



# AFCTN Test Report 94-059

AFCTB-ID  
94-007

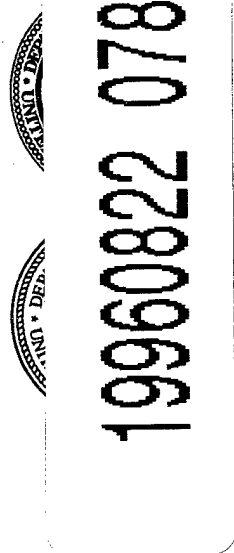


## Texas Instruments IGES Data Development

Using:



PTC/IGESWorks with  
Pro Engineer IGES  
Filter



MIL-D-28000A (IGES)

Quick Short Test Report

28 February 1994



Prepared for  
Electronic Systems Center  
Det 2 HQ ESC/AV-2  
4027 Colonel Glenn Hwy, Suite 300  
Dayton, Ohio 45431-1672

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**28 February 1994**

---

**Prepared By**

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# **Air Force CALS Test Bed**

## ***Notification of Test Results***

**28 February 1994**

This notice documents the results of an Air Force CALS Test Bed (AFCTB) Quick Short Test Report (QSTR) evaluation of data submitted by:

### **Texas Instruments**

Identified as follows:

Title:	<b>Texas Instruments IGES Data Development</b>
Program:	<b>JSOW Joint Stand-Off Weapon</b>
Program Office:	<b>Naval Air System Command</b>
Contract No.:	<b>N0019-91-C-0196</b>
QSTR No.:	<b>AFCTB-ID 94-007</b>

Received on the following media: **Via Internet**

The results of the AFCTB Quick Short Test Report evaluation are as follows:

MIL-STD-1840A Media Format:	<b>Pass</b>
MIL-D-28000A IGES:	<b>File 1 Fail/File 2 Pass</b>
MIL-M-28001A SGML:	<b>N/A</b>
MIL-R-28002A Raster:	<b>N/A</b>
MIL-D-28003 CGM:	<b>N/A</b>

Formal results with associated disclaimer are documented and available from the AFCTB.

**Air Force CALS Test Bed  
HQ ESC/AV-2P  
4027 Colonel Glenn Highway, Suite 300  
Dayton, OH 45431-1672  
Phone: 513-257-3085 FAX: 513-257-5881**

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## **1. Introduction**

### **1.1 Background**

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

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## 1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Texas Instruments' interpretation and use of the CALS standards, in transferring technical IGES data. Texas Instruments used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff using an electronic transfer to the AFCTB internet node.

## 2. Test Parameters

Test Plan: AFCTB 94-007

Date of  
Evaluation: 28 February 1994

Evaluator: George Elwood  
Air Force CALS Test Bed  
DET 2 HQ ESC/AV-2P  
4027 Colonel Glenn Hwy  
Suite 300  
Dayton OH 45431-1672

Data  
Originator: Michael Hurn  
Texas Instruments  
M/S 8420  
6500 Chase Oaks Blvd  
P.O. Box 869305  
Plano TX 75086  
(214) 575-3368  
(214) 575-6807

Data  
Description: Technical IGES Test  
1 Document Declaration file  
2 Initial Graphics Exchange Specification  
(IGES) files

Data  
Source System:

1840A

**HARDWARE**

4/60 SUN Workstation w/48 Megabyte RAM

**SOFTWARE**

SUN UNIX OS R 4.1.3

IGES

**HARDWARE**

4/60 SUN Workstation

**SOFTWARE**

Pro/Engineer v11 IGES Filter  
International TechneGroup Incorporated  
(ITI) IGESWorks  
IGES Data Analysis (IDA) CALSView

---

**Evaluation Tools Used:**

**MIL-STD-1840A (TAPE)**

PC 486/50

AFCTN Tapetool v1.2.10 DOS

**MIL-D-28000 (IGES)**

Sun SparcStation 2

ArborText iges2draw

Carberry CADLeaf Plus v3.1

IDA Parser/Verifier v92

IDA IGESView v3.05

ITI IGES/Works v1.3

Rosetta Technologies Prepare

Rosetta Technologies Preview v3.2

SGI Indigo2

AUTODESK AutoCAD R12

Cadkey Cadkey v6.0

PC 486/50

AUTODESK AutoCAD 386 R12

AUTODESK AutoCAD 386 R11

Cadkey Cadkey v6.0

Cadkey Cadkey v4.06

IDA IGESView Windows

**Standards**

**Tested:**

MIL-STD-1840A

MIL-D-28000A

### **3. 1840A Analysis**

#### **3.1 External Packaging**

The files arrived at the Air Force CALS Test Bed (AFCTB) via an electronic transfer to the internet server. No physical media was exchanged or evaluated.

#### **3.2 Transmission Envelope**

The file set received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

##### **3.2.1 Tape Formats**

No tape was submitted for evaluation.

##### **3.2.2 Declaration and Header Fields**

No errors were found in the Document Declaration file or data file headers. The submitted file set meets the requirements defined in MIL-STD-1840A for CALS file structure.

### **4. IGES Analysis**

The transfer contained two IGES files. A visual inspection showed file D001Q001 as not containing the Start Section conformance statement, as required by MIL-D-28000A, para. 3.2.2.4, whereas, file D001Q002 did contain the required statement. Included with the transfer set, which was used during the visual inspection, was a postscript file.

Both IGES files are the same. The stated difference was the final output software. Both files started from *Pro/Engineer* v11. File D001Q001 was the baseline file. File D001Q002 was read into ITI's *IGESWorks*, and the output meets the CALS Class II specification.

These files were evaluated using IDA's *Parser/Verifier* set for CALS Class II. This utility reported one CALS error in file D001Q001 and no CALS errors in file D001Q002. The reported CALS error was the use of an illegal IGES specification, value nine. MIL-D-28000A, para 3.2.4.2 permits only values of four to six. The utility reported several basic IGES warnings. The logs for both files are included in Appendix B, Sections 10.1.1 and 10.2.1 to this report.

Specification version = 9 (IGES 5.1)

ERROR 4048: Illegal specification version for CALS Class II specified.

The AFCTB has several tools for viewing IGES files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The files were converted using ArborText's *iges2draw* utility with no reported errors. The resulting files were read into Island Graphics' *IslandDraw*, displayed and printed without a reported error.

The files were read using AUTODESK's *AutoCAD R12* with translator version 5.1. The displayed and printed copies appear to match the provided copies. Many warnings were generated during the translation. These log files are included in Appendix B, Sections 10.1.2 and 10.2.2 to this report.

The files were read into another software available within the AFCTB, without a reported error. The displayed and printed images appear to match the hard copy provided by Texas Instruments.

The files were converted using Cadkey's *ig2c* utility. The resulting files were read into Cadkey's *Cadkey*. The displayed images appear to match the hard copy provided by Texas Instruments.

The files were read into Carberry's *CADLeaf* software without a reported error. The displayed and printed images appear to match the hard copy provided by Texas Instruments.

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The files were read using IDA's *IGESView* and *IGESView for Windows*. The displayed and printed images appear to match the hard copy provided by Texas Instruments.

The files were read using ITI's *IGESWorks* without any reported warnings. The log files from the parsing operation are included in Appendix B, Sections 10.1.3 and 10.2.3 to this report. The displayed and printed images appear to match the hard copy provided by Texas Instruments.

The IGES files were converted using Rosetta Technologies' *Prepare* with reported errors. The error logs are included in Appendix B, Sections 10.1.4 and 10.2.4 to this report. The resulting files were read into Rosetta Technologies' *Preview*, displayed and printed.

File D001Q001 did not meet the CALS MIL-D-28000A specification, because of the missing Start Section. File D001Q002 did not have any reported CALS errors or warnings. Both files had reported warning issued by all products which issue log files. A visual inspection of the output files against the provided hard copy did not disclose any discrepancies. The hard copy provided by Texas Instruments is included in Appendix C, Section 11.1.

## 5. SGML Analysis

No Standard Generalized Markup Language (SGML) files were include in this evaluation.

## 6. Raster Analysis

No Raster files were included in this evaluation.

## 7. CGM Analysis

No Computer Graphics Metafile (CGM) files were included in this evaluation.

## 8. Conclusions and Recommendations

The electronic submission by Texas Instruments had no errors relating to the Document Declaration file or data file headers, and meets the physical requirements define in the CALS MIL-STD-1840A.

File D001Q001 did not meet the CALS MIL-D-28000A specification due to a missing required Start Section. File D001Q002 had no reported CALS nor IGES errors or warnings, and meets the CALS MIL-D-28000A specification for Class II IGES. Both files had reported warnings issued by several applications.

The file sets submitted by Texas Instruments does not meet the CALS MIL-STD-1840A requirements, due to the error in file D001Q001.

---

## 9. Appendix A - Tapetool Report Logs

### 9.1 Tape Catalog

CALS Test Network Catalog Evaluation - Version 1.2; Release 10 (O)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Mon Feb 28 11:41:30 1994

MIL-STD-1840A File Catalog

File Set Directory: C:\TT\SET007

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00256	02048/000000	Extracted
D001Q001	IGES	F/00080	02000/000000	Extracted
D001Q002	IGES	F/00080	02000/000000	Extracted

Catalog Process terminated normally.



---

## 9.2 Tape File Set Validation Log

CALS Test Network File Set Evaluation - Version 1.2; Release 10 (O)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Mon Feb 28 11:41:31 1994

MIL-STD-1840A File Set Evaluation Log

File Set: SET007

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: Texas Instruments P.O.Box 869305 Plano, TX 75086 Mail Station 8420

srcdocid: CALS TEST NETWORK IGES TEST USING PTC IGES AND PTC/IGESWORKS IGES

srcrelid: NONE

chglvl: ORIGINAL

dteis: 19940224

dstsys: AIR FORCE CALS TEST BED 4027 COLONEL GLENN HIGHWAY SUITE 300 DAYTON, OHIO 4543

dstdocid: TEXAS INSTRUMENTS IGES TEST USING PTC IGES AND PTC/IGESWORKS IGES

dstrelid: NONE

dtetm: 19940224

dlvacc: NONE

filcnt: Q2

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: Product Data

docttl: NONE

Found file: D001Q001

Extracting IGES Header Records...

Evaluating IGES Header Records...

srcdocid: 3153708 sheet 2

dstdocid: 3153708 sheet 2

txtfilid: NONE

figid: NONE

srcgph: NONE

doccls: UNCLASSIFIED

notes: THIS TEST FILE WAS GENERATED BY THE PROENGINEER IGES OUT FILTER

Saving IGES Header File: D001Q001.HDR

Saving IGES Data File: D001Q001.IGS

Found file: D001Q002  
Extracting IGES Header Records...  
Evaluating IGES Header Records...

srcdocid: 3153708 sheet 2  
dstdocid: 3153708 sheet 2  
txtfilid: NONE  
figid: NONE  
srcgph: NONE  
doccls: UNCLASSIFIED  
notes: FILE GENERATED BY PRO E IGES OUT AND FLAVORED BY IGESWORKS

Saving IGES Header File: D001Q002.HDR  
Saving IGES Data File: D001Q002.IGS

Evaluating numbering scheme...  
No errors were encountered during numbering scheme evaluation.  
Numbering scheme evaluation complete.

Checking file count...  
No errors were encountered during file count verification.  
File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

## 10. Appendix B - Detailed IGES Analysis

### 10.1 File D001Q001

#### 10.1.1 Parser/Verifier Log

```
*****
****  IGES PARSER/VERIFIER  ****
****      MARCH 1993      ****
****  IGES Data Analysis  ****
****      (708) 344-1815  ****
*****
```

Input file is d001q001.igs

Checking conformance to CALS Class II (MIL-D-28000A 2/10/92)

Today is February 28, 1994 12:14 AM

```
*****
****  CHECK FILE SYNTAX  ****
*****
```

Section	Records
Start	1
Global	4
Directory	3552 ( 1776 Entities)
Parameter	2602
Terminate	1

NITPICK 2489: Excess precision in real constant (5.4077661160653E-05) for Grain of Global Section.

NITPICK 2489: Excess precision in real constant (0.54079824353627) for MaxValue of Global Section.

NITPICK 2413: 0H string constant (0H) specified for Strings[1].TEXT of D 161.

NITPICK 2413: 0H string constant (0H) specified for Strings[1].TEXT of D 167.

NITPICK 2413: 0H string constant (0H) specified for Strings[1].TEXT of D 957.

NITPICK 2413: 0H string constant (0H) specified for Strings[1].TEXT of D 1009.

NITPICK 2413: 0H string constant (0H) specified for Strings[1].TEXT of D 1017.

NITPICK 2413: 0H string constant (0H) specified for Strings[1].TEXT of D 1025.

NITPICK 2413: 0H string constant (0H) specified for Strings[1].TEXT of D 1033.

NITPICK 2413: 0H string constant (0H) specified for Strings[1].TEXT of D 1041.

\*\*\*\*\*  
\*\*\*\*\* SUMMARY AND STATISTICS \*\*\*\*\*  
\*\*\*\*\*

NITPICK 2489: Excess precision in real constant (5.4077661160653E-05) for Grain of Global Section.

NITPICK 2489: Excess precision in real constant (0.54079824353627) for MaxValue of Global Section.

\*\*\* File and Product Name Information \*\*\*

File name from sender = '3153708\_ptc\_cals2.igs'  
File creation Date.Time = '940209.081746'  
Model change Date.Time = ''  
Author = 'igesuser'  
Department = ''

ERROR 4064: CALS Class II does not allow department to be defaulted.

Product name from sender = '3153708\_2'  
Destination product name = '3153708\_2'

\*\*\* Parameter Delimiters \*\*\*

Delimiter = ','  
Terminator = ';'.

\*\*\* Originating System Data \*\*\*

System ID = 'Pro/ENGINEER by Parametric Technology Corporation'  
Preprocessor version = 'D-02-39'  
Specification version = 9 (IGES 5.1)

---

---

ERROR 4048: Illegal specification version for CALS Class II specified.

\*\*\* Precision levels \*\*\*

Integer bits = 32  
Floating point - Exponent = 38 Mantissa = 7  
Double precision - Exponent = 38 Mantissa = 15

\*\*\* Global Model Data \*\*\*

Model scale = 1.0000E+00  
Unit flag = 1  
Units = 'INCH'  
Line weights = 32768  
Maximum line thickness = 5.000000E-01  
Minimum line thickness = 1.525879E-05  
Granularity = 5.407766E-05  
Maximum coordinate = 5.407982E-01

Drafting standard applicable to original data is not specified.

\*\*\* Status Flag Summary \*\*\*

Blank status:	Visible	1776
	Blanked	0
Independence:	Independent	1423
	Physically Subordinate	352
	Logically Subordinate	1
	Totally Subordinate	0
Entity use:	Geometry	1157
	Annotation	619
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Construction geometry	0
	Not Specified	0
Hierarchy:	Structure DE applies	1776
	Subordinate DE applies	0
	Hierarchy property applies	0
	Not Specified	0

\*\*\* Entity Occurrence Counts \*\*\*

Entity	Form	Level	Count	Type
-----	----	-----	-----	-----
100	0	0	296	Circular arc
106	11	0	23	Copious data - Piecewise planar, linear
string(2D linear path)				
106	20	0	4	Centerline
106	40	0	83	Witness line
110	0	0	921	Line
202	0	0	1	Angular dimension
206	0	0	1	Diameter dimension
210	0	0	12	General label
212	0	0	256	General note
214	3	0	64	Leader arrow - Filled triangle
214	4	0	12	Leader arrow - No arrowhead
216	0	0	22	Linear dimension
218	0	0	43	Ordinate dimension
222	0	0	1	Radius dimension
228	0	0	32	General symbol
404	0	1	1	Drawing
406	15	1	1	Property - Name
406	16	1	1	Property - Drawing size
406	17	1	1	Property - Drawing units
410	0	1	1	View - Orthographic parallel

\*\*\* Entity Count by Level \*\*\*

Level	Count
0	1771
1	5

\*\*\* Labeling Information \*\*\*

0% of the entities are labeled.  
Unlabeled 1776

\*\*\* Line Fonts Used in Data \*\*\*

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
282	-	-	106	-	790	-	-	Solid
13	-	-	-	-	2	-	-	Dashed
1	-	-	-	-	5	-	-	Phantom
-	-	-	4	-	124	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

---

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

\*\*\* Line Widths Used in Data \*\*\*

Weight	Count	Width
Defaulted	1776	(0.0000)

\*\*\* Colors Used in Data \*\*\*

Defaulted	5
Red	48
Yellow	1091
White	632

\*\*\*\*\*  
\*\*\*\*\* ENTITY ANALYSIS \*\*\*\*\*  
\*\*\*\*\*

\*\*\* Entity type: 100

\*\*\* Entity type: 106

\*\*\* Entity type: 110

CAUTION 2336: Zero length line at D 1687.  
-- 921 lines averaging 1.516383E+00 units --

\*\*\* Entity type: 202

\*\*\* Entity type: 206

\*\*\* Entity type: 210

\*\*\* Entity type: 212

307 text strings in data file.  
Average text aspect ratio in file is 0.8888776.  
Minimum text aspect ratio in file is 0.6666667.  
Maximum text aspect ratio in file is 1.8333333.

FONTS USED IN FILE

FONT	COUNT	NAME
1	284	Default ASCII Style
1002	1	Symbol Font 2
1003	30	Drafting Font

\*\*\* Entity type: 214

---

Average arrow aspect ratio in file is 3.0000000.  
Minimum arrow aspect ratio in file is 3.0000000.  
Maximum arrow aspect ratio in file is 3.0000000.

\*\*\* Entity type: 216

\*\*\* Entity type: 218

\*\*\* Entity type: 222

\*\*\* Entity type: 228

WARNING 2323: No geometry referenced by general symbol at D 851.

\*\*\* Entity type: 404

Drawing at D 9 contains 1 views.

Drawing at D 9 contains 0 annotation entities.

\*\*\* Entity type: 406

\*\*\* Entity type: 410

Scale of view at D 1 is 1.000000E+00.

Orthographic View entity at D 1 has 0 clipping planes specified.

XMIN = Not Set XMAX = Not Set

YMIN = Not Set YMAX = Not Set

ZMIN = Not Set ZMAX = Not Set

\*\*\* Message Summary \*\*\*

2009: 1 Illegal defaults.

2015: 1 Mathematically incorrect definitions.

2034: 8 Improper character strings.

4011: 1 Problems in the Global section

4031: 1 Illegally defaulted global values.

\*\*\* Error Summary \*\*\*

0 fatal errors

0 severe errors

2 errors

1 warnings

1 cautions

12 nitpicks

0 notes

\*\*\* End of Analysis of d001q001.igs \*\*\*



## 10.1.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

=====  
File: C:/TMP/D001Q001.xli

Date: Mon, Feb 28, 1994

Time: 12:47:55  
=====

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750

Translating from IGES file: C:/TMP/D001Q001.IGS  
to AutoCAD Drawing: C:\D001Q001.dwg  
=====

Options obtained from: default settings

Curves Approximated to Tolerance of 0.01

Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

IGES Text font	Style Name	ACAD Font
0	SYMBOL0	iges0
1	STANDARD	txt
2	LEROY	txt
3	FUTURA	txt
6	COMP80	txt
12	GOTHICE	gothice
13	GOTHICI	gothici
14	ROMANS	romans
17	ROMANT	romant
18	ROMAND	romand
19	OCR	txt
1001	SYMBOL1	iges1001
1002	SYMBOL2	iges1002
1003	SYMBOL3	iges1003
2001	KANJI	bigfont

IGES Linefont/AutoCAD Linetype mapping

IGES Line Font	AutoCAD linetype	Shape file
0	BYLAYER	
1	CONTINUOUS	
2	DASHED	acad.lin
3	PHANTOM	acad.lin
4	CENTER	acad.lin
5	DOT	acad.lin

=====  
Parse phase

---

\*\*\* Warning (IAFP\_\_LARGER\_SGL\_SIG) \*\*\*

C:/TMP/D001Q001.IGS, line 5: IGES file has greater number of significant digits in single precision numbers than this system.

\*\*\* Warning (IAFP\_\_BAD\_HCOUNT) \*\*\*

OH; 161P  
157  
^

C:/TMP/D001Q001.IGS, line 3714: Bad hollerith count found, hollerith count must be greater than zero.

\*\*\* Warning (IAFP\_\_BAD\_HCOUNT) \*\*\*

OH; 167P  
162  
^

C:/TMP/D001Q001.IGS, line 3719: Bad hollerith count found, hollerith count must be greater than zero.

\*\*\* Warning (IAFP\_\_BAD\_HCOUNT) \*\*\*

OH; 957P  
884  
^

C:/TMP/D001Q001.IGS, line 4441: Bad hollerith count found, hollerith count must be greater than zero.

\*\*\* Warning (IAFP\_\_BAD\_HCOUNT) \*\*\*

OH; 1009P  
932  
^

C:/TMP/D001Q001.IGS, line 4489: Bad hollerith count found, hollerith count must be greater than zero.

\*\*\* Warning (IAFP\_\_BAD\_HCOUNT) \*\*\*

OH; 1017P  
937  
^

C:/TMP/D001Q001.IGS, line 4494: Bad hollerith count found, hollerith count must be greater than zero.

\*\*\* Warning (IAFP\_\_BAD\_HCOUNT) \*\*\*

OH; 1025P  
942  
^

C:/TMP/D001Q001.IGS, line 4499: Bad hollerith count found, hollerith count must be greater than zero.

\*\*\* Warning (IAFP\_\_BAD\_HCOUNT) \*\*\*

OH; 1033P

947

^

C:/TMP/D001Q001.IGS, line 4504: Bad hollerith count found, hollerith count must be greater than zero.

\*\*\* Warning (IAFP\_\_BAD\_HCOUNT) \*\*\*

OH;

1041P

952

^

C:/TMP/D001Q001.IGS, line 4509: Bad hollerith count found, hollerith count must be greater than zero.

\*\*\* Warning (IEVM\_FIRST\_NOT\_COLINEAR\_106) \*\*\*

(DE 293, TF 106:40) Entity's points are not directionally colinear. All vectors formed by consecutive points must be in the same direction.

Action taken: First point moved to a valid location.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

\*\*\* Warning (IEVM\_NUM\_POINTS\_LOW\_106) \*\*\*

(DE 949, TF 106:20) Entity has too few data points. Number of data points found was 2. Number of data points must be at least 3.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

\*\*\* Warning (IEVM\_BAD\_GEOM\_PTR\_228) \*\*\*

(DE 959, TF 228:0) Entity references DE 949 of type 106:20. Pointer must reference a Curve entity.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

\*\*\* Warning (IEVM\_BAD\_GEOM\_PTR\_228) \*\*\*

(DE 959, TF 228:0) Entity references DE 955 of type 106:20. Pointer must reference a Curve entity.

=====

Start Section:

PTC IGES file: 3153708\_ptc\_cals2.igs

Global Section:

Parameter Delimiter: ,  
Record Delimiter: ;  
Sending Product ID: 3153708\_2  
File Name: 3153708\_ptc\_cals2.igs

---

System ID: Pro/ENGINEER by Parametric Technology Corporation  
 Preprocessor Version: D-02-39  
 Size of Integer: 32  
 Sgl. Precision Mag: 38  
 Sgl. Precision Sig: 7  
 Dbl. Precision Mag: 38  
 Dbl. Precision Sig: 15  
 Receiving Product ID: 3153708\_2  
 Model Space Scale: 1.000000  
 Unit Flag: 1  
 Unit String: INCH  
 # of Line Weights: 32768  
 Maximum Line Width: 0.500000  
 Creation Date: 02/09/94 08:17:46  
 Minimum Resolution: 0.000054  
 Maximum Coordinate: 0.540798  
 Author: igesuser  
 Organization:  
 IGES Version Number: 9  
 Drafting Standard: 0  
 Model Create/Modify Date: Not Specified

Entity Summary:

Type	Form	Description	Count
100	0	Circular Arc	296
106	11	Planar Piecewise Linear Curve	23
106	20	Centerline Through Points	4
106	40	Witness Line	83
110	0	Line	921
202	0	Angular Dimension	1
206	0	Diameter Dimension	1
210	0	General Label	12
212	0	General Note (Simple)	256
214	3	Leader (Filled triangle)	64
214	4	Leader (No arrowhead)	12
216	0	Linear dim - undetermined form	22
218	0	Ordinate Dimension	43
222	0	Radius Dimension (Single Leader)	1
228	0	General Symbol	32
404	0	Drawing (form 0)	1
406	15	Property (Name)	1
406	16	Property (Drawing Size)	1
406	17	Property (Drawing Units)	1
410	0	View	1
Total			1776

---

Translation phase

Drawing Entity (404 Form 0) at DE 9, with

name = 3153708\_2\_2,  
size = 34.000000, 22.000000,  
units = INCH,

was processed in the AutoCAD drawing file: C:\D001Q001.dwg

\*\*\* Warning (ACAD\_NEW\_VIEW\_VOLUME\_GENERATED) \*\*\*

( DE: 1 TF: 410:0 )

A new view volume has been generated for the view with:

XMIN (-4.526313), XMAX (41.861857),  
YMIN (-4.526313), YMAX (28.533200),  
ZMIN (-12.605469), ZMAX (5.305885).

IGES Entity Summary

Type	Form	Description	Count	Processed	Errors
100	0	Circular Arc	296	296	0
106	11	Planar Piecewise Linear Curve	23	23	0
106	40	Witness Line	83	83	0
110	0	Line	921	921	0
202	0	Angular Dimension	1	1	0
206	0	Diameter Dimension	1	1	0
210	0	General Label	12	12	0
212	0	General Note (Simple)	255	248	7
214	3	Leader (Filled triangle)	64	64	0
214	4	Leader (No arrowhead)	12	12	0
216	0	Linear dim - undetermined form	22	22	0
218	0	Ordinate Dimension	43	43	0
222	0	Radius Dimension (Single Leader)	1	1	0
228	0	General Symbol	32	31	1
404	0	Drawing (form 0)	1	1	0
406	15	Property (Name)	1	1	0
406	16	Property (Drawing Size)	1	1	0
406	17	Property (Drawing Units)	1	1	0
410	0	View	1	1	0
Totals			1771	1763	8

AutoCAD Entity Summary

Entity	Created	Errors
LINE	951	0

CIRCLE	106	0
TEXT	213	0
ARC	190	0
SOLID	16	0
INSERT	69	0
POLYLINE	23	0
DIMENSION	68	0
BLOCK	69	0

Totals	=====	=====
	1705	0

=====

#### Error Summary:

The following message was issued 1 time(s)  
IGES file has greater number of significant digits in single precision numbers than this system.

The following message was issued 8 time(s)  
Bad hollerith count found, hollerith count must be greater than zero.  
The following message was issued 4 time(s)  
Entity has too few data points. Number of data points found was %d. Number of data points must be at least %d.

The following message was issued 4 time(s)  
Entity's points are not directionally colinear. All vectors formed by consecutive points must be in the same direction.

The following message was issued 4 time(s)  
Entity references DE %ld%s. Pointer must reference a Curve entity.

The following message was issued 1 time(s)  
A new view volume has been generated for the view with:  
XMIN (%lf), XMAX (%lf),  
YMIN (%lf), YMAX (%lf),  
ZMIN (%lf), ZMAX (%lf).

Status: 0  
Warning: 22  
Error: 0  
Fatal: 0

Elapsed Time:

Processor: 00:00:42  
Clock: 00:00:43

=====

## 10.1.3 Parser Log - IGESWorks

IGES/Works v1.4.1  
International TechneGroup Incorporated  
Validation Logfile

Date: February 28, 1994  
Model: d001q001

\*\*\*\*\* Validation Parameters \*\*\*\*\*

### TOLERANCE CONFIGURATION VALUES

-----

ZERO_TOL	= 1.000000e-13
MODEL_SPACE_PNT_COIN_TOL	= 1.000000e-03
PARM_SPACE_PNT_COIN_TOL	= 1.000000e-08
ISO_PARM_CURVE_TOL	= 1.000000e-08
NON_CONV_TOL	= 1.000000e-12
KNOT_COIN_TOL	= 1.000000e-10
SAME_INTER_TOL	= 1.000000e-12
PARALLEL_LINES_TOL	= 1.000000e-07
ANGLE_COIN_TOL	= 1.000000e-05
PNT_PROJ_TOL	= 1.000000e-07
COLIN_TOL	= 1.000000e-07
COPLANAR_TOL	= 1.000000e-08
ZERO_NORMAL_TOL	= 1.000000e-06
SAME_TANGENT_TOL	= 1.000000e-04
SAME_CURVATURE_TOL	= 1.000000e-04
SAME_DERIVATIVE_TOL	= 1.000000e-03
MODEL_LINEAR_APPROX_TOL	= 2.220446e-16

\*\*\*\*\* Entity Listing Before Validation \*\*\*\*\*

Count	Type	Form	Description
-----	----	----	-----
296	100	0	Circular Arc
23	106	11	Planar Piecewise Linear Curve
4	106	20	Centerline Through Points
83	106	40	Witness Line
921	110	0	Line
1	202	0	Angular Dimension
1	206	0	Diameter Dimension
12	210	0	General Label
256	212	0	General Note (Simple)
64	214	3	Leader (Filled triangle)
12	214	4	Leader (No arrowhead)

---

22	216	0	Linear dim - undetermined form
43	218	0	Ordinate Dimension
1	222	0	Radius Dimension (Single Leader)
32	228	0	General Symbol
1	404	0	Drawing (form 0)
1	406	15	Property (Name)
1	406	16	Property (Drawing Size)
1	406	17	Property (Drawing Units)
1	410	0	View

1776 - Number of entities in selection list

\*\*\*\*\* Entity Validation \*\*\*\*\*

\*\*\* Warning (IEVM\_BAD\_COORD\_VALUE) \*\*\*

(DE 11, TF 212:0) This independent or logically dependent entity had a coordinate value of 2.8589998e+01, which is beyond the maximum coordinate value set in the Global section (at Index 20) of the IGES file. The maximum coordinate value allowed is 5.4079824e-01.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_ZERO\_CHARS\_212) \*\*\*

(DE 161, TF 212:0) This General Note entity (212) has a substring, 1, with zero characters.

\*\*\* Warning (IEVM\_ZERO\_CHARS\_212) \*\*\*

(DE 167, TF 212:0) This General Note entity (212) has a substring, 1, with zero characters.

\*\*\* Warning (IEVM\_FIRST\_NOT\_COLINEAR\_106) \*\*\*

(DE 293, TF 106:40) The first 3 data points in this Witness Line Entity (106:40) are not directionally colinear within the stated tolerance. All vectors formed by consecutive points must be in the same direction. Action taken: The first point has been moved to a valid location.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_NUM\_POINTS\_LOW\_106) \*\*\*

(DE 949, TF 106:20) This Copious Data entity (106) has only 2 data points, which is too few for the stated form. The entity must have at least 3 data points.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_ZERO\_CHARS\_212) \*\*\*



(DE 957, TF 212:0) This General Note entity (212) has a substring, 1, with zero characters.

\*\*\* Warning (IEVM\_BAD\_GEOM\_PTR\_228) \*\*\*

(DE 959, TF 228:0) This General Symbol entity (228) has a pointer (Index 3 through 2+N of Parameter Data) that references DE 949 of type 106:20. The pointer must reference a Curve entity.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

\*\*\* Warning (IEVM\_ZERO\_CHARS\_212) \*\*\*

(DE 1009, TF 212:0) This General Note entity (212) has a substring, 1, with zero characters.

\*\*\* Warning (IEVM\_ZERO\_CHARS\_212) \*\*\*

(DE 1017, TF 212:0) This General Note entity (212) has a substring, 1, with zero characters.

\*\*\* Warning (IEVM\_ZERO\_LENGTH\_110) \*\*\*

(DE 1687, TF 110:0) This Line entity has a zero length within the stated tolerance.

Entity Validation Summary:

Type	Form	Entity Count	Number Valid	Number of Corrected		Number of Uncorrected	
				Warnings	Errors	Warnings	Errors
Global Section		1	1	0	0	0	0
100	0	296	16	0	0	1680	0
106	11	23	0	0	0	230	0
106	20	4	0	0	0	0	4
106	40	83	79	0	4	0	0
110	0	921	60	0	0	3323	0
202	0	1	1	0	0	0	0
206	0	1	1	0	0	0	0
210	0	12	12	0	0	0	0
212	0	256	104	0	0	321	0
214	3	64	64	0	0	0	0
214	4	12	12	0	0	0	0
216	0	22	22	0	0	0	0
218	0	43	43	0	0	0	0
222	0	1	1	0	0	0	0
228	0	32	31	0	0	0	4
404	0	1	1	0	0	0	0
406	15	1	1	0	0	0	0
406	16	1	1	0	0	0	0

---

406	17	1	1	0	0	0	0
410	0	1	1	0	0	0	0
-----							
Totals:	1777	452	0	4	5554		8

The following message was issued and suppressed 5540 times:

This independent or logically dependent entity had a coordinate value of %.7e, which is beyond the maximum coordinate value set in the Global section (at Index 20) of the IGES file. The maximum coordinate value allowed is %.7e.

The following message was issued and suppressed 3 times:

This General Note entity (212) has a substring, %d, with zero characters.

A message is suppressed when it has been issued more than 5 times. This value is controlled by the 'MAX\_MESSAGE' configuration parameter.

\*\*\*\*\*

## 10.1.4 Error Log - Preview

ERROR REPORT FOR FILE /novell/94007/d001q001.igs

>> File record length is 80

Terminate section report :

File Section	#lines
START	1
GLOBAL	4
DIRECTORY ENTRY	3552
PARAMETER DATA	2602
TERMINATE	1
TOTAL	6160

(Expect 80 X 6160 = 492800 bytes)

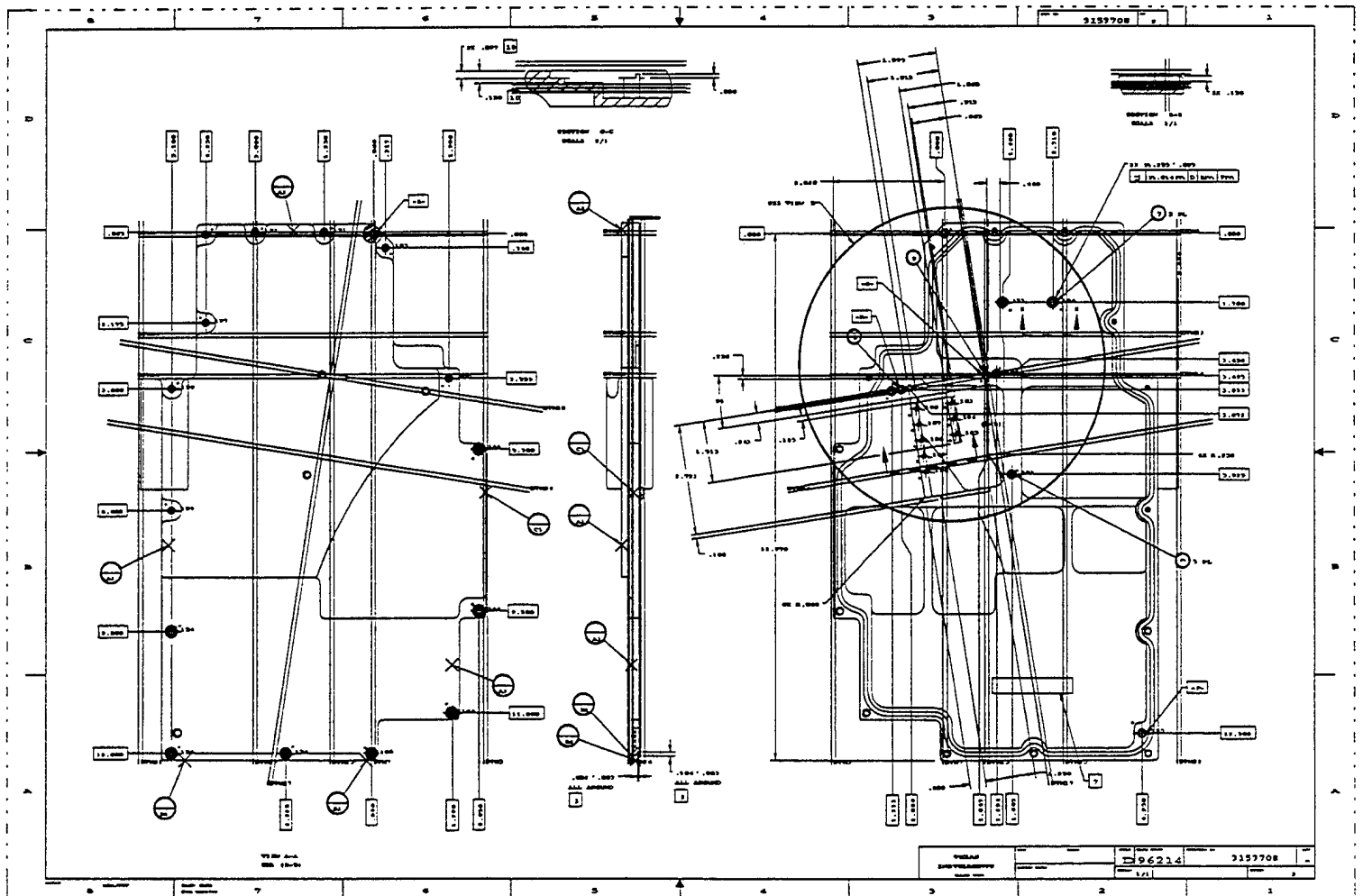
----- preliminary format scan complete -----

>> WARNING: Number of line widths exceed IGES spec. allowed.  
: Read value 32768. Use value 32767.  
: (Maximum line width reduced from 0.5 to 0.499985.)  
: Field 17 line 3 of GLOBAL section. (Max # Line Weights)  
38,15,9H3153708\_2,1.,1,4HINCH,32768,0.5,13H940209.081746,  
G 3 ^^^^^

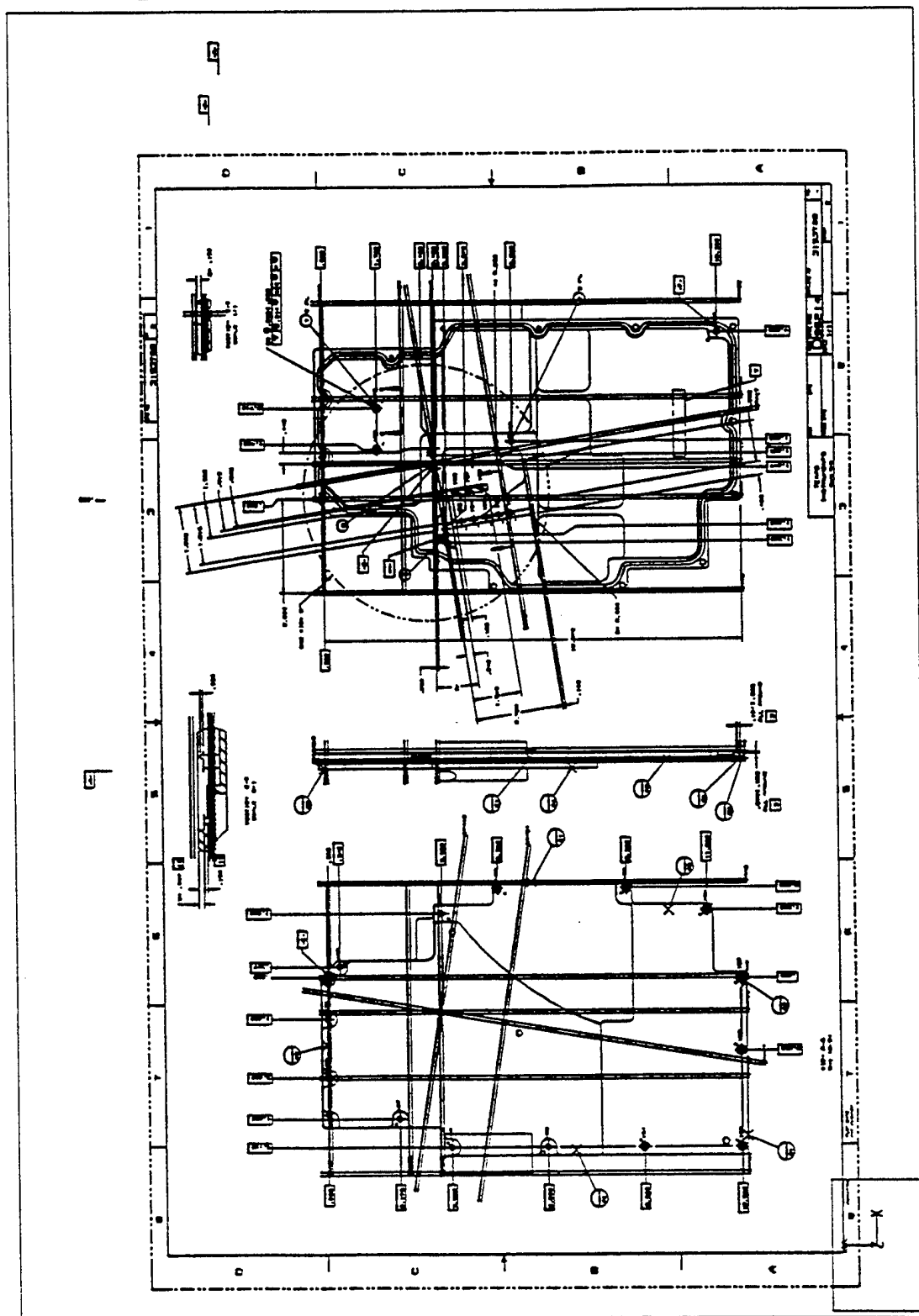
Found 0 errors and 1 warnings



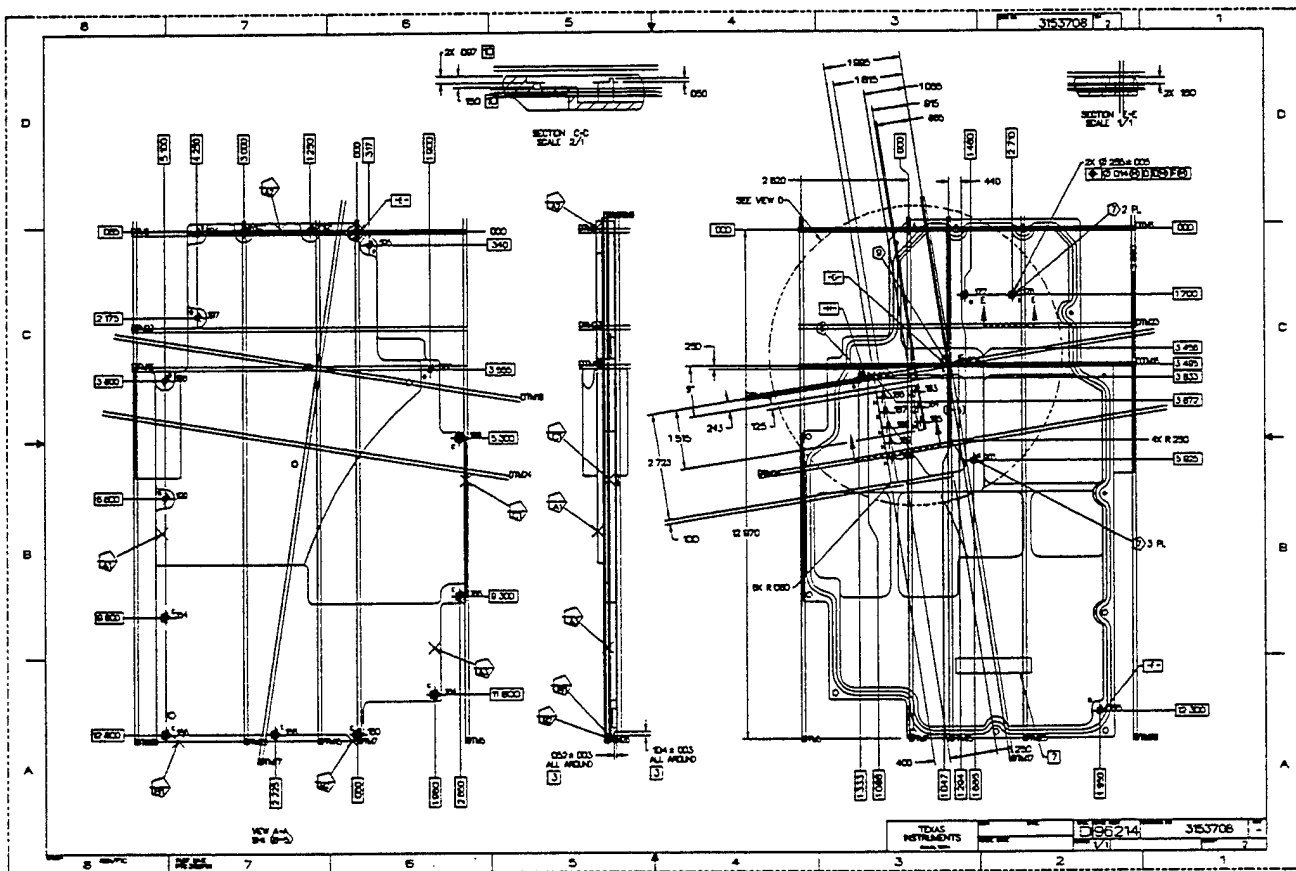
## 10.1.6 Output CADLeaf



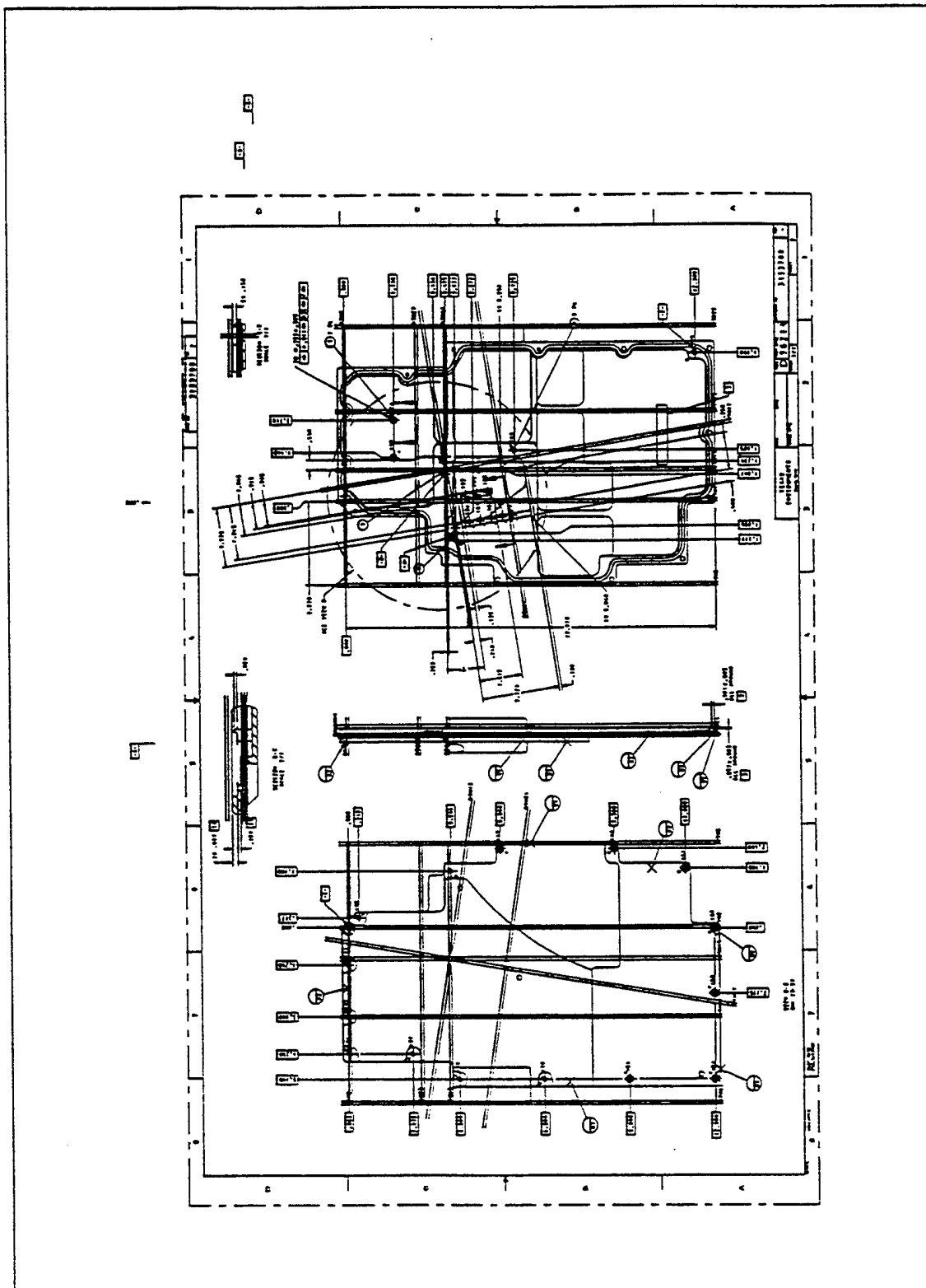
### 10.1.7 Output Generic



## 10.1.8 Output IGESView

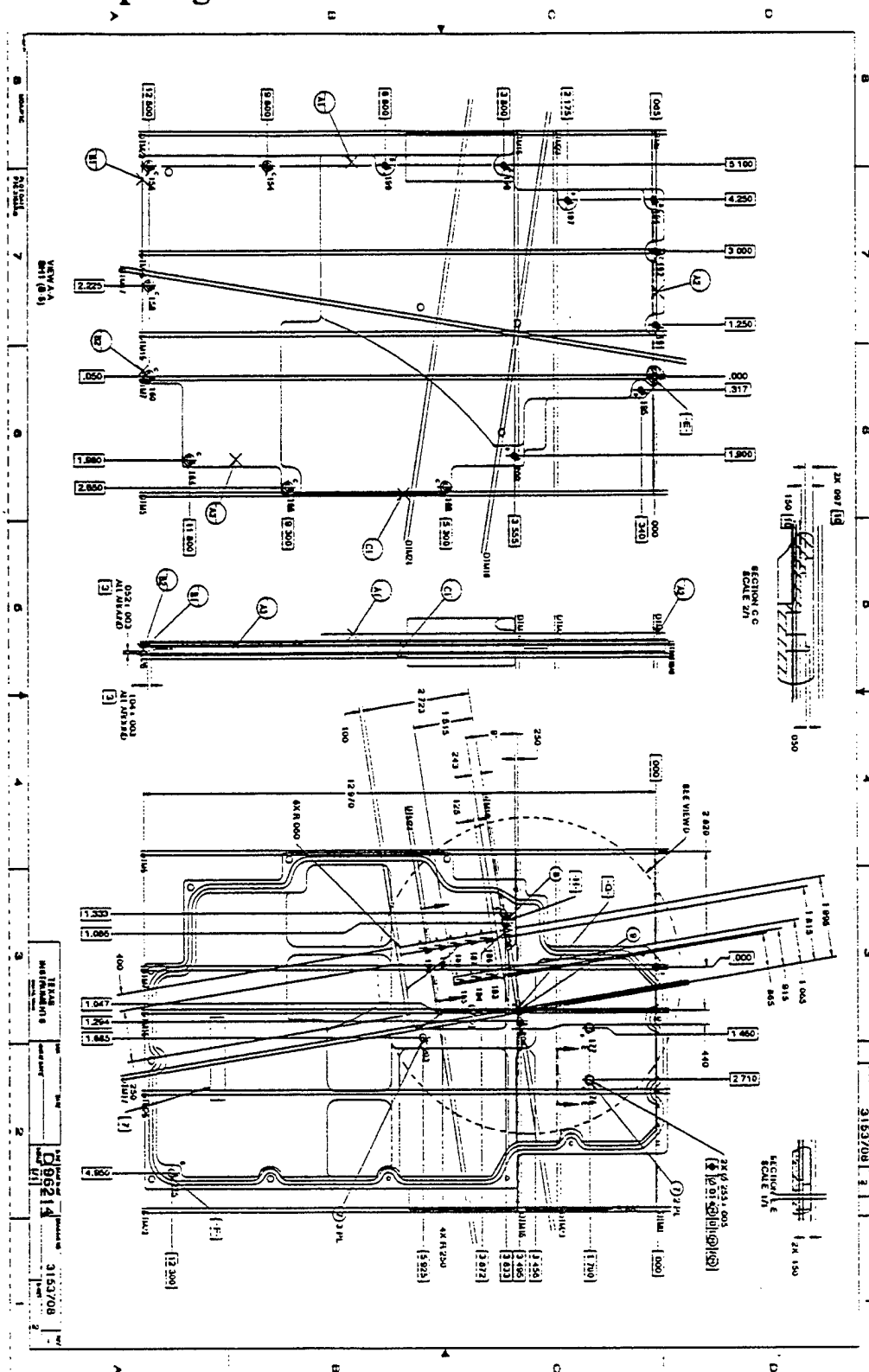


## 10.1.9 Output IGESWorks





### 10.1.10 Output iges2draw/IslandDraw





---

## 10.2 File D001Q002

### 10.2.1 Parser/Verifier Log

```
*****
****  IGES PARSER/VERIFIER  ****
****      MARCH 1993      ****
****  IGES Data Analysis  ****
****      (708) 344-1815  ****
*****
```

Input file is d001q002.igs  
Checking conformance to CALS Class II (MIL-D-28000A 2/10/92)  
Today is February 28, 1994 12:15 AM

```
*****
****  CHECK FILE SYNTAX  ****
*****
```

<u>Section</u>	<u>Records</u>	
Start	21	
Global	4	
Directory	3552	( 1776 Entities)
Parameter	2604	
Terminate	1	

No syntax errors detected.

```
*****
****  SUMMARY AND STATISTICS  ****
*****
```

#### \*\*\* File and Product Name Information \*\*\*

File name from sender = '3153708\_ptc\_cals2.igs'  
File creation Date.Time = '940209.084243'  
Model change Date.Time = ''  
Author = 'igesuser'  
Department = '<UNKNOWN>'  
Product name from sender = '3153708\_2'  
Destination product name = '3153708\_2'

#### \*\*\* Parameter Delimiters \*\*\*

Delimiter = ','  
Terminator = ';'

---

\*\*\* Originating System Data \*\*\*

System ID = 'Pro/ENGINEER by Parametric Technology Corporation'  
Preprocessor version = 'D-02-39'  
Specification version = 9 (IGES 5.1)

ERROR 4048: Illegal specification version for CALS Class II specified.

\*\*\* Precision levels \*\*\*

Integer bits = 32  
Floating point - Exponent = 38 Mantissa = 6  
Double precision - Exponent = 308 Mantissa = 15

\*\*\* Global Model Data \*\*\*

Model scale = 1.0000E+00  
Unit flag = 1  
Units = 'INCH'  
Line weights = 32768  
Maximum line thickness = 5.000000E-01  
Minimum line thickness = 1.525879E-05  
Granularity = 5.407766E-05  
Maximum coordinate = 5.407982E-01

Drafting standard applicable to original data is not specified.

\*\*\* Status Flag Summary \*\*\*

Blank status:	Visible	1776
	Blanked	0
Independence:	Independent	1423
	Physically Subordinate	352
	Logically Subordinate	1
	Totally Subordinate	0
Entity use:	Geometry	1157
	Annotation	619
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Construction geometry	0
	Not Specified	0
Hierarchy:	Structure DE applies	1776
	Subordinate DE applies	0
	Hierarchy property applies	0
	Not Specified	0

\*\*\* Entity Occurrence Counts \*\*\*

Entity	Form	Level	Count	Type
-----	----	-----	-----	-----
100	0	0	296	Circular arc
106	11	0	23	Copious data - Piecewise planar, linear string(2D linear path)
106	20	0	4	Centerline
106	40	0	83	Witness line
110	0	0	921	Line
202	0	0	1	Angular dimension
206	0	0	1	Diameter dimension
210	0	0	12	General label
212	0	0	256	General note
214	3	0	64	Leader arrow - Filled triangle
214	4	0	12	Leader arrow - No arrowhead
216	0	0	22	Linear dimension
218	0	0	43	Ordinate dimension
222	0	0	1	Radius dimension
228	0	0	32	General symbol
404	0	1	1	Drawing
406	15	1	1	Property - Name
406	16	1	1	Property - Drawing size
406	17	1	1	Property - Drawing units
410	0	1	1	View - Orthographic parallel

\*\*\* Entity Count by Level \*\*\*

Level	Count
0	1771
1	5

\*\*\* Labeling Information \*\*\*

0% of the entities are labeled.  
Unlabeled 1776

\*\*\* Line Fonts Used in Data \*\*\*

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
282	-	-	106	-	790	-	-	Solid
13	-	-	-	-	2	-	-	Dashed
1	-	-	-	-	5	-	-	Phantom
-	-	-	4	-	124	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted

---

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Line Widths Used in Data \*\*\*

Weight	Count	Width
Defaulted	1776	(0.0000)

\*\*\* Colors Used in Data \*\*\*

Defaulted	5
Red	48
Yellow	1091
White	632

\*\*\*\*\*  
\*\*\*\*\* ENTITY ANALYSIS \*\*\*\*\*  
\*\*\*\*\*

\*\*\* Entity type: 100  
\*\*\* Entity type: 106  
\*\*\* Entity type: 110

CAUTION 2336: Zero length line at D 1687.  
-- 921 lines averaging 1.516383E+00 units --

\*\*\* Entity type: 202  
\*\*\* Entity type: 206  
\*\*\* Entity type: 210  
\*\*\* Entity type: 212

307 text strings in data file.  
Average text aspect ratio in file is 0.8888776.  
Minimum text aspect ratio in file is 0.6666667.  
Maximum text aspect ratio in file is 1.8333333.

FONTS USED IN FILE

FONT	COUNT	NAME
1	284	Default ASCII Style
1002	1	Symbol Font 2
1003	30	Drafting Font

\*\*\* Entity type: 214

Average arrow aspect ratio in file is 3.0000000.  
Minimum arrow aspect ratio in file is 3.0000000.  
Maximum arrow aspect ratio in file is 3.0000000.

\*\*\* Entity type: 216  
\*\*\* Entity type: 218  
\*\*\* Entity type: 222  
\*\*\* Entity type: 228

WARNING 2323: No geometry referenced by general symbol at D 11.

\*\*\* Entity type: 404

Drawing at D 1 contains 1 views.  
Drawing at D 1 contains 0 annotation entities.

\*\*\* Entity type: 406  
\*\*\* Entity type: 410

Scale of view at D 9 is 1.000000E+00.  
Orthographic View entity at D 9 has 0 clipping planes specified.  
XMIN = Not Set XMAX = Not Set  
YMIN = Not Set YMAX = Not Set  
ZMIN = Not Set ZMAX = Not Set

\*\*\* Message Summary \*\*\*

2009: 1 Illegal defaults.  
2015: 1 Mathematically incorrect definitions.  
4011: 1 Problems in the Global section

\*\*\* Error Summary \*\*\*

0 fatal errors  
0 severe errors  
1 errors  
1 warnings  
1 cautions  
0 nitpicks  
0 notes

\*\*\* End of Analysis of d001q002.igs \*\*\*

---

## 10.2.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

=====

File: C:/TMP/D001Q002.xli  
Date: Mon, Feb 28, 1994  
Time: 12:48:41

=====

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750  
Translating from IGES file: C:/TMP/D001Q002.IGS  
to AutoCAD Drawing: C:\D001Q002.dwg

=====

Options obtained from: default settings

Curves Approximated to Tolerance of 0.01  
Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

IGES Text font	Style Name	ACAD Font
0	SYMBOL0	iges0
1	STANDARD	txt
2	LEROY	txt
3	FUTURA	txt
6	COMP80	txt
12	GOTHICE	gothice
13	GOTHICI	gothici
14	ROMANS	romans
17	ROMANT	romant
18	ROMAND	romand
19	OCR	txt
1001	SYMBOL1	iges1001
1002	SYMBOL2	iges1002
1003	SYMBOL3	iges1003
2001	KANJI	bigfont

IGES Linefont/AutoCAD Linetype mapping

IGES Line Font	AutoCAD linetype	Shape file
0	BYLAYER	
1	CONTINUOUS	
2	DASHED	acad.lin
3	PHANTOM	acad.lin
4	CENTER	acad.lin

---



---

5 DOT acad.lin

---

Parse phase

\*\*\* Warning (IEVM\_BAD\_GEOM\_PTR\_228) \*\*\*  
(DE 111, TF 228:0) Entity references DE 115 of type 106:20. Pointer must  
reference a Curve entity.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

\*\*\* Warning (IEVM\_NUM\_POINTS\_LOW\_106) \*\*\*  
(DE 115, TF 106:20) Entity has too few data points. Number of data points  
found was 2. Number of data points must be at least 3.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

\*\*\* Warning (IEVM\_NUM\_POINTS\_LOW\_106) \*\*\*  
(DE 121, TF 106:20) Entity has too few data points. Number of data points  
found was 2. Number of data points must be at least 3.

---

Start Section:

CONFORMANCE: This IGES file conforms to the MIL-D-28000A Class II  
subset (Engineering Drawings) dated December 19, 1990.

DOD-STD-100 and MIL-T-31000 part and drawing identification:

Revision letters:

Performing organization:

Date of the ASME Y14.26M file pre-processing:

Contract Number:

Intended drawing size letter:

Number of drawing sheets in the file:

Data organization method with contents of each level:

IGES/Works Version v1.4.2 Subset Generator  
PTC IGES file: 3153708\_ptc\_cals2.igs

Global Section:

---

Parameter Delimiter: ,  
Record Delimiter: ;  
Sending Product ID: 3153708\_2  
File Name: 3153708\_ptc\_cals2.igs  
System ID: Pro/ENGINEER by Parametric Technology Corporation  
Preprocessor Version: D-02-39  
Size of Integer: 32  
Sgl. Precision Mag: 38  
Sgl. Precision Sig: 6  
Dbl. Precision Mag: 308  
Dbl. Precision Sig: 15  
Receiving Product ID: 3153708\_2  
Model Space Scale: 1.000000  
Unit Flag: 1  
Unit String: INCH  
# of Line Weights: 32768  
Maximum Line Width: 0.500000  
Creation Date: 02/09/94 08:42:43  
Minimum Resolution: 0.000054  
Maximum Coordinate: 0.540798  
Author: igesuser  
Organization: <UNKNOWN>  
IGES Version Number: 9  
Drafting Standard: 0  
Model Create/Modify Date: Not Specified

Entity Summary:

Type Count	Form	Description
100	0	Circular Arc
296		
106	11	Planar Piecewise Linear Curve
23		
106	20	Centerline Through Points
4		
106	40	Witness Line
83		
110	0	Line
921		
202	0	Angular Dimension
1		
206	0	Diameter Dimension
1		
210	0	General Label
12		

---

212	0	General Note (Simple)
256		
214	3	Leader (Filled triangle)
64		
214	4	Leader (No arrowhead)
12		
216	0	Linear dim - undetermined form
22		
218	0	Ordinate Dimension
43		
222	0	Radius Dimension (Single Leader)
1		
228	0	General Symbol
32		
404	0	Drawing (form 0)
1		
406	15	Property (Name)
1		
406	16	Property (Drawing Size)
1		
406	17	Property (Drawing Units)
1		
410	0	View
1		

-----  
Total 1776  
=====

#### Translation phase

Drawing Entity (404 Form 0) at DE 1, with  
 name = 3153708\_2\_2,  
 size = 34.000000, 22.000000,  
 units = INCH,  
 was processed in the AutoCAD drawing file: C:\D001Q002.dwg

\*\*\* Warning (ACAD\_NEW\_VIEW\_VOLUME\_GENERATED) \*\*\*  
 ( DE: 9 TF: 410:0 )

A new view volume has been generated for the view with:  
 XMIN (-4.526313), XMAX (41.861857),  
 YMIN (-4.526313), YMAX (28.533200),  
 ZMIN (-12.605469), ZMAX (5.305885).

#### IGES Entity Summary

Type	Form	Description	Count	Processed	Errors
=====	=====	=====	=====	=====	=====
100	0	Circular Arc	296	296	0

106	11 Planar Piecewise Linear Curve	23	23	0
106	40 Witness Line	83	83	0
110	0 Line	921	921	0
202	0 Angular Dimension	1	1	0
206	0 Diameter Dimension	1	1	0
210	0 General Label	12	12	0
212	0 General Note (Simple)	255	248	7
214	3 Leader (Filled triangle)	64	64	0
214	4 Leader (No arrowhead)	12	12	0
216	0 Linear dim - undetermined form	22	22	0
218	0 Ordinate Dimension	43	43	0
222	0 Radius Dimension (Single Leader)	1	1	0
228	0 General Symbol	32	31	1
404	0 Drawing (form 0)	1	1	0
406	15 Property (Name)	1	1	0
406	16 Property (Drawing Size)	1	1	0
406	17 Property (Drawing Units)	1	1	0
410	0 View	1	1	0
		=====	=====	=====
Totals		1771	1763	8

#### AutoCAD Entity Summary

Entity	Created	Errors
=====	=====	=====
LINE	951	0
CIRCLE	106	0
TEXT	213	0
ARC	190	0
SOLID	16	0
INSERT	69	0
POLYLINE	23	0
DIMENSION	68	0
BLOCK	69	0
Totals	=====	=====
	1705	0

#### Error Summary:

The following message was issued 4 time(s)  
Entity has too few data points. Number of data points found was %d. Number of data points must be at least %d.

The following message was issued 4 time(s)  
Entity references DE %ld%s. Pointer must reference a Curve entity.

The following message was issued 1 time(s)  
A new view volume has been generated for the view with:  
XMIN (%lf), XMAX (%lf),  
YMIN (%lf), YMAX (%lf),  
ZMIN (%lf), ZMAX (%lf).

Status: 0  
Warning: 9  
Error: 0  
Fatal: 0

Elapsed Time:

Processor: 00:00:40  
Clock: 00:00:41

=====

### 10.2.3 Parser Log - IGESWorks

IGES/Works v1.4.1  
International TechneGroup Incorporated  
Validation Logfile

Date: February 28, 1994  
Model: d001q002

\*\*\*\*\* Validation Parameters \*\*\*\*\*

#### TOLERANCE CONFIGURATION VALUES -----

ZERO_TOL	= 1.000000e-13
MODEL_SPACE_PNT_COIN_TOL	= 1.000000e-03
PARM_SPACE_PNT_COIN_TOL	= 1.000000e-08
ISO_PARM_CURVE_TOL	= 1.000000e-08
NON_CONV_TOL	= 1.000000e-12
KNOT_COIN_TOL	= 1.000000e-10
SAME_INTER_TOL	= 1.000000e-12
PARALLEL_LINES_TOL	= 1.000000e-07
ANGLE_COIN_TOL	= 1.000000e-05
PNT_PROJ_TOL	= 1.000000e-07
COLIN_TOL	= 1.000000e-07
COPLANAR_TOL	= 1.000000e-08
ZERO_NORMAL_TOL	= 1.000000e-06
SAME_TANGENT_TOL	= 1.000000e-04
SAME_CURVATURE_TOL	= 1.000000e-04
SAME_DERIVATIVE_TOL	= 1.000000e-03
MODEL_LINEAR_APPROX_TOL	= 2.220446e-16

\*\*\*\*\* Entity Listing Before Validation \*\*\*\*\*

Count	Type	Form	Description
-----	----	----	-----
296	100	0	Circular Arc
23	106	11	Planar Piecewise Linear Curve
4	106	20	Centerline Through Points
83	106	40	Witness Line
921	110	0	Line
1	202	0	Angular Dimension
1	206	0	Diameter Dimension
12	210	0	General Label
256	212	0	General Note (Simple)
64	214	3	Leader (Filled triangle)
12	214	4	Leader (No arrowhead)
22	216	0	Linear dim - undetermined form

43	218	0	Ordinate Dimension
1	222	0	Radius Dimension (Single Leader)
32	228	0	General Symbol
1	404	0	Drawing (form 0)
1	406	15	Property (Name)
1	406	16	Property (Drawing Size)
1	406	17	Property (Drawing Units)
1	410	0	View

1776 - Number of entities in selection list

\*\*\*\*\* Entity Validation \*\*\*\*\*

\*\*\* Warning (IEVM\_BAD\_GEOM\_PTR\_228) \*\*\*

(DE 111, TF 228:0) This General Symbol entity (228) has a pointer (Index 3 through 2+N of Parameter Data) that references DE 115 of type 106:20. The pointer must reference a Curve entity.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_ZERO\_CHARS\_212) \*\*\*

(DE 113, TF 212:0) This General Note entity (212) has a substring, 1, with zero characters.

\*\*\* Warning (IEVM\_NUM\_POINTS\_LOW\_106) \*\*\*

(DE 115, TF 106:20) This Copious Data entity (106) has only 2 data points, which is too few for the stated form. The entity must have at least 3 data points.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_ZERO\_CHARS\_212) \*\*\*

(DE 169, TF 212:0) This General Note entity (212) has a substring, 1, with zero characters.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_BAD\_COORD\_VALUE) \*\*\*

(DE 933, TF 212:0) This independent or logically dependent entity had a coordinate value of 2.8589998e+01, which is beyond the maximum coordinate value set in the Global section (at Index 20) of the IGES file. The maximum coordinate value allowed is 5.4079824e-01.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_ZERO\_LENGTH\_110) \*\*\*

(DE 1687, TF 110:0) This Line entity has a zero length within the stated tolerance.

Entity Validation Summary:

Type	Form	Entity Count	Number Valid	Number of Corrected		Number of Uncorrected	
				Warnings	Errors	Warnings	Errors
Global Section		1	1	0	0	0	0
100	0	296	16	0	0	1680	0
106	11	23	0	0	0	230	0
106	20	4	0	0	0	0	4
106	40	83	83	0	0	0	0
110	0	921	60	0	0	3323	0
202	0	1	1	0	0	0	0
206	0	1	1	0	0	0	0
210	0	12	12	0	0	0	0
212	0	256	104	0	0	321	0
214	3	64	64	0	0	0	0
214	4	12	12	0	0	0	0
216	0	22	22	0	0	0	0
218	0	43	43	0	0	0	0
222	0	1	1	0	0	0	0
228	0	32	31	0	0	0	4
404	0	1	1	0	0	0	0
406	15	1	1	0	0	0	0
406	16	1	1	0	0	0	0
406	17	1	1	0	0	0	0
410	0	1	1	0	0	0	0
Totals:		1777	456	0	0	5554	8

The following message was issued and suppressed 5540 times:

This independent or logically dependent entity had a coordinate value of %.7e, which is beyond the maximum coordinate value set in the Global section (at Index 20) of the IGES file. The maximum coordinate value allowed is %.7e.

The following message was issued and suppressed 3 times:

This General Note entity (212) has a substring, %d, with zero characters.

A message is suppressed when it has been issued more than 5 times. This value is controlled by the 'MAX\_MESSAGE' configuration parameter.

\*\*\*\*\*



## 10.2.4 Error Log - Preview

ERROR REPORT FOR FILE /novell/94007/d001q002.igs

>> File record length is 80

Terminate section report :

File Section	#lines
START	21
GLOBAL	4
DIRECTORY ENTRY	3552
PARAMETER DATA	2604
TERMINATE	1
TOTAL	6182

(Expect 80 X 6182 = 494560 bytes)

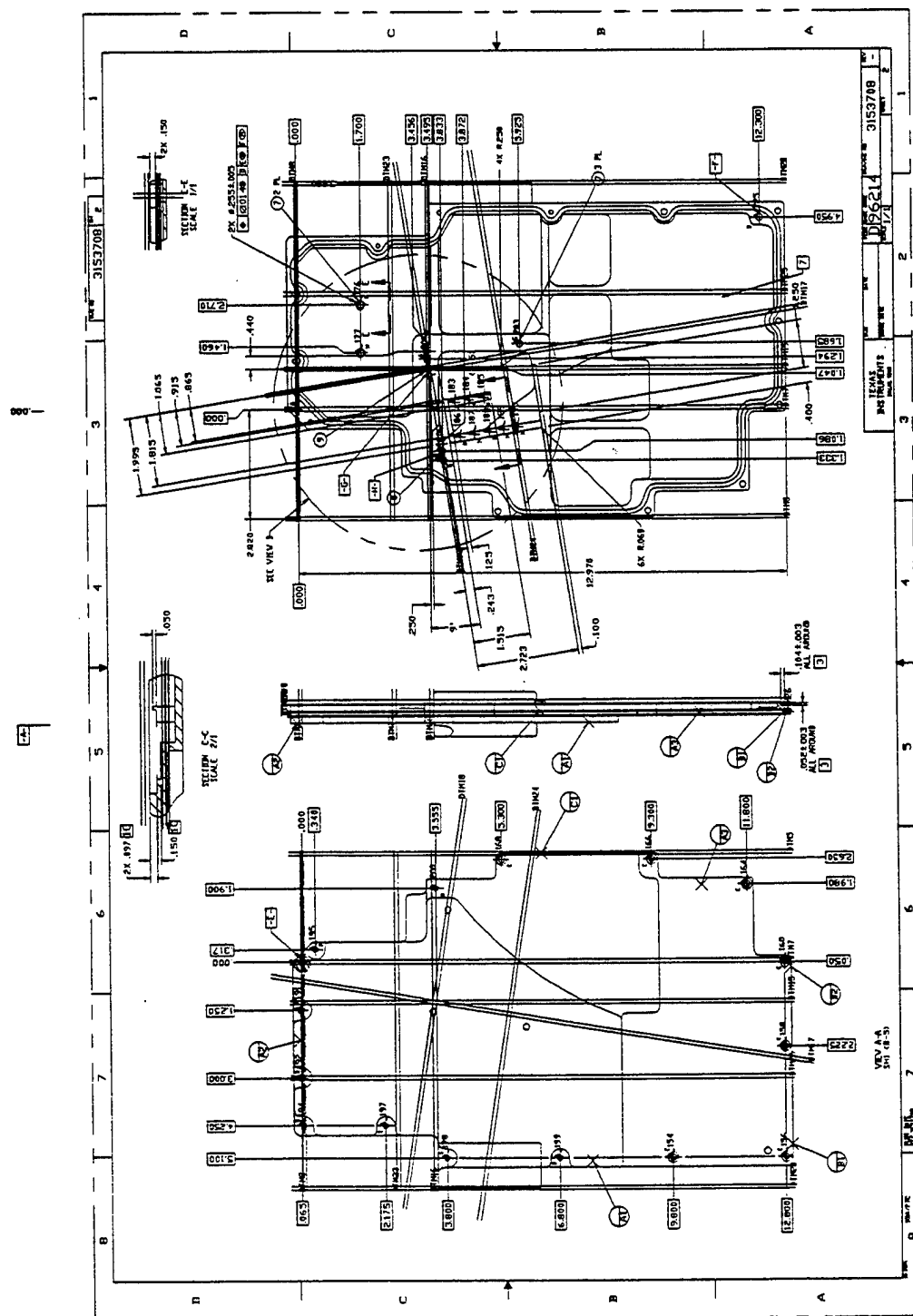
----- preliminary format scan complete -----

>> WARNING: Cannot use maximum power of 10 requested.  
: Requested maximum power of 308 using 307.  
: Field 11 line 2 of GLOBAL section. (Max. Exp. for Double)  
Technology Corporation,7HD-02-39,32,38,6,308,15,9H3153708\_2,1.0D0,1,4HINCH,G  
2 ^^^

>> WARNING: Number of line widths exceed IGES spec. allowed.  
: Read value 32768. Use value 32767.  
: (Maximum line width reduced from 0.5 to 0.499985.)  
: Field 17 line 3 of GLOBAL section. (Max # Line Weights)  
32768,.5D0,13H940209.084243,5.4077661160653D-5,.54079824353627D0,8HigesuG  
3^^^^^

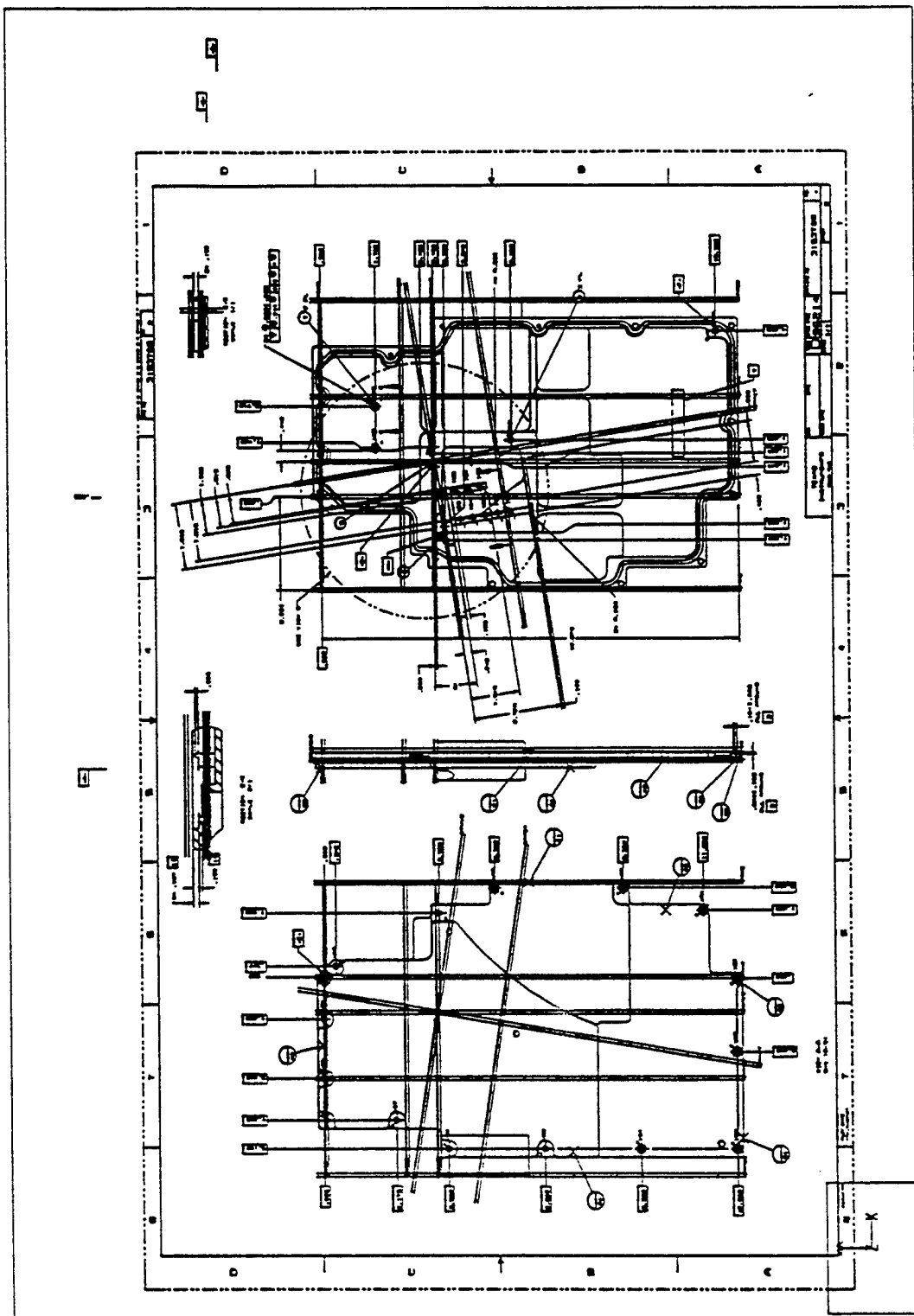
Found 0 errors and 2 warnings

### 10.2.5 Output AutoCAD R12



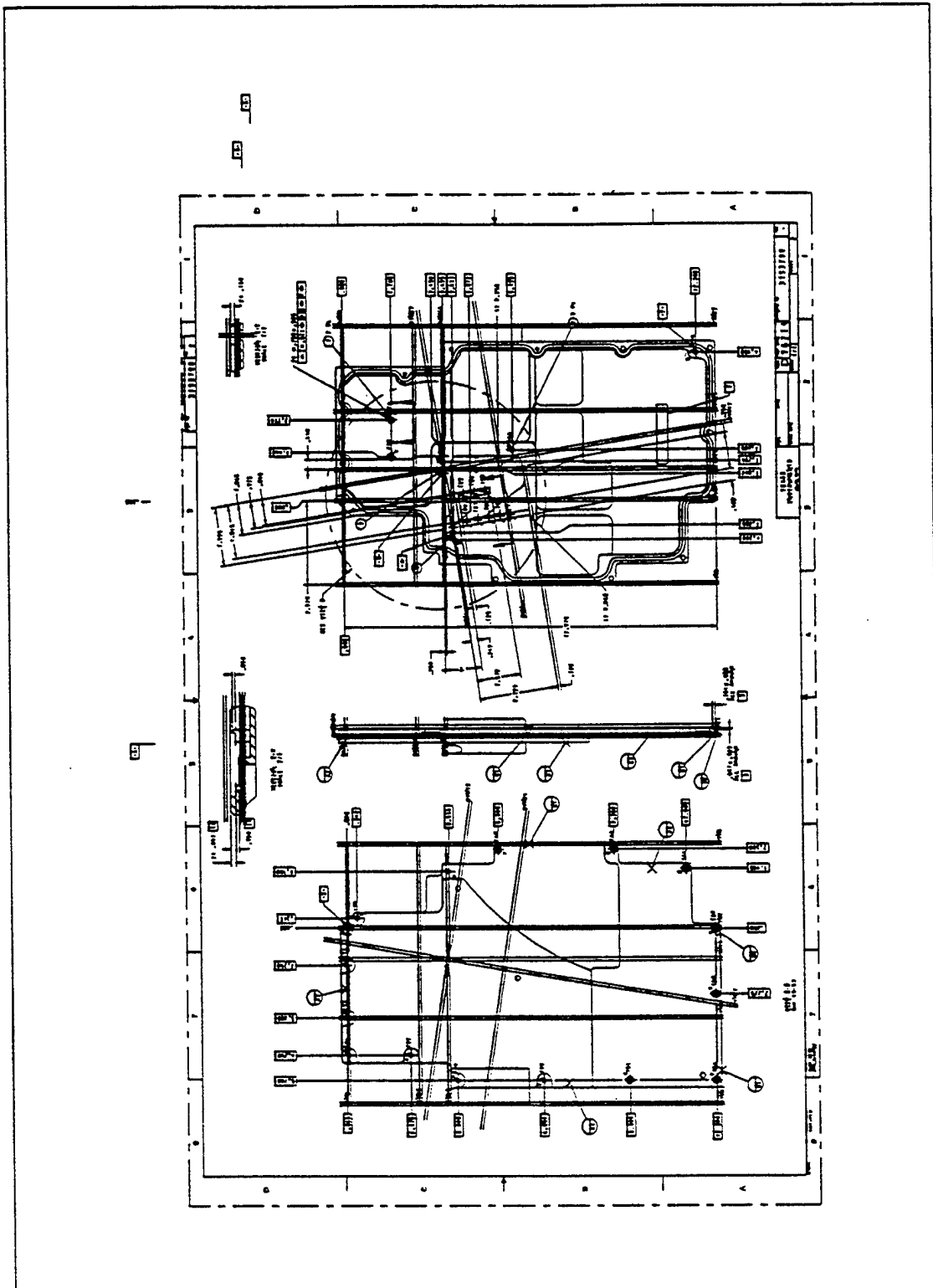
Technical drawing of a ship's hull structure, showing a plan view of the hull and a cross-section view. The plan view includes numerous dimensions and labels for various structural components. The cross-section view shows the internal structure of the hull, including the keel, bottom, and side plates. The drawing is labeled "HULL" and "SHIP".

## 10.2.7 Output Generic



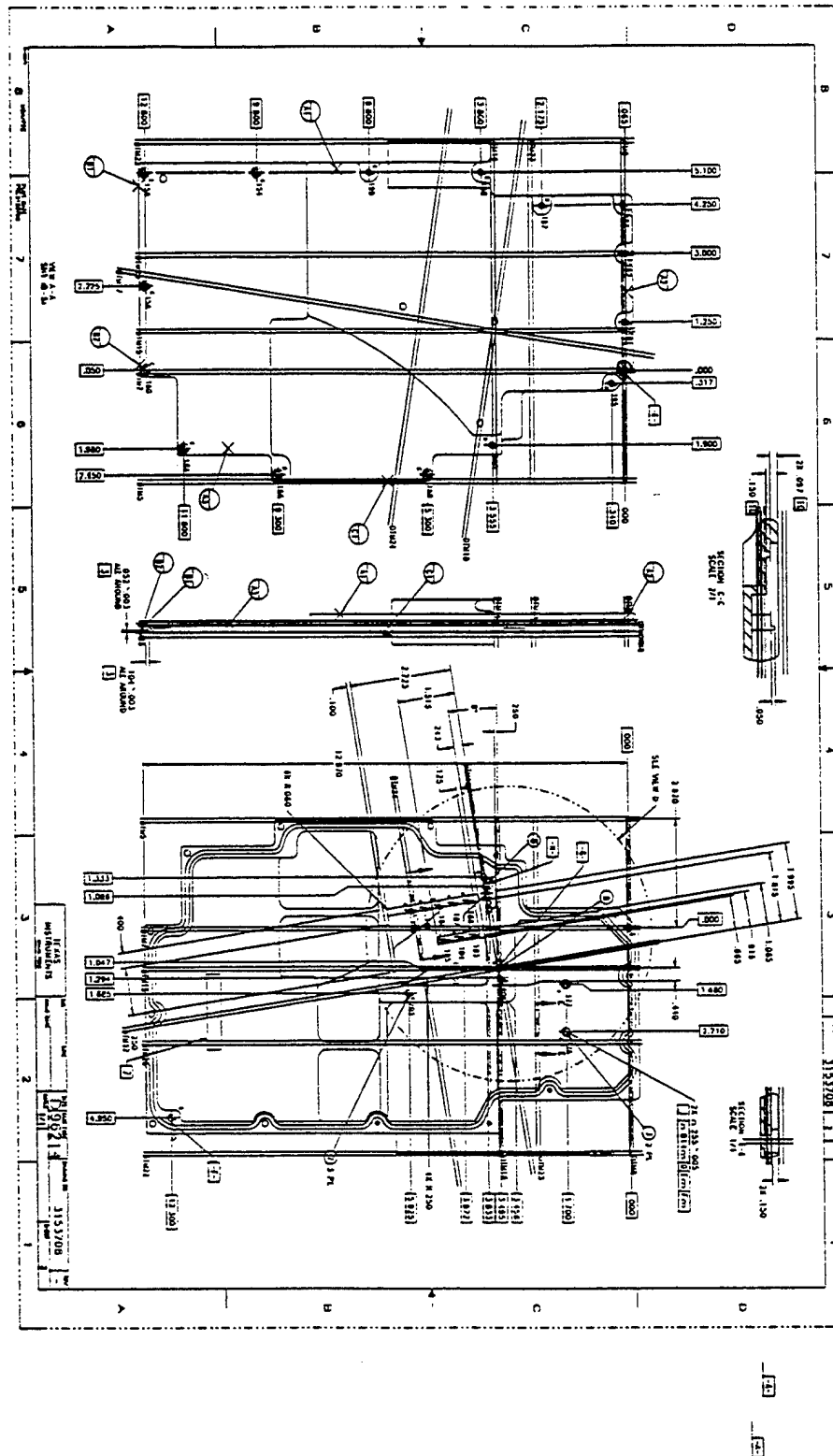
[illegible]

## 10.2.9 Output IGESWorks





## 10.2.11 Output Preview





### 11.1 Provided Hard Copy

