

## Overview

This User Defined input file allows Pipeline Attribute data to be accessed by Isogen and output on the isometric using TextPos and included in generated output files

Sample Pipeline Attributes are - LINE REFERENCE - P & ID FROM - P & ID TO - UNIT NUMBER - PAINT CODE - OPERATING TEMP - etc.

Pipeline Attribute source data is usually held in a data system such as Microsoft Excel or Access but this must be output to a CSV (Comma Delimited) file to produce the form of text file that ISOGEN can read

In ISOGEN the input file is held at Project level - the actual name is User definable and should be allocated a meaningful name such as PIPEATTRS.ATT

## System Requirements

Entries required in the ISOGEN.FLS File:-

PIPELINE-ATTRIBUTE-FILE	C:\MYPATH\MYPROJECT\FINAL\PIPEATTRS.ATT (Slide 3)
FUNCTION-DEFINITION	C:\MYPATH\MYPROJECT\FINAL\ATTA.FDF (Slide 4)
POSITIONED-TEXT	C:\MYPATH\MYPROJECT\FINAL\FINAL.POS (Slide 5)
DRAWING-DEFINITION	C:\MYPATH\MYPROJECT\FINAL\FINAL.DDF (Slide 6)

A section of a typical PIPEATTRS.TXT file in the PIPELINE-ATTRIBUTE-FILE CSV format :-

Information Only

1LINE REF, 2P&ID 3FROM, 3P&ID TO, 4UNIT NO, 5SERVICE CODE, 6PAINT CODE, 7OPERATING TEMP, 8DESIGN TEMP, 9OPERATING PRESS, 10DESIGN PRESSURE, 11TEST PRESS, 12TEST TYPE, 13INSULATION THKS, 14HEAT TRACING, 15INSULATION CODE, 16DESIGN CODE, 17MATERIAL

Data

```

"4-DDE-4325", "300-019", "300-020", "300", "PA", P12, 170, 220, 14, 21, 28, T4, 65, , "HC", "DC12", CARB STL
"3-DDE-4326", "300-020", "300-020", "300", "PA", P12, 230, 280, 10, 15, 20, T4, 90, , "HC", "DC12", CARB STL
"4-DDE-4327", "300-020", "300-020", "300", "PA", P12, 230, 280, 10, 15, 20, T4, 90, , "HC", "DC12", CARB STL
"2-DDE-4328", "351-019", "351-020", "351", "FG", P10, 170, 220, 14, 21, 28, T4, 65, , "HC", "DC12", CARB STL
"4-DDE-4329", "351-019", "351-020", "351", "PB", P11, 170, 220, 14, 21, 28, T4, 65, , "HC", "DC12", CARB STL
"8-DDE-4330", "381-020", "381-020", "381", "PA", P12, 230, 280, 10, 15, 20, T4, 90, , "HC", "DC12", CARB STL
"4-DDE-4331", "300-020", "300-020", "300", "PA", P12, 230, 280, 21, 31. 5, 42, T4, 90, , "HC", "DC12", CARB STL
"6-ASC-6900", "300-020", "300-019", "300", "PA", P12, 230, 280, 21, 31. 5, 42, T4, 65, , "HC", "DC16", ST STEEL
"1-ASC-6901", "300-018", "300-018", "300", "PA", P12, 200, 250, 21, 31. 5, 42, T4, 65, , "HC", "DC16", ST STEEL
  
```

↑ 1      ↑ 2      ↑ 3      ↑ 4      ↑ 5      ↑ 6      ↑ 7      ↑ 8      ↑ 9      ↑ 10      ↑ 11      ↑ 12      ↑ 13      ↑ 14      ↑ 15      ↑ 16      ↑ 17

This is the pipeline used as an example in later slides

## Limitations

Max width of file = 250 characters  
 Max number of defined Pipeline Attribute entries in FDF = 100  
 (-900 to -999 record i.d.'s)

In the FUNCTION-DEFINITION-FILE - a section like this is needed -

## FUNCTION-DEFINITION-FILE

### PIPELINE-ATTRIBUTE-FILE

```

DELIMITER-CHARACTER  ,
IGNORE-CHARACTER  "
-900      1      ! LINE REF.
-901      2      ! P & ID FROM
-902      3      ! P & ID TO
-903      4      ! UNIT NO.
-904      5      ! SERVICE CODE
-905      6      ! PAINT CODE
-906      7      ! OPERATING TEMP.
-907      8      ! DESIGN TEMP.
-908      9      ! OPERATING PRESSURE
-909     10      ! DESIGN PRESSURE
-910     11      ! TEST PRESSURE
-911     12      ! TEST TYPE
-912     13      ! INSULATION THKS.
-913     14      ! HEAT TRACING
-914     15      ! INSULATION CODE
-915     16      ! DESIGN CODE
-916     17      ! MATERIAL
  
```

This file assigns the Attribute Data field value from the CSV file to an Isogen -900 series attribute, thus enabling Isogen to place the -900 attribute on the User Defined Backing Sheet via the Text Positioned File.

e.g.  
The P&ID value contained in Data Item 2 of the Pipeline Attribute File is mapped to a -901 Pipeline Attribute

Assigned  
-900 series  
attribute

Data field  
number in  
PIPEATTRS.TXT  
file

Attribute  
Identification Text  
(These are comments only)

The POSITIONED-TEXT file contains the -900 series attributes with their corresponding X & Y co-ordinates where they will be positioned on the Backing Sheet, positions are in 1/100<sup>th</sup> mm:-

Table Text ID No	Table X Pos	Numb Y Pos	Numb Char Width	Char Height	Offset in X	Offset in Y	of Cols	of Lines	Table Dir
-----	---	---	-----	-----	-----	-----	----	-----	-----
-901	30000	4000	0	250					
-902	30000	3500	0	250					
-903	30000	3000	0	250					
-904	30000	2500	0	250					
-905	30000	2000	0	250					
-906	30000	1500	0	250					
-907	35000	4000	0	250					
-908	35000	3500	0	250					
-909	35000	3000	0	250					
-910	35000	2500	0	250					
-911	35000	2000	0	250					
-912	35000	1500	0	250					
-916	40000	4000	0	250					
-914	40000	3500	0	250					
-915	40000	3000	0	250					



The DRAWING-DEFINITION file contains an entry telling Isogen to look for a Full match between the Pipeline Reference in the PCF file and the Pipeline Reference in the Pipeline Attribute File and map the corresponding data found to the -900 series records as cross referenced in the Function Definition file:-

```
PIPELINE-REFERENCE-LOCATION-DEFINITION  
FULL-REFERENCE -900
```

# Drawing Output

The Attributes are positioned in their respective positions on the isometric with the table and titles having been drawn previously on the Backing Sheet

Attribute			Attribute			Attribute		
P & ID FROM	2	300-020	DESIGN TEMP.	8	280	MATERIAL	17	ST STEEL
P & ID TO	3	300-019	OPERATING PRESS.	9	21	INSULATION CODE	15	HC
UNIT NUMBER	4	300	DESIGN PRESS.	10	31.5	DESIGN CODE	16	DC16
SERVICE CODE	5	PA	TEST PRESS.	11	42	HEAT TRACING		NONE
PAINT CODE	6	P12	TEST TYPE	12	T4	SPOOLED BY		TSR
OPERATING TEMP.	7	230	INSULATION THKS.	13	65	CHECKED BY		