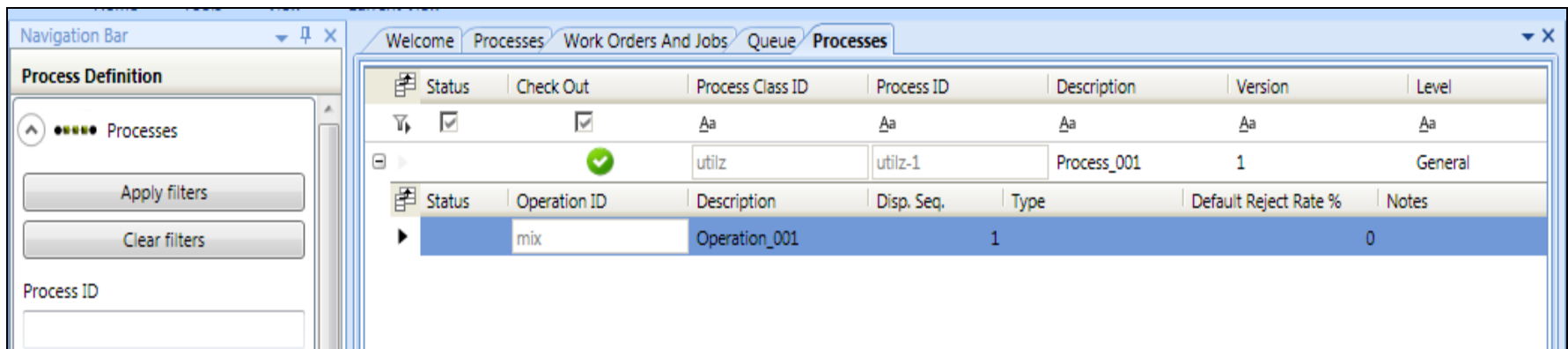


FIGURE 30: CHECK OUT UTILIZ PROCESS

3. Add the certificate **Without Audit** like we did with Audit enabled above. Select the steps and add a new step group/step and save.

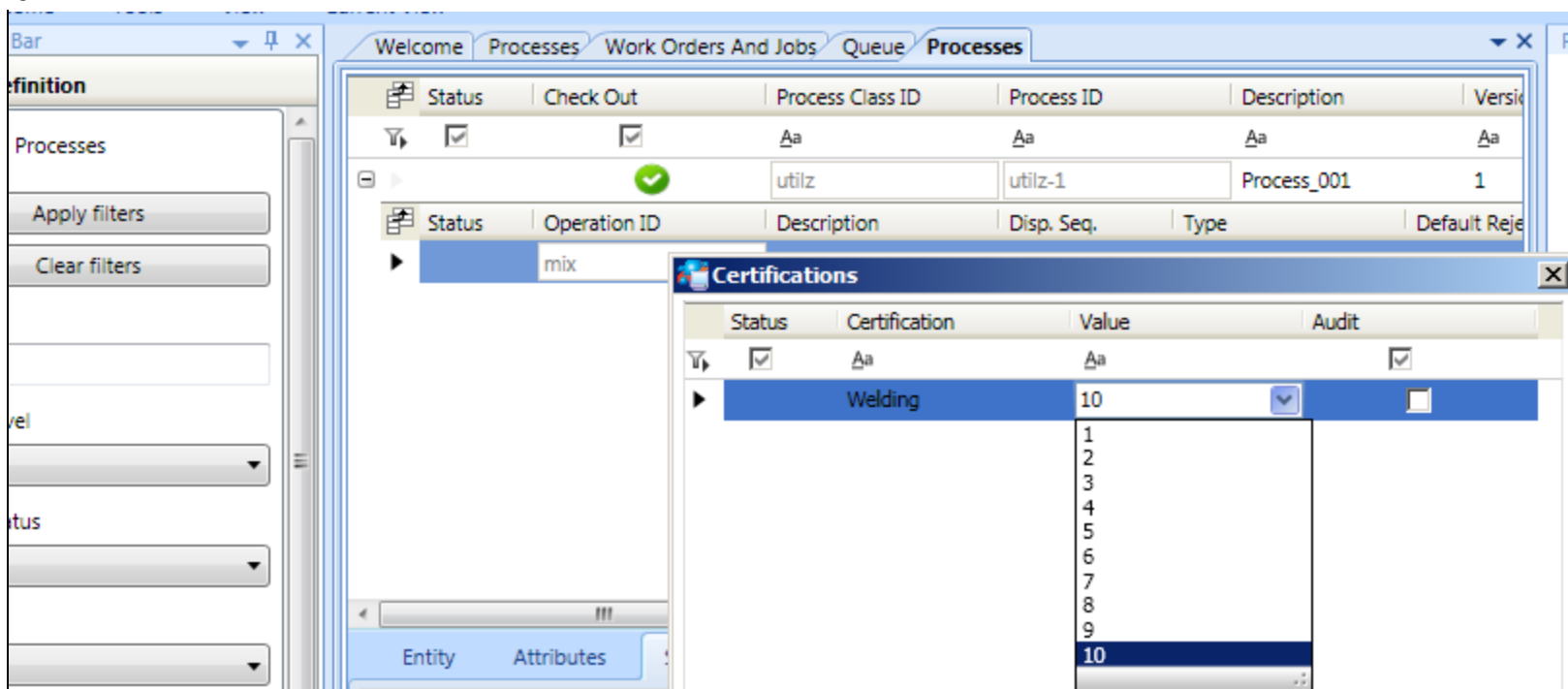


FIGURE 31: ADD CERTIFICATION WITH HIGH NUMBER

4. Next check in the Save the changes.
5. Check in the Process and create a Work Order.

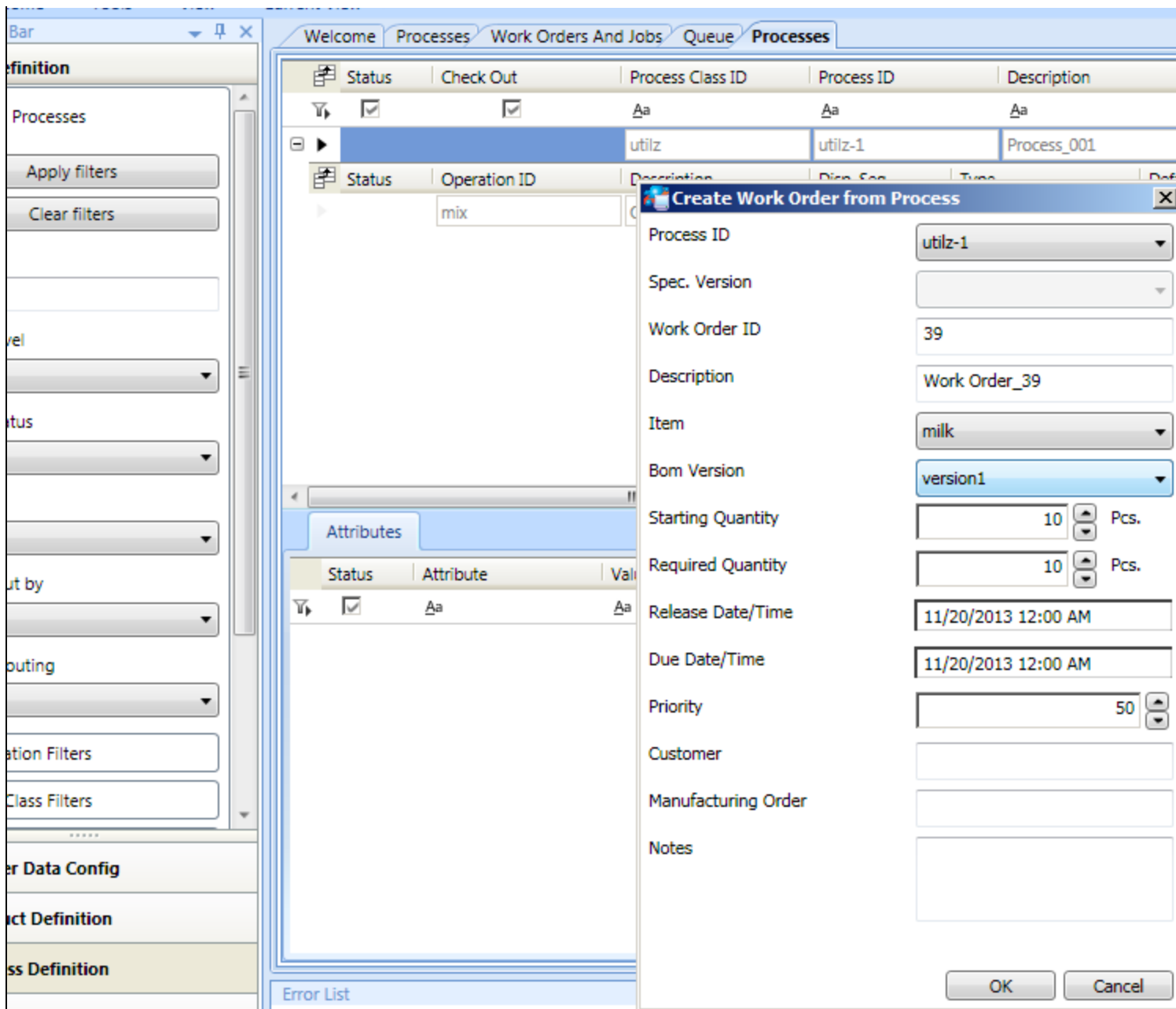


FIGURE 32: CREATE WORK ORDER FROM PROCESS

6. Start Operator and login as **Oper_1**, then start the Work order.

Create Work Order from Process

Process ID: utilz-1

Spec. Version:

Work Order ID: 39

Description: Work Order_39

Item: milk

Bom Version: version1

Starting Quantity: 10 Pcs.

Required Quantity: 10 Pcs.

Release Date/Time: 11/20/2013 12:00 AM

Due Date/Time: 11/20/2013 12:00 AM

Priority: 50

Customer:

Manufacturing Order:

Notes:

OK Cancel

FIGURE 33: LOGIN AND START THE WORK ORDER

7. Click the **Steps** Tab and login to the Step.

Job Summary: Mixer1

Current User: oper_1

WO ID 42	Oper ID mix	Part Number milk	Start Qty 10	Reqd Qty 10
Job State RUNNING	Job Desc Operation_001	Part Desc milk	Batch Size 1	Good Qty 0
Machine Status RUNNING	WO Desc Work Order_42	Reqd By 11/20/13 12:00:00 AM	Estimated Finish	Reject Qty 0

Notes

Route | Work Queue | Production | BOM | Genealogy | Util/OEE | Folders | **Steps** | Specs | Data Log | Audit | Inventory

Operator: oper_1 | Serial Number: - | Step Group: - All -

Step No	Step Desc	Grp Seq	Seq	Document	View	Data	Start	Finish	State
1	welding	1	1						READY

Step Desc: welding

Data Edit

Status: READY | Action: Normal | Start: | Cert Name: Welding

Required for Step Completion: | Finish: |

Documents: | Form Name: |

FIGURE 34: STEPS TAB

You will see you can't login due Oper_1 level is not correct.

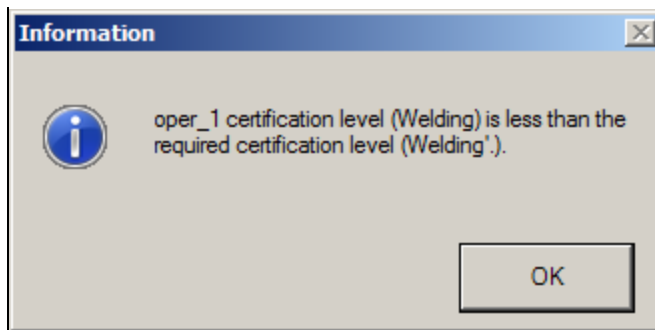


FIGURE 35: NOT ENOUGH PERMISSIONS

8. Change the user like we did for the Audit section and login as Super_1 and start the step and it will go to running.

Job Summary: Mixer1

Current User: Super_1

WO ID 42	Oper ID mix	Part Number milk	Start 10
Job State RUNNING	Job Desc Operation_001	Part Desc milk	Batch 1
Machine Status RUNNING	WO Desc Work Order_42	Reqd By 11/20/13 12:00:00 AM	Estim

Notes

Route
Work Queue
Production
BOM
Genealogy
Util/OEE
Folders
Steps
Specs
Data Log
Audit
Inventory

Operator

Serial Number

Step No	Step Desc	Grp Seq	Seq.	Document	View	Data
1	welding	1	1			

Step Desc. welding			
Data Edit			
Status RUNNING	Action Normal	Start 11/19/13 2:31:43 PM	Cert Name Welding
Required for Step Completion Operator accept		Finish	

FIGURE 36: CHANGE THE USER AND SHOW RUNNING

9. Log off and log back on as Oper_1 and now you can complete the step and jobs.

This feature gives you the ability to limit users. For more detail on MES security please see the MES User Guide.

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