

INTERGRAPH AT HxGN LIVE

SPI Workshare: Documenting Challenges and Solutions
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Business Problem

- Documenting changes on datasheets generated using Workshare resources

Solution

- SPI has multiple “Mark Change” methods built into the software. We will explore the different methods.

Benefits

- Time saving & more efficient than manually checking each datasheet for changes

Anticipated Long-Term Benefits

- Completion of the Project on time/under budget

Future Plans/Strategy or Summary Statement

- All future Workshare projects will use established “Best Practices” document change methods.

Topics to Be Discussed-

- Workshare Challenges
 1. Language
 2. Time Difference
 3. Cultural Differences
 4. Internet Connections
 5. Communication

- SPI Documenting Change Methods (Pros/Cons of each method)
 1. Archiving
 2. Mark Changes
 3. Document Binder
 4. Other Methods

Workshare Challenges

Workshare - an arrangement where multiple sites or locations divide the project design responsibilities. Workshare locations can be across town, across the country, or across the globe.



Language differences can be a barrier for any project. Communicating over vast distances and different time zones makes it even more difficult. Some linguistic barriers can be:

- Spanish to English
- English to British English
- Texas to Louisiana
- South Texas to East Texas



Global Workshare locations can create a problem in communicating effectively such as:

- Meeting times
- Days off do not coincide
- Holidays



What is acceptable practice in one culture may be offensive in another. Be sensitive to cultural differences in communication.

- Salutations
- Avoid using clichés and “Slang” terms



Citrix is the most common tool used to access the domain remotely. Some of the issues with Citrix have been:

- Login
- Printing
- Multiple domains on the same server
- Speed



Communication is the key to a successful project when using WorkShare. Address these issues prior to a project:

- Method of documenting changes
- Training on procedures
- Schedules



- Reduced cost
- Around-the-Clock schedule
- Different perspectives



Documenting Changes

There are multiple ways to document changes that are internal to SPI. We will explore the most common ones.

- Archiving or Compare to Revision
- Mark Changes
- Document Binder
- Other Methods

Documenting Changes-Archiving

Pre Set-up

To utilize the Archiving/Compare to Revision function the SPI Administrator must first activate the Specification Sheets Archiving option in the Report Manager. The user must save a copy with a Revision for the Comparison to work. Save to database, save to file and save to zip file are archiving options.

Report Management									
Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Segment Wiring Report	Wiring	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Single Speaker Report	Wiring	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Speaker Load Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Specification Sheets	Specifications	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Save as file	C:\Program Files\SmartPlant\Instrume
Standard Telecom Type List	Instrument Index	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Status History Report	Dimensional Data	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Strip With Adjacent Connections	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Strip Without Adjacent Connections (Style 1)	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Strip Without Adjacent Connections (Style 2)	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Summary of Outcome	Maintenance	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Summary of Repair Actions	Maintenance	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Summary of Repair Reasons Report	Maintenance	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	

Documenting Changes-Archiving

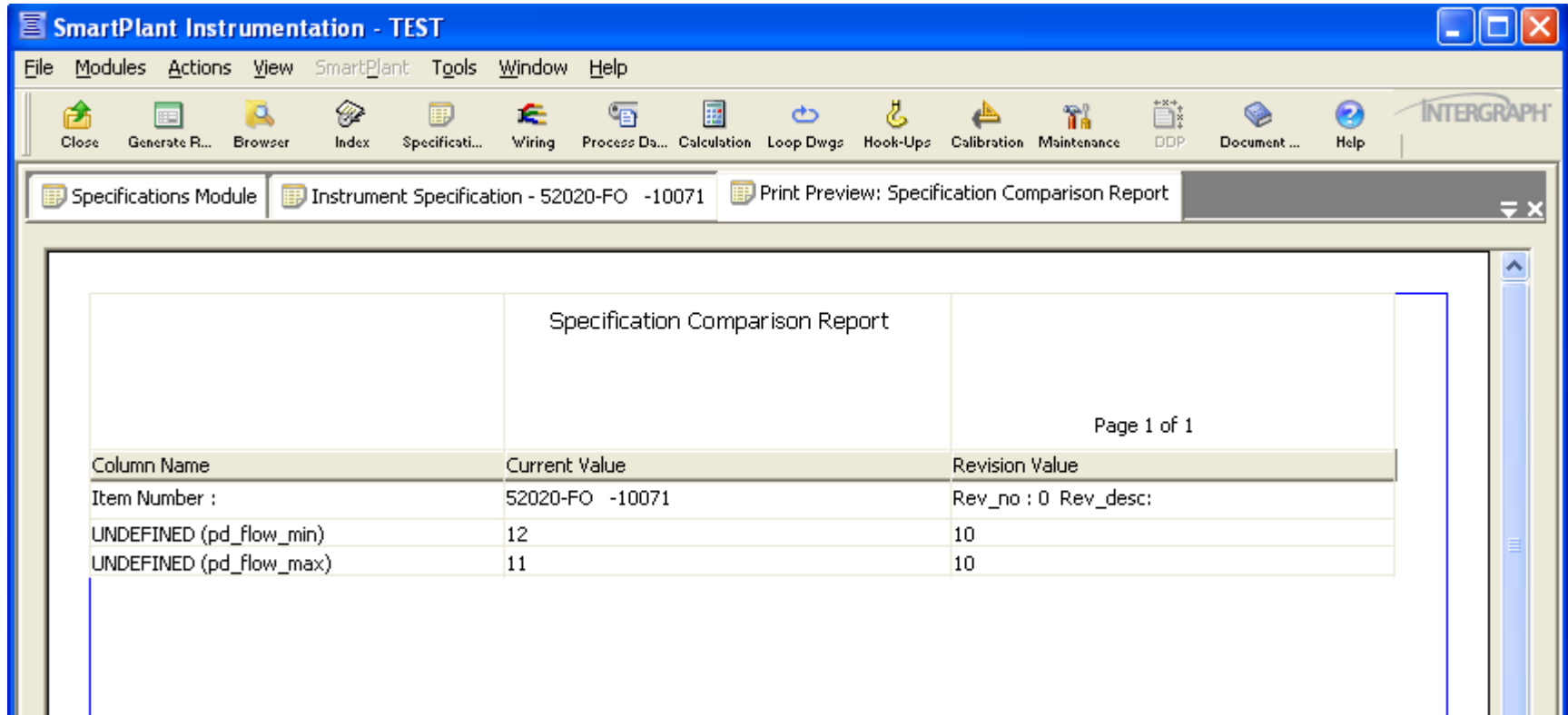
Once the initial revision is saved, subsequent copies can be saved and compared using the “Compare with Revision” function.

The screenshot shows the SmartPlant Instrumentation interface with the 'Actions' menu open. The 'Compare with Revision...' option is highlighted in blue. The background shows a process data table for '52020-FO -10071'.

Process Data...	Calculation	Loop Dwgs	Hook-Ups	Calibration	Maintenance	DDP
52020-FO -10071						
52020-FO -10071						
LP STEAM TO PV17.107						
52020-977-0523						
Field						
052306-03CJ278-12"2 1/2"HC						
12	in	Sch. XS	I.D. 11			
1-1/4Cr - 1/2Mo						
to						
11	lb/h	12	lb/h			
lb/h						
psi-g						
°F						
°F						
Molecular mass						
Viscosity at Operating Conditions						
cP						

Documenting Changes-Archiving

A Comparison report can be generated documenting the changes.



The screenshot shows the SmartPlant Instrumentation software interface. The title bar reads "SmartPlant Instrumentation - TEST". The menu bar includes File, Modules, Actions, View, SmartPlant, Tools, Window, and Help. The toolbar contains icons for Close, Generate R..., Browser, Index, Specificati..., Wiring, Process Da..., Calculation, Loop Dwgs, Hook-Ups, Calibration, Maintenance, DDP, Document ..., and Help. The window title bar shows "Specifications Module", "Instrument Specification - 52020-FO -10071", and "Print Preview: Specification Comparison Report". The main content area displays a "Specification Comparison Report" for "Page 1 of 1". The report includes a table with the following data:

Column Name	Current Value	Revision Value
Item Number :	52020-FO -10071	Rev_no : 0 Rev_desc:
UNDEFINED (pd_flow_min)	12	10
UNDEFINED (pd_flow_max)	11	10

Archiving Pros:



- Creates a comparison report
- Highlights the changed values
- Highlights printed copy

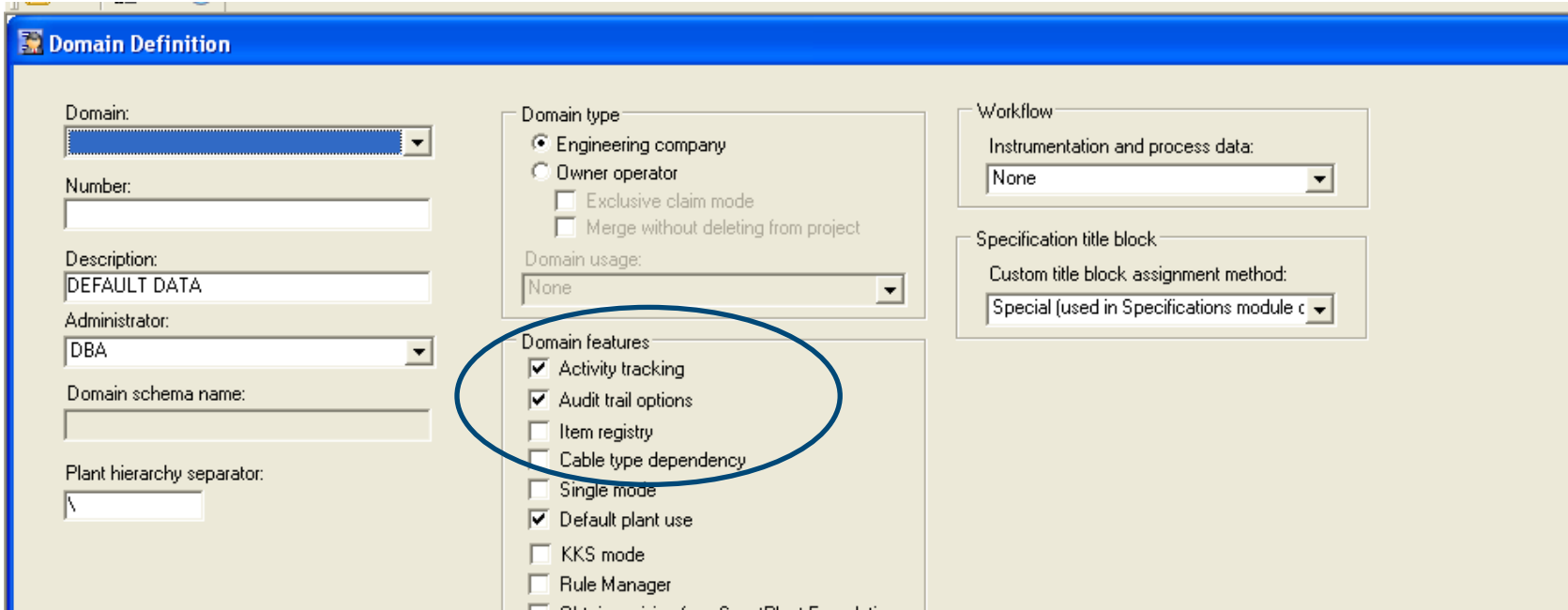
Archiving Cons:



- Must add a revision to the change to compare
- No bulk comparisons
- Database size if saving revs to database
- Disk management if saving to file

Pre Set-Up

History and Mark Changes Options are only available if the SPI Administrator activates the audit trail functionality in the domain definition.

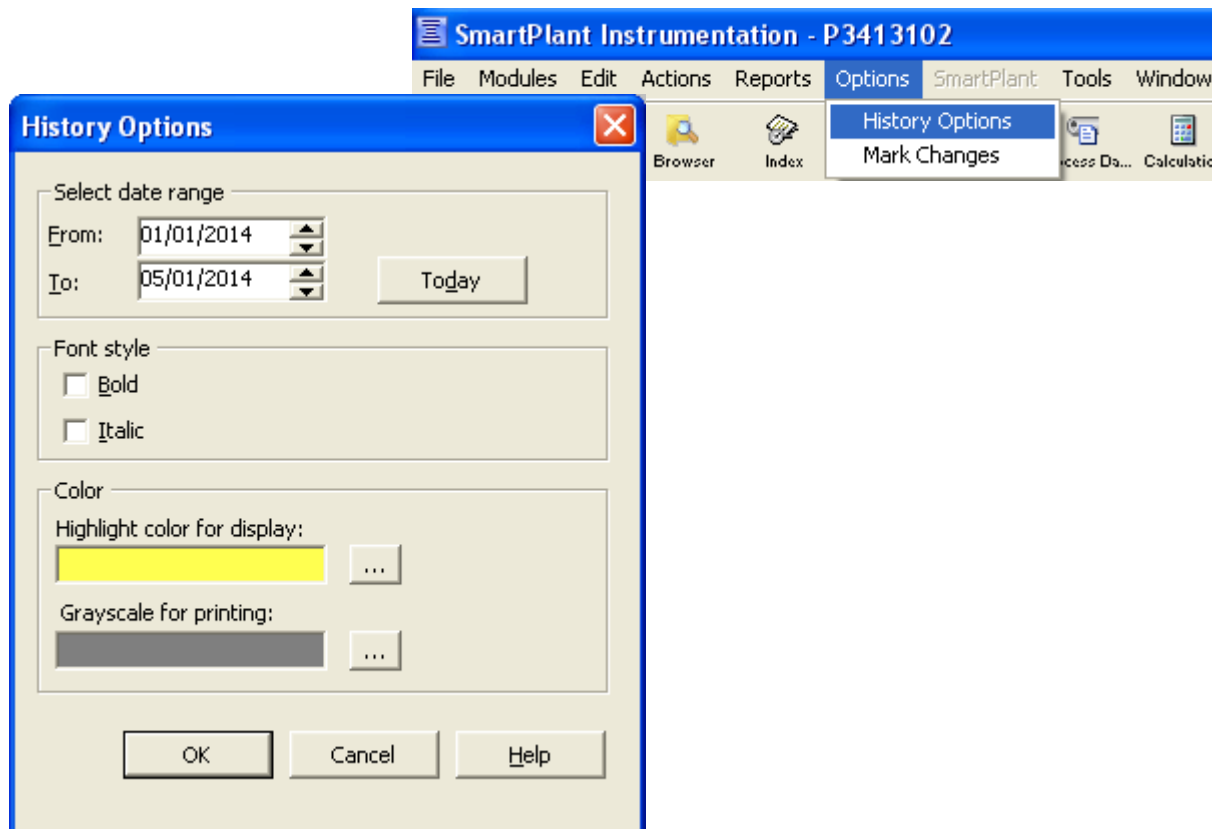


The screenshot shows the 'Domain Definition' configuration window. The 'Domain features' section is circled in blue, indicating the settings for audit trail functionality. The 'Domain type' is set to 'Engineering company'. The 'Domain usage' is set to 'None'. The 'Domain features' list includes:

- Activity tracking
- Audit trail options
- Item registry
- Cable type dependency
- Single mode
- Default plant use
- KKS mode
- Rule Manager
- Obtain revision from SmartPlant Foundation

Documenting Changes-Mark Changes

In the Spec Module open a spec and choose the “History Options” under the “Options” list. Choose the date range, font style and the colors for highlighting and printing.



Documenting Changes-Mark Changes

Choose the “Mark Changes” option. The Changes will be highlighted.

Instrumentation - P3413102

Actions Reports Options SmartPlant Tools Window Help

Browser Index History Options **Mark Changes** Access Da... Calculation Loop Dwgs Hook-Ups Calibration Maintenance DDP Document ...

Module Instrument Specification - TE 4491 B

Notes

1	Tag Number	TE 4491 B		
2	Service	2ND ACET CONV TO C-1701B		
3	Location			
4	Area Classification	P&ID No	51H-22	
5	Line No	Schedule	Equipment No	
6	Design Press Max Min	Design Temp Max Min		"F
7	Line Size / ID			
8	Fluid Name	Fluid State(s)	Liquid	
9	Pressure	Max	Oper	Min
10	Temperature	Max	Oper	Min
11	Flow	Max	Oper	Min
12	Velocity	Max	Oper	Min
13	Spec Grav @ Oper	Density @ Oper		lb/ft ³
14	Vibrations	Thermal Shock		
15	Erosion	Oxidizing Atmosphere		
16				
17	Type			
18	ISA Type	Insulators/Sheath Matl		
19	T/C	Sheath	Grounded	Ungrounded
20		Epoxy.		
21	Material	Resistance		
22	RTD			

Mark Changes Pros:



- Do not have to save as a revision
- Changes are set for entire session
- Highlights printed copy
- Can print multiple spec forms

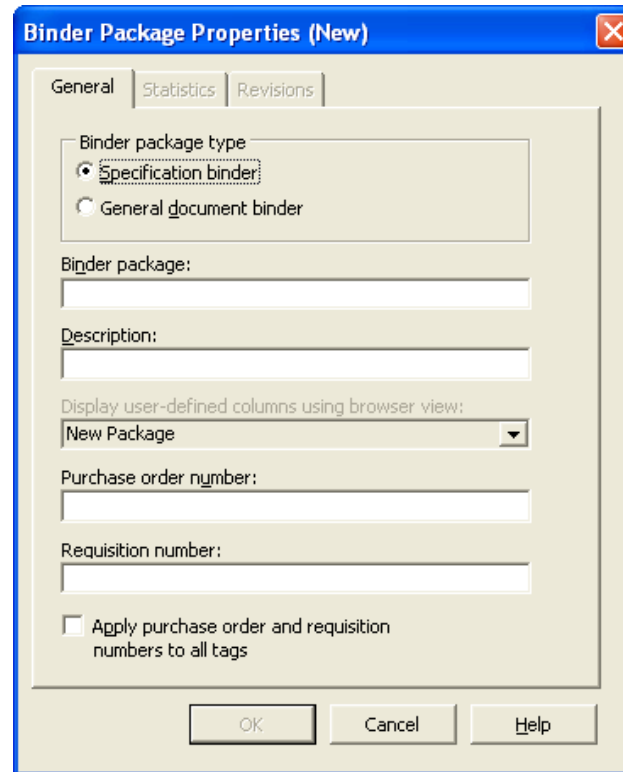
Mark Changes Cons:



- Defined window for changes
- Slows down the system
- .ini file gets stuck with the “Mark Change” setting on

Pre Set-Up

A new Specification Binder has to be set up prior to use. Spec sheets are then added to the binder for reporting.



Binder Package Properties (New)

General | Statistics | Revisions

Binder package type

Specification binder

General document binder

Binder package:

Description:

Display user-defined columns using browser view:
New Package

Purchase order number:

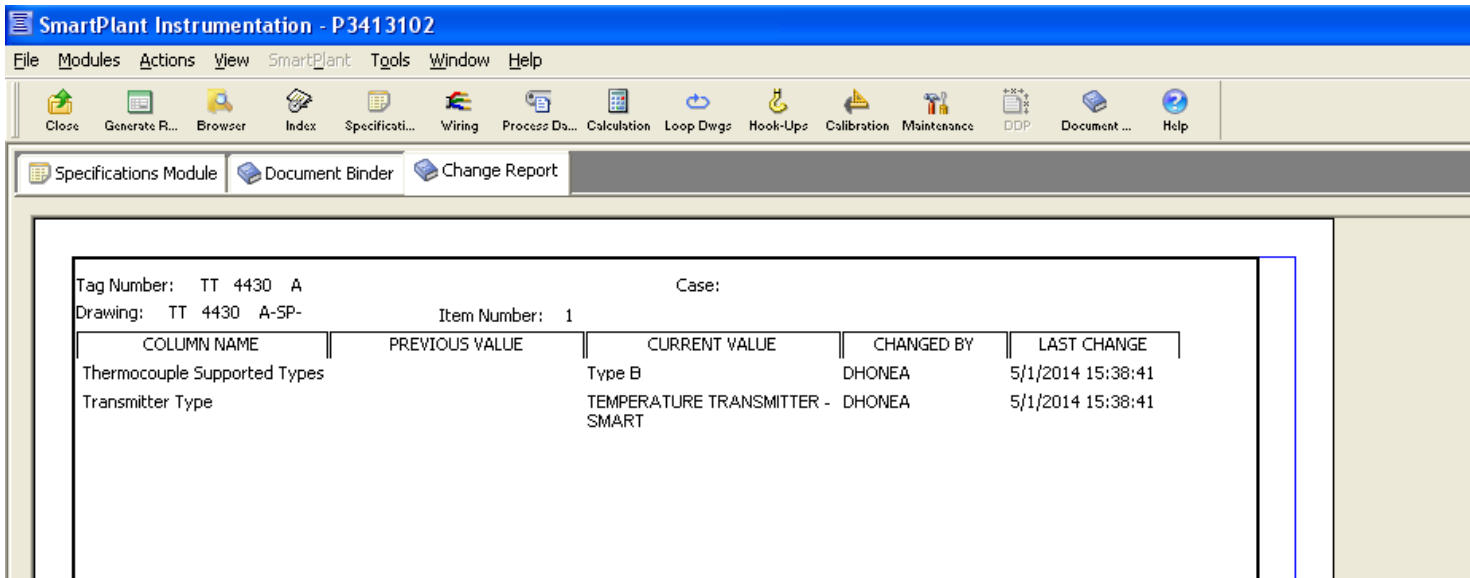
Requisition number:

Apply purchase order and requisition numbers to all tags

OK Cancel Help

Documenting Changes-Document Binder

Changes are documented through a change report in the document binder module.



The screenshot shows the SmartPlant Instrumentation software interface. The title bar reads "SmartPlant Instrumentation - P3413102". The menu bar includes File, Modules, Actions, View, SmartPlant, Tools, Window, and Help. The toolbar contains icons for Close, Generate R..., Browser, Index, Specificati..., Wiring, Process Da..., Calculation, Loop Dwgs, Hook-Ups, Calibration, Maintenance, DDP, Document ..., and Help. The "Document Binder" module is active, showing a "Change Report" for Tag Number TT 4430 A, Drawing TT 4430 A-SP-, and Item Number 1. The report includes a table with the following data:

COLUMN NAME	PREVIOUS VALUE	CURRENT VALUE	CHANGED BY	LAST CHANGE
Thermocouple Supported Types		Type B	DHONEA	5/1/2014 15:38:41
Transmitter Type		TEMPERATURE TRANSMITTER - SMART	DHONEA	5/1/2014 15:38:41

Document Changes Pros:



- Most efficient and cleanest option for documenting changes

Document Changes Cons:



- Pre Set-up is time consuming
- Specs are not editable outside the Document Binder
- Only works well at the end of a project

- External Comparisons
- Excel File Comparisons
- Manually checking

Using WorkShare Resources in SPI can be beneficial for companies to reduce costs. Good communication and proven “Best Practices” at the beginning of the project can result in accurate data that is on time and under budget

Some key points to remember:

- Good Communication
- Training
- Identify the best way to divide the work
- Decide on a plan

Where to Get More Information

<http://spi-Ituf.org/>

