Specification Sheet Recommendations for INTERGRAPH INtools

Instrumentation and Electrical Technical User Forum of Houston

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Introduction

- The Intergraph INtools software package has been adopted by many E&C (Engineering and Construction) and Operating Companies worldwide. There has been a need for a software package that standardizes specification sheets used to acquire instrumentation at a plant site, and then tracking changes for the life of the instrument. INtools provides this functionality. This write up is a review of the default Spec Sheets available from the Specification Sheet Module, and recommendations on how these default forms can be improved.

Committee General Recommendations

- Item 1 – Ensure that the “P&ID No.” field is on every Specification Form
- Item 2 – Ensure that Range Fields exist for Flow, Level and Pressure devices
- Item 3 – Ensure that all Title Blocks have By / Checked / Approved Signatures
- Item 4 – Ensure that “AIR_FAILURE_POSITION’ is added to forms.
  - Supplement the existing field called “PD_FAILURE_ACTION” – or –
  - Renaming the current field to “PD_EL_FAILURE_ACTION
- Item 5 – Ensure that all Switch devices have Set Point field with Engineering units
- Item 6 – Ensure that the following are included in the Specification Sheet Header:
  - Project Name Field
  - Client Project Number Field
  - Engineering Project Number Field
- Item 7 – Ensure that the Area Classification Field is on each Specification Sheet
- Item 8 – Ensure that Design Pressure and Temperature is on each Spec Sheet
- Item 9 – Ensure that UDF Fields are standardized across all Specification Forms
- Item 10 – Process Data Remarks are incorporated into the Spec Sheet Notes

Committee General Recommendations

- Item 11 – Ensure that all Transmitter Specification Sheets have an Output Signal Type Field consistently.
- Item 12 – Instruments that always require ‘Power’ should have it included on the Specification Sheet. This may need to be added to the Component Table with choices like “Loop Powered – 24VDC”, “120VAC – External”, “24VDC – External” etc. This field would be a good candidate to be an independent “Table” with USER defined lists as seen in the Index Module.
- Item 13 – Use of two (2) Specific Gravity (PD_General. PD_SPEC_GRAV_NOR and PD_General. PD_GAS_SG_AS_MM) fields makes creation and maintenance of the Spec Forms difficult. Even if it is kept, many ‘out-of-the-box’ Spec forms that should have it referenced even though the Process Engr Module uses it while the Spec doesn’t use it. Use of only PD_General. PD_SPEC_GRAV_NOR / Max / Min is preferred.

Committee Specific Recommendations

- Item 1 – Ensure that Engineering Units for Flow are changed to reflect industry standards to minimize confusion. The following are specific examples:
  - USGPM@FLOW not the current AUSGPM
  - USGPM@STANDARD not the current SUSGPM
  - USGPM@BASE not the current BUSGPM
- Item 2 – Control Valves Spec 1 does not have a Body Type of KNIFE GATE
- Item 3 – Relief Valve Spec 7 does not allow the Process Data Field “Lever” (YES / NO) to transfer to the datasheet Line 46. It would be best if line 46 could be modified to 2 fields. The ‘left’ field would be “Lever Required” and linked to the Process Data Field for a YES / NO answer. The ‘right’ field would be a Spec UDF and a pull down of “Plain” or “Packed”
- Item 4 - Spec Sheet 7 (Relief Valve) does not allow the Fire and Non-fire Sizing Data Basis to transfer properly. It only specifies what kind of Fire calculation was used (Gas Expansion or Blocked Flow).
- Item 5 – Spec Sheets (in general - on the Notes page) are severely restricted as to how many characters may be placed on the page. Increasing the limits in Infomaker seems to have no effect. Effectively the page can only be filled about 40 to 50 % when using complete sentences and paragraphs in the Notes page.

Committee Specific Recommendations

- Item 1 – Every Specification Sheet must have an option to produce an electronic file of that Spec Sheet.
  - ***Mandatory*** – Print to an EXCEL Spreadsheet
    - Note: This has been a part of current releases, but does not truly work. Clients that do not use INtools need an editable document for all of their equipment. EXCEL is an acceptable 'lowest common denominator', generic format.
  - ***Optional*** – A separate method to print to an Acrobat *.PDF File
    - Note – This should be available without any 3rd party software.
- Item 2 – There should be an option to Batch Print all Specification Sheets as one document when printing, instead of one sheet at a time, when printing to an external PDF writer
- Item 3 – All delivered Specification Sheets should already have a predefined browse in the Instrument Specification Browser
- Item 4 – All Specification Sheets (capable of applying to DDP) should share the same data fields.

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Other General Recommendations

- Item 1 - Turn on selection (check box) in InfoMaker for every data field under ‘Edit’ tab titled “Empty String is NULL”
- Item 2 - Data Dictionary needs to be completely set up on ‘out-of-the-box Specs’
- Item 3 - Utilize the DDP module fields for the Instrument Inlet and Outlet Connections size, Class and End Prep on each Spec form.
- Item 4 - Utilize all of the Process Data fields available in the Spec forms
- Item 5 - Selection of a ‘2 Phase’ condition is available in the Process Data module but does **not** appear on the Spec forms in general.
- Item 6 - Add the appropriate flow and density Process Data fields to any instrument having a Thermowell

Section 4

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Response from Intergraph dated February 13, 2004

From: Ambrose, Scott A [mailto:saambros@ingr.com]

Sent: Friday, February 13, 2004 4:49 PM

To: Bolmanski, John V

Cc: Newton, Ohad; Alexander Koifman

Subject: INtools SR: 1-26917101 (JACOBS EN/HOUST) - Specification Sheet

Summary

Mr. Bolmanski,

Mr. Newton and I were just reviewing the list you provided from the LTUF committee. We decided that these issues would be best served by having our Product Management group (i.e. Ohad) spearhead the consideration of these proposed changes.

As a result, I will be closing this service request. You can use Mr. Newton as a contact point, or if needed, you can always call Mr. Koifman or myself and we can attempt to obtain a status in his absence.

Thank you and the committee for you efforts. A number of these items seem like they would be good additions to the product.

Regards,

Scott Ambrose

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