



## QualityAssuranceModule

### Use Case 2: Check if flow elements and control valves are associated to pipe runs

#### CHALLENGE

It is always a challenge to keep track if all inline elements (like flow elements and control valves) have a correct tag number and if they are associated to a pipe run.

#### WORKFLOW STEPS

1. Extract source data from SmartPlant Instrumentation using **SPI ReportAdapter**

Tag Number	Service	Instrument Type	Manufacturer	Model	Line Number
101-FE -125		FE			
101-FE -100	Feed from V-8	FE	FISHER-PORTER		4"-P-1501-11H
101-FV -100	Feed from V-8	FV	FOXBORO		4"-P-1501-11H
101-FE -102	Feed from C-1	FE			4"-P-1502-11H
101-FE -1234/A		FE			
101-FE -1446		FE			
101-FE -201	Stripping Steam to F-102	FE			1.5"-S-2001-4C
101-FE -2212	Feed to B-101 Pass A	FE			3"-FO-1212-4C
101-FV -2212	Feed to B-101 Pass A	FV	FOXBORO		3"-FO-1212-4C
101-FE -2213	Feed to B-101 Pass B	FE			3"-FO-1213-4C
101-FV -2213	Feed to B-101 Pass B	FV	MASONELAN		3"-FO-1213-4C
101-FE -2214	Feed to B-101 Pass C	FE			3"-FO-1212-4C
101-FV -2214	Feed to B-101 Pass C	FV	MASONELAN		3"-FO-1212-4C
101-FE -905	DCS closed loop	FE			
101-FV -905	DCS closed loop	FV			

2. View data in the **QualityAssuranceModule** and apply the rules to check the inline elements:  
 Rule 1: "Tag is not allowed to contain a dash followed by one or more blanks"  
 Rule 2: "If Tag starts with 'FE' or 'FV' then the LineNumber should not be Null"

Instrument Name	Loop_Loop Service	Instrument Function Type	Instrument Manufa...	Line_Line Number
101-FE -125		FE		
101-FE -102	Feed from C-1	FE		4"-P-1502-11H
101-FE -1234/A		FE		
101-FE -1446		FE		
101-FE -201	Stripping Steam to F-102	FE		1.5"-S-2001-4C
101-FE -2212	Feed to B-101 Pass A	FE		3"-FO-1212-4C
101-FE -2213	Feed to B-101 Pass B	FE		3"-FO-1213-4C
101-FE -2214	Feed to B-101 Pass C	FE		3"-FO-1212-4C
101-FE -905	DCS closed loop	FE		

3. Create Excel report from the **QualityAssuranceModule**

#### SOLUTION

- The **QualityAssuranceModule** makes it easy to identify the tags which are not compliant with the naming convention or tags that have no association to for instance pipe runs.
- This type of report can be handed out to the contractors (or to other in-house departments) with the goal to have the data reworked so that it complies with the rules

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