SmartPlant® Instrumentation

External Editors for Specs and Process Data

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Implementation Team

By John Dressel

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INTERGRAPH

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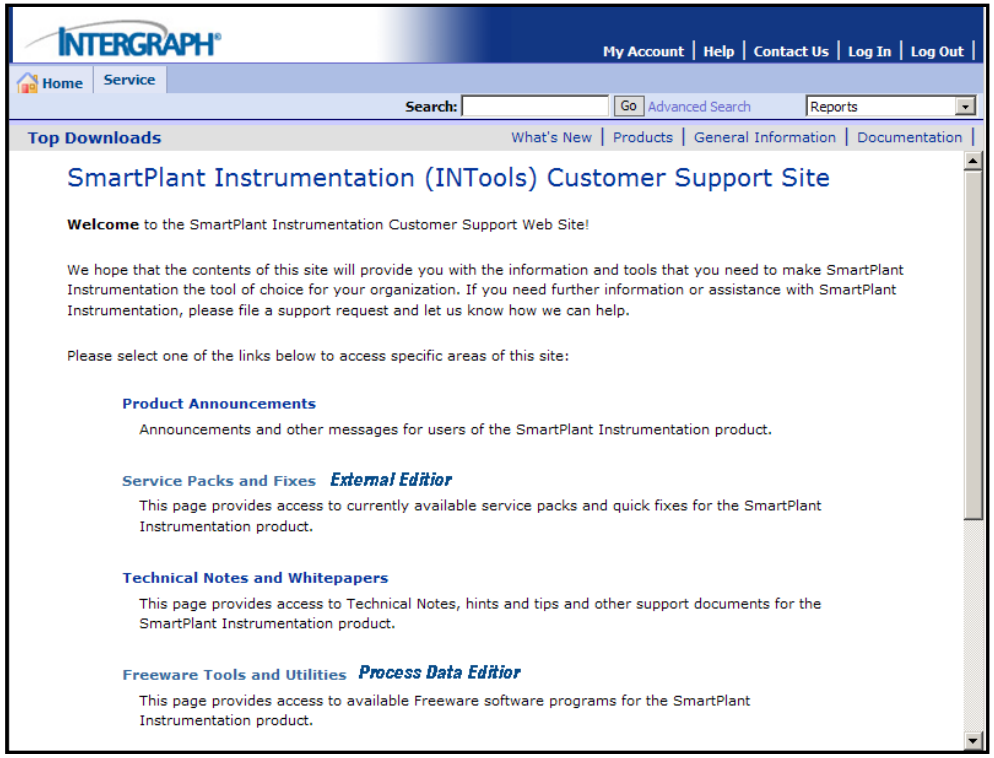
SPI External Editors

- SmartPlant Instrumentation External Editors for Specs and Process Data may be downloaded from the SmartPlant Instrumentation (INtools) Customer Support Website.



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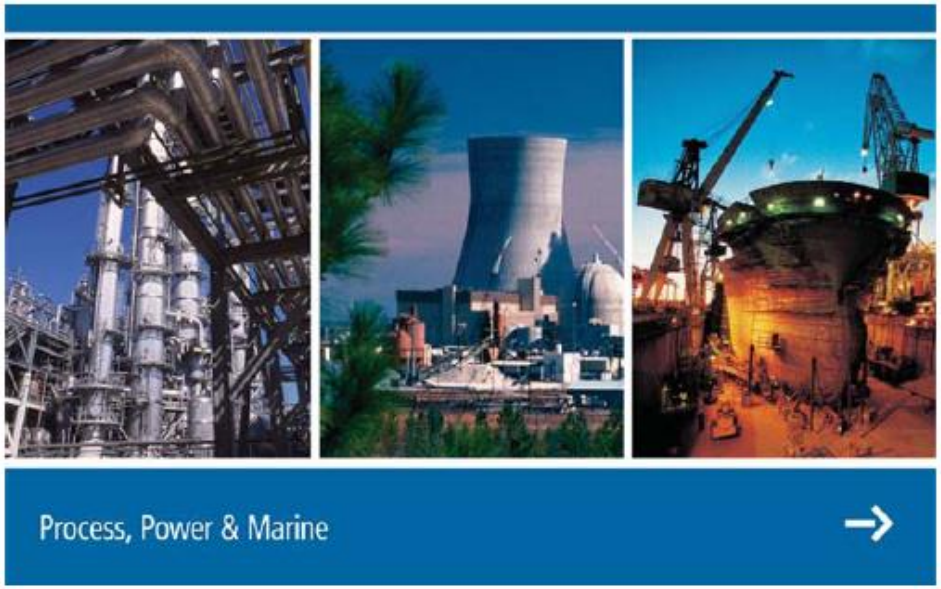
SPI External Editor

SmartPlant Instrumentation External Editor



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SPI External Editor

- SmartPlant Instrumentation External Editor enables an external party (Vendor, contractor, engineering company, and so forth) to modify specifications outside of SmartPlant Instrumentation.
- The External Editor allows the user to open specification sheets that have been created in SPI and modify them as needed.
- The modified specification sheets can then be import back into SmartPlant Instrumentation for further processing.
- The External Editor supports .psr and .isf file formats.
- Using the External Editor, users may Edit a Single-Tag Specification or Edit a Multi-Tag Specification
- The External Editor is a freeware program distributed by Intergraph

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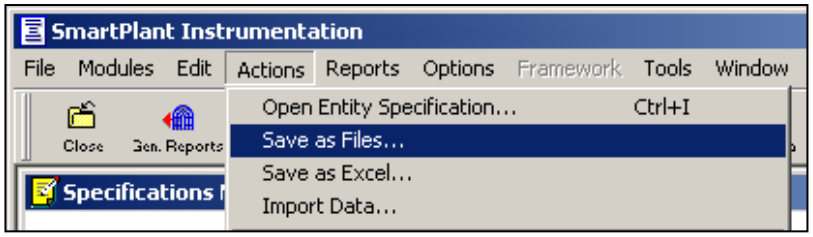
SPI Side of External Editor

- Use of the External Editor starts within SPI
- All Specs that need to be edited in the External Editor need to originate in SPI
- Identify the Tag numbers that you wish to Edit externally and create a Spec sheet for each one
  - You may also create a multi-item spec sheet
- The Tag number, Title block and Revision information cannot be edited with the External editor, so this data is the responsibility of the originator.



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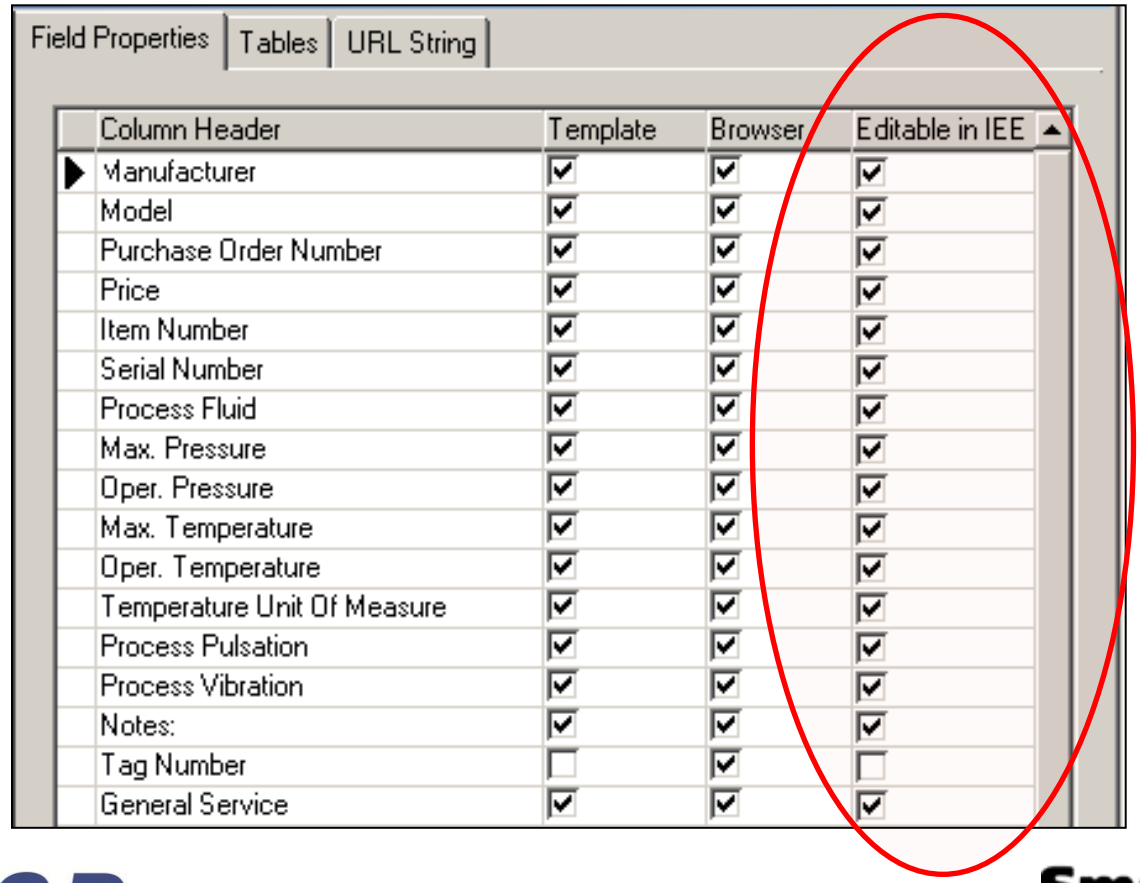
SPI External Editor

- **Be sure to select which fields you wish to edit in the External Editor in the Spec Data Dictionary**



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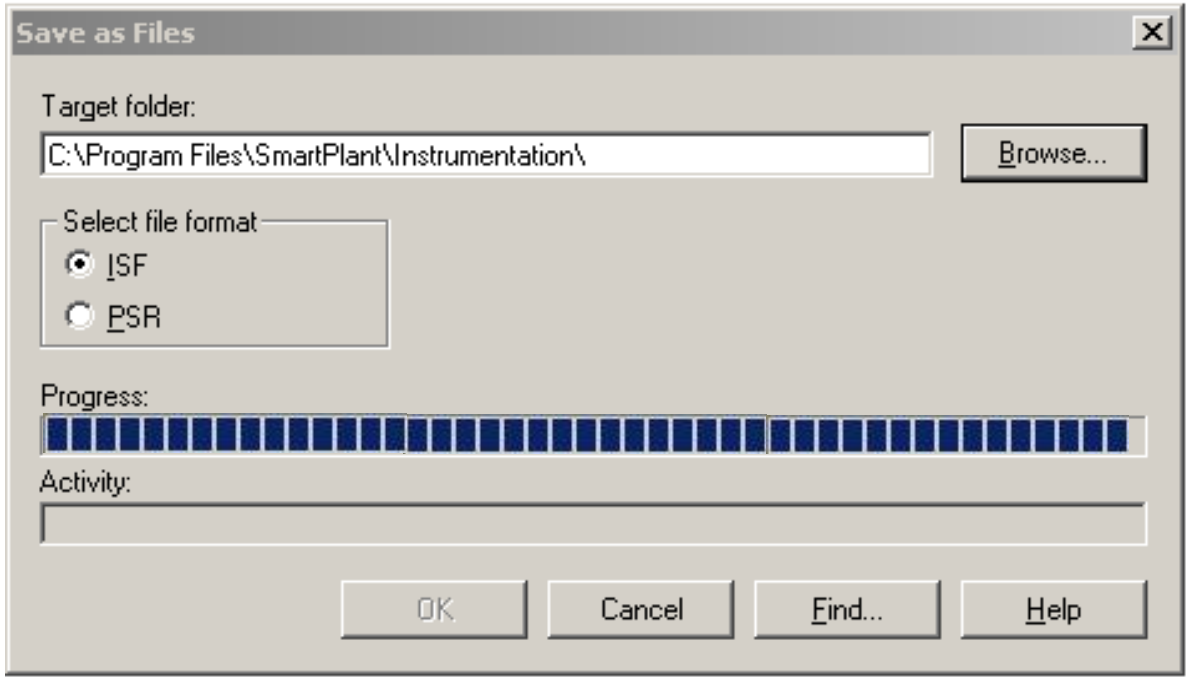
SPI External Editor

- **In the Spec Module select “Actions / Save as Files” then “Find” to select the Specs you wish to export**
- **The ISF or PDF files will be placed in your SPI destination directory.**



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Using SPI External Editor

- **Edit a Single-Tag Specification**
  1. On the **File** menu, click **Open**.
  2. From the **Files of type** list, do one of the following:
     - **Select Spec files (*.isf).**
     - **Select .psr files.**
  3. Navigate to the SmartPlant Instrumentation specification file that you want to edit, and click **Open**.
  4. Click inside each field that you want to edit and do one of the following, as available:
     - **Type a new entry, or edit the existing data.**
     - **Select values from available lists.**
     - **If necessary, you can add entries to the Manufacturers list and to the Model list, and include these in your specification.**

Using SPI External Editor

- **Edit a Single-Tag Specification**

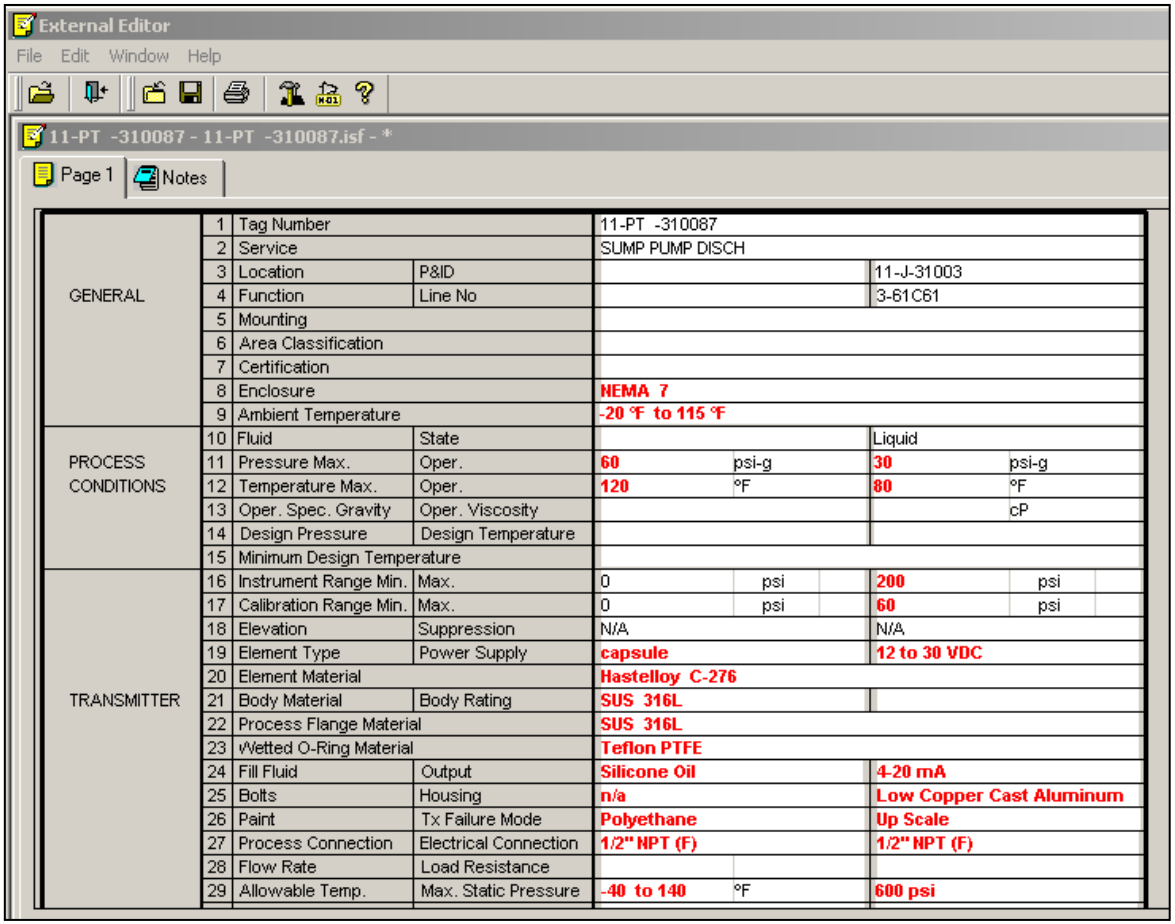
  5. If you click the unit of measure fields, select values from the **Select Unit of Measure** dialog box that opens.
  6. On the **File** menu, do one of the following:
     - Click **Save**. This option is available only if you loaded an .isf file.
     - Click **Save As**, and in the dialog box that opens, change the existing file name or type a new name, and then click **Save**.

- **Notes**

  – The tag number field is never enabled for editing in External Editor.
  – If you are editing a file with the older .psr suffix, the software automatically converts it to .isf format upon saving.

Using SPI External Editor

- **Edit a Single-Tag Specification**



GENERAL	1	Tag Number		11-PT -310087			
	2	Service		SUMP PUMP DISCH			
	3	Location	P&ID			11-J-31003	
	4	Function	Line No			3-61C61	
	5	Mounting					
	6	Area Classification					
	7	Certification					
	8	Enclosure		NEMA 7			
	9	Ambient Temperature		-20 °F to 115 °F			
PROCESS CONDITIONS	10	Fluid	State			Liquid	
	11	Pressure Max.	Oper.	60	psi-g	30	psi-g
	12	Temperature Max.	Oper.	120	°F	80	°F
	13	Oper. Spec. Gravity	Oper. Viscosity				cP
	14	Design Pressure	Design Temperature				
	15	Minimum Design Temperature					
TRANSMITTER	16	Instrument Range Min.	Max.	0	psi	200	psi
	17	Calibration Range Min.	Max.	0	psi	60	psi
	18	Elevation	Suppression	N/A		N/A	
	19	Element Type	Power Supply	capsule		12 to 30 VDC	
	20	Element Material		Hastelloy C-276			
	21	Body Material	Body Rating	SUS 316L			
	22	Process Flange Material		SUS 316L			
	23	Wetted O-Ring Material		Teflon PTFE			
	24	Fill Fluid	Output	Silicone Oil		4-20 mA	
	25	Bolts	Housing	n/a		Low Copper Cast Aluminum	
	26	Paint	Tx Failure Mode	Polyethane		Up Scale	
	27	Process Connection	Electrical Connection	1/2" NPT (F)		1/2" NPT (F)	
	28	Flow Rate	Load Resistance				
	29	Allowable Temp.	Max. Static Pressure	-40 to 140	°F	600 psi	

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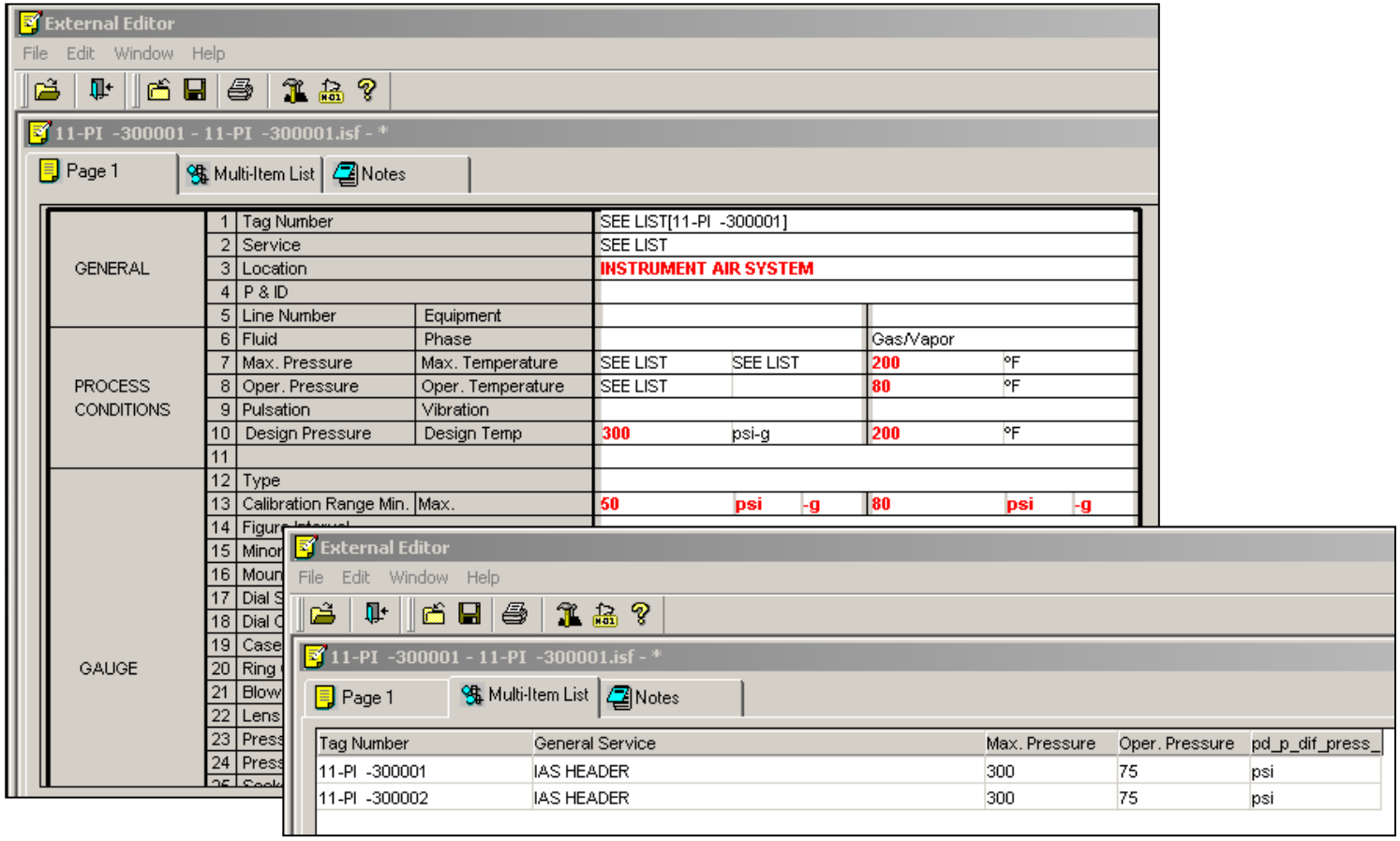
Using SPI External Editor

- **Edit a Multi-Tag Specification**



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Using SPI External Editor

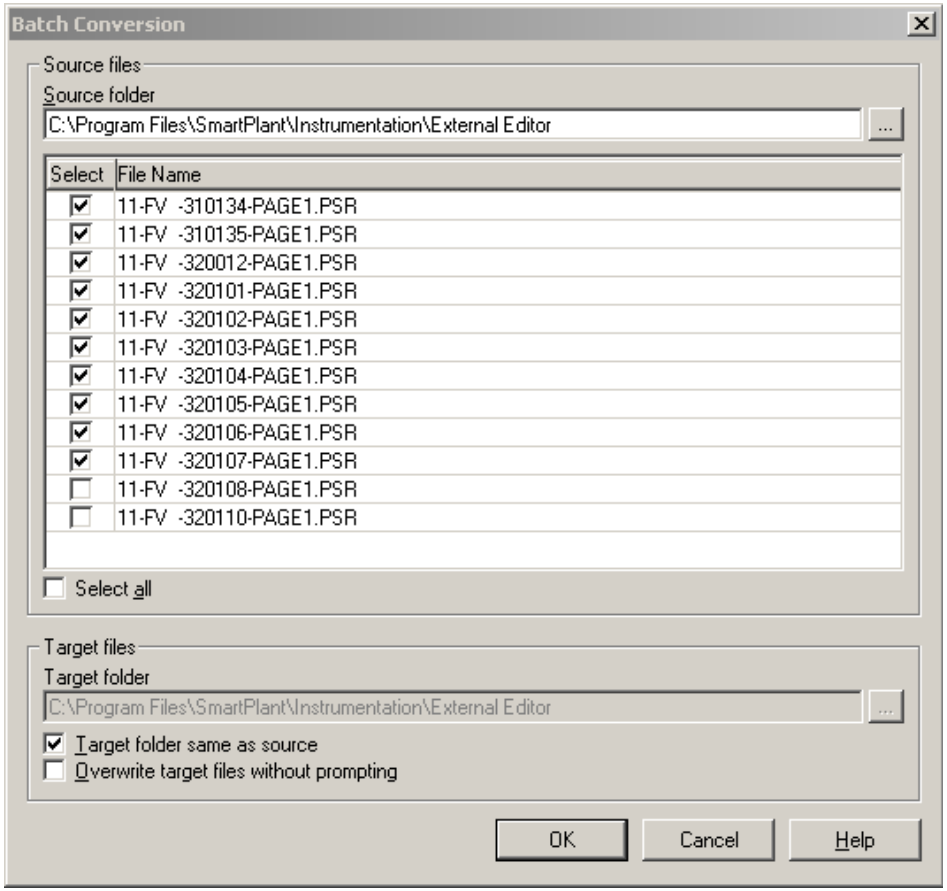
- **Manufacturer and Model Tables**
  - **You can add and edit manufacturers and models to the Instrument Manufacturer and Instrument Model supporting tables.**
  - **These manufacturers and models are available when you edit specifications in External Editor.**
  - **When you open and then save an externally edited specification file in SmartPlant Instrumentation, the new manufacturers and models are added to the relevant supporting tables within SmartPlant Instrumentation.**
  - **To manage manufacturer and model tables, use the following procedures:**
    - Add Manufacturers to the Instrument Manufacturer Table
    - Edit Manufacturers in the Instrument Manufacturer Table
    - Delete Manufacturers in the Instrument Manufacturer Table
    - Add Models to an Instrument Model Table
    - Edit Models in an Instrument Model Table
    - Delete Models from an Instrument Model Table

Using SPI External Editor

- **Printing from External Editor**
- A number of options are available for printing specification sheets using External Editor.
  - **Print Individual Specification Sheets**
    - You can print specification sheets from External Editor one at a time.
      - On the **File** menu, click **Print**
  - **Print Specification Sheets Without Notes**
    - You can print specification sheets without printing the accompanying note pages.
    - 1. On the **File** menu, click **Preferences**.
    - 2. On the **General** tab, clear **Print ISF note page**.
    - 3. Do one of the following:
      - Print a specification from External Editor.

Using SPI External Editor

- **Convert a Batch of Specification Files PSR to ISF Format**



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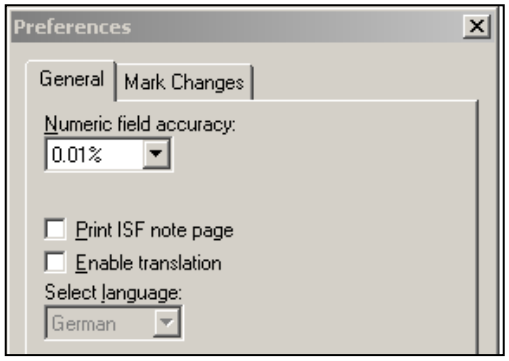
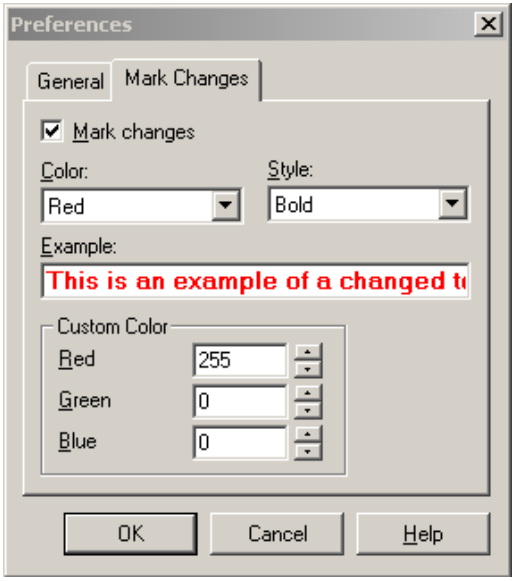
Using SPI External Editor





- **Preferences Dialog Box**
  - **General Tab**
    - **Numeric field accuracy**
    - **Print ISF note page**
    - **Enable translation & Select language**
  - **Mark Changes Tab**
    - **Mark changes**
    - **Color**
    - **Style - Regular**, **Italic**, **Bold**, or **Bold Italic**
    - **Example**
    - **Custom color**

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Using SPI External Editor

- **External Editor Issues**
  - The vendor spec sheets must be initially created by the GEC for export to the "External Editor Folder" and then to the vendor.
  - The External Editor software and user interface is not very user friendly requiring vendors to spend a lot of time populating the data onto each spec form.
  - The export and import of over Citrix is very time consuming usually requiring the manual delivery of files using CD or FTP transfer.
  - Revision control is handled manually by modifying the file names of the .isf files.
  - The use of the External Editor adds cost to the vendor that may not be included in their estimate or bid.
  - Printing of Spec Sheets is one at a time from within External Editor

Using SPI External Editor

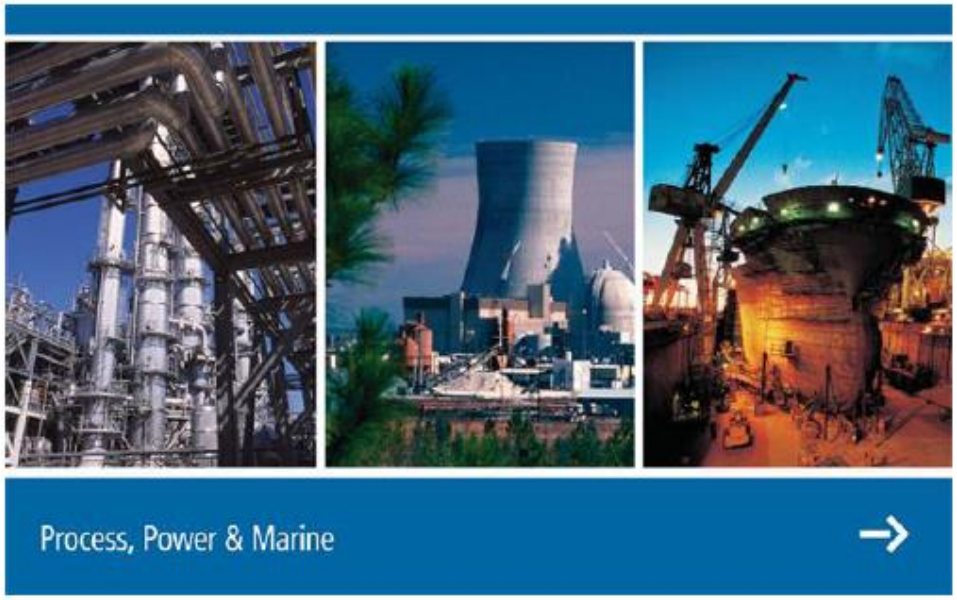
- **External Editor Aids**
  - When first distributing the "External Editor" software to a vendor, include a "readme.txt" file with installation and user instructions.
  - Give the vendor specific times as to when the files are to be returned to meet the project schedule.
  - Since vendor spec sheets can be repetitive, allow the vendor to populate one spec form and list the Tags that it applies to in notes. This will facilitate the data loading and import into SmartPlant Instrumentation.
  - Carefully select the fields in the Spec Module Data Dictionary (Spec DD) that will import into the SmartPlant Instrumentation database.
  - Return a copy of the completed SmartPlant Instrumentation spec forms to the vendor for approval before final issue.

SPI Side of External Editor

- Use of the External Editor ends within SPI
- Specs that are edited in the External Editor need to imported back into SPI
- Specs may be imported to different Tag Numbers as long as the Spec Form is the same
- The Tag number, Title block and Revision information cannot be edited with the External editor, so this data must be edited in SPI
- Use caution when importing data and check the results carefully

SPI Process Data Editor

SmartPlant Instrumentation Process Data Editor



A SPLM connection is required for the Process Data Editor

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SPI Process Data Editor

- SmartPlant Instrumentation Process Data Editor enables an external party (Vendor, contractor, engineering company, and so forth) to modify Process Data outside of SmartPlant Instrumentation.
- The Process Data Editor allows the user to open Process Data that have been created in SPI and modify them as needed.
- The modified Process Data can then be imported back into SmartPlant Instrumentation for further processing.
- The Process Data Editor supports .ipd file formats.
- Process Data exported from SPI in .ipd format can contain process data from more than one line or instrument.
- The Process Data Editor does not support process data sheets for instruments that belong to the process function **General** or **Analyzer**.

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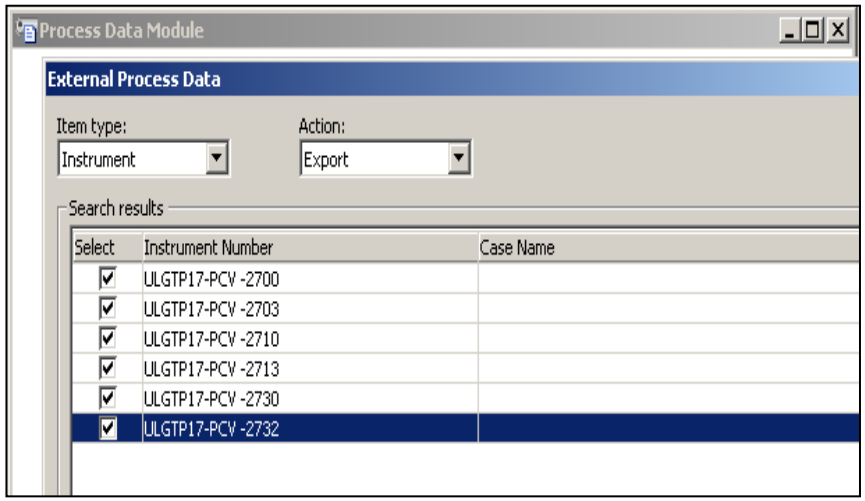
SPI Side of Process Data Editor

- Use of the Process Data Editor starts within SPI
- All Process Data that need to be edited in the Process Data Editor needs to originate in SPI
- Identify the Tag numbers that you wish to Export from the Actions – External Process Data
- This action will create a (.ipd) data file.



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Process Data Editor

- **Process Data Editor Window Toolbar**

Opens a process data sheet for editing.

Exits Process Data Editor.

Closes the active file.

Saves the active file, replacing the previously saved version of the same file name.

Prints the current (.ipd) file. Note that the software prints the contents of the **Details** tab only for the active item.

Displays context-sensitive help.

- **The Preferences Dialog Box has the same function as the External Editor**
- **The Print Icon will print a Detail Process Data Report**

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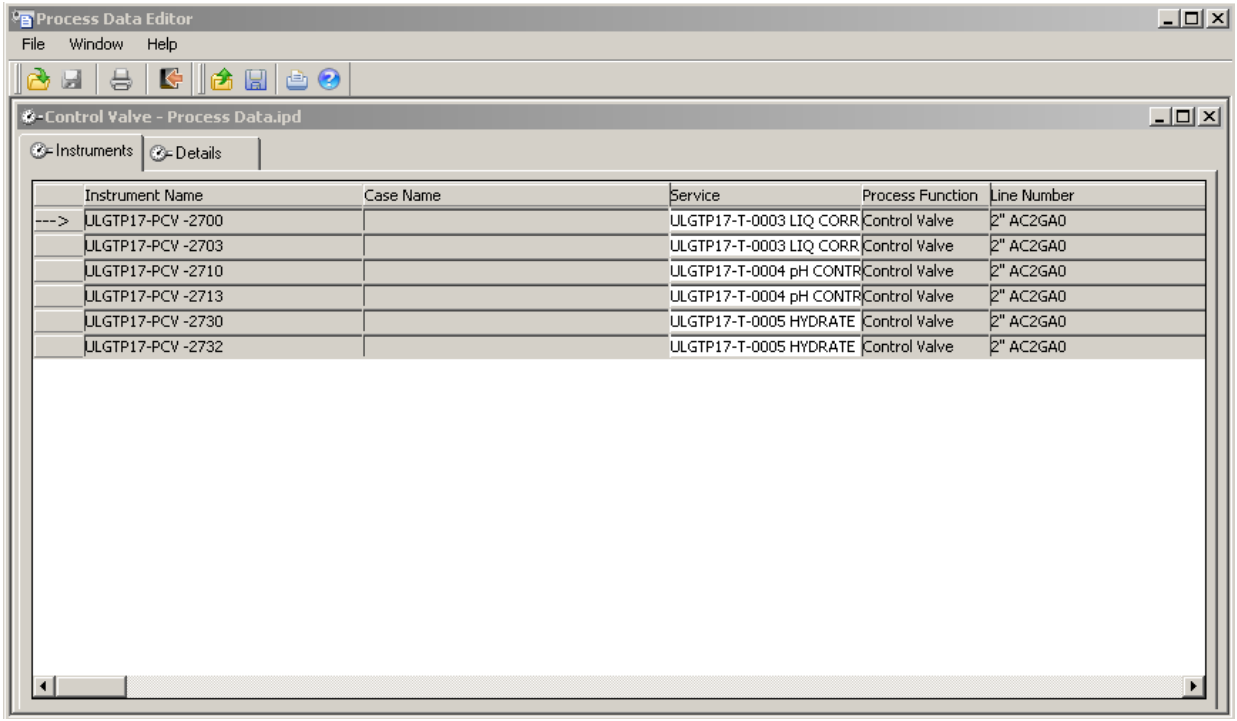
Process Data Editor

- The Instrument tab displays all of the Tags in the .ipd File
- The Editing area displays the data for editing
- View only data shows as a shaded background



	Instrument Name	Case Name	Service	Process Function	Line Number
--->	ULGTP17-PCV -2700		ULGTP17-T-0003 LIQ CORR	Control Valve	2" AC2GA0
	ULGTP17-PCV -2703		ULGTP17-T-0003 LIQ CORR	Control Valve	2" AC2GA0
	ULGTP17-PCV -2710		ULGTP17-T-0004 pH CONTR	Control Valve	2" AC2GA0
	ULGTP17-PCV -2713		ULGTP17-T-0004 pH CONTR	Control Valve	2" AC2GA0
	ULGTP17-PCV -2730		ULGTP17-T-0005 HYDRATE	Control Valve	2" AC2GA0
	ULGTP17-PCV -2732		ULGTP17-T-0005 HYDRATE	Control Valve	2" AC2GA0

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Process Data Editor

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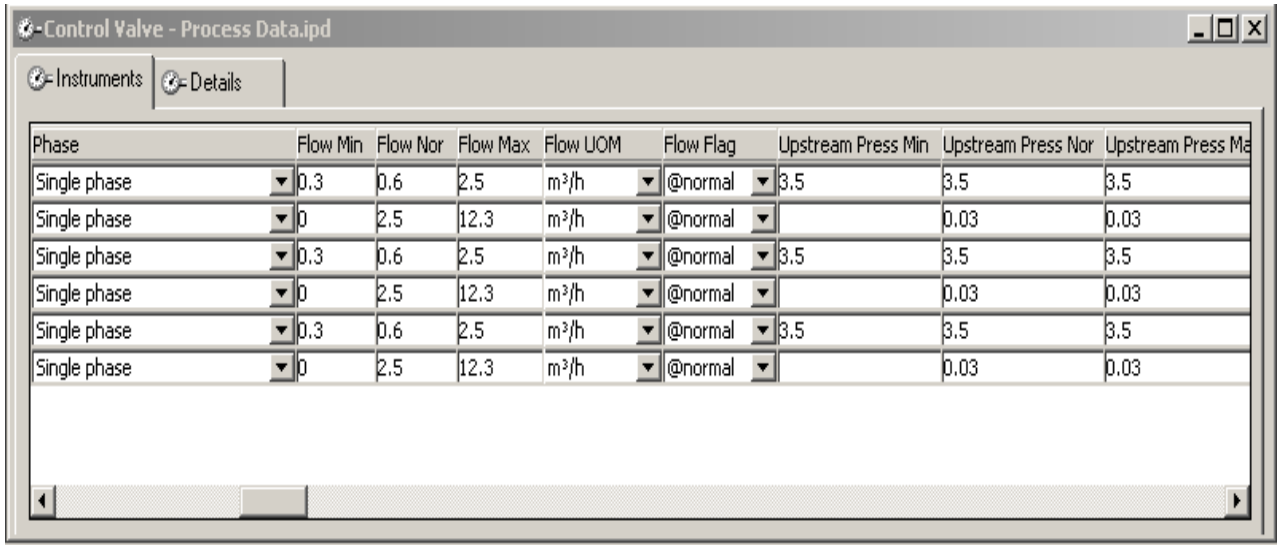

Phase	Flow Min	Flow Nor	Flow Max	Flow UOM	Flow Flag	Upstream Press Min	Upstream Press Nor	Upstream Press Ma
Single phase	0.3	0.6	2.5	m³/h	@normal	3.5	3.5	3.5
Single phase	0	2.5	12.3	m³/h	@normal		0.03	0.03
Single phase	0.3	0.6	2.5	m³/h	@normal	3.5	3.5	3.5
Single phase	0	2.5	12.3	m³/h	@normal		0.03	0.03
Single phase	0.3	0.6	2.5	m³/h	@normal	3.5	3.5	3.5
Single phase	0	2.5	12.3	m³/h	@normal		0.03	0.03

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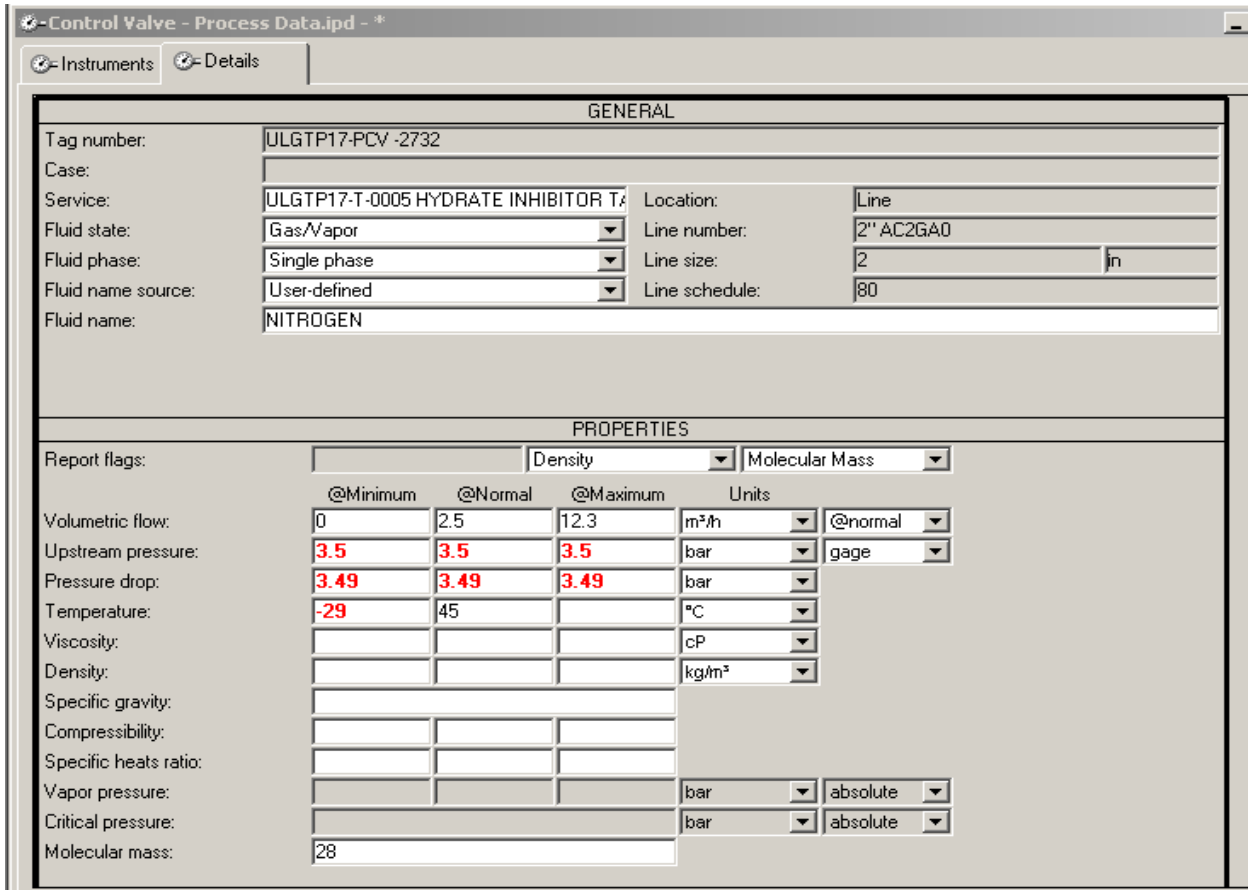
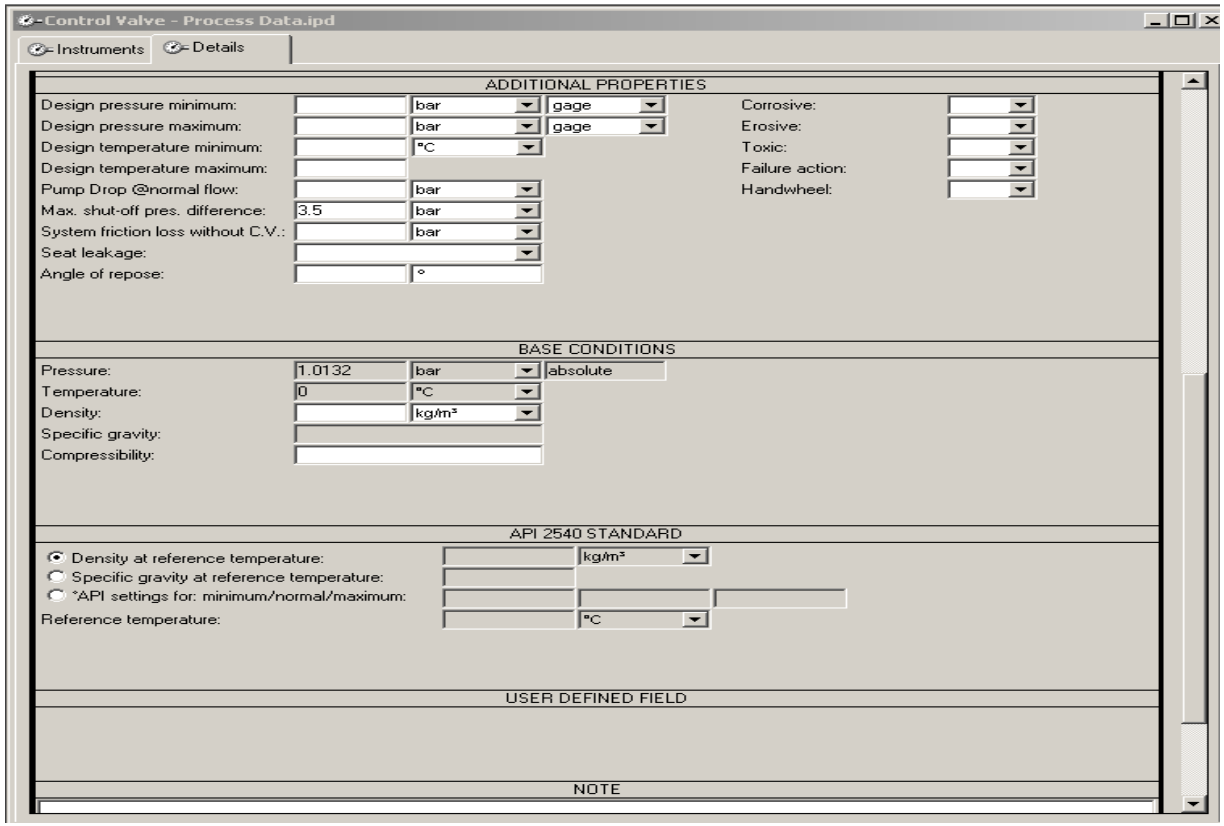
Process Data Editor

- **The Detail tab displays a data sheet view of the selected Tag**



Process Data Editor

- **The Detail tab displays a data sheet view of the selected Tag**



SPI Process Data Editor

- Use of the Process Data Editor ends within SPI
- Data that are edited in the Process Data Editor need to imported back into SPI
- Imported Process Data can be only be imported to the original Tag Number
- The Tag number, Title block and Revision information cannot be edited with the Process Data Editor, so this data must be edited in SPI
- Use caution when importing data and check the results carefully especially units of measure
- Since the editing capabilities are limited and the Process Data Editor requires SPLM, I see no advantage to using it over the Process Module in SPI

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SPI External Editors

- Questions?

John Dressel, FLUOR

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