INL/MIS-21-61880-Revision-0

GTRI Large Blister Threshold Furnace

March 2021

Gregory K Housley

Changing the World's Energy Future

Idaho National Laboratory

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GTRI Large Blister Threshold Furnace

Gregory K Housley

March 2021

Idaho National Laboratory
Idaho Falls, Idaho 83415

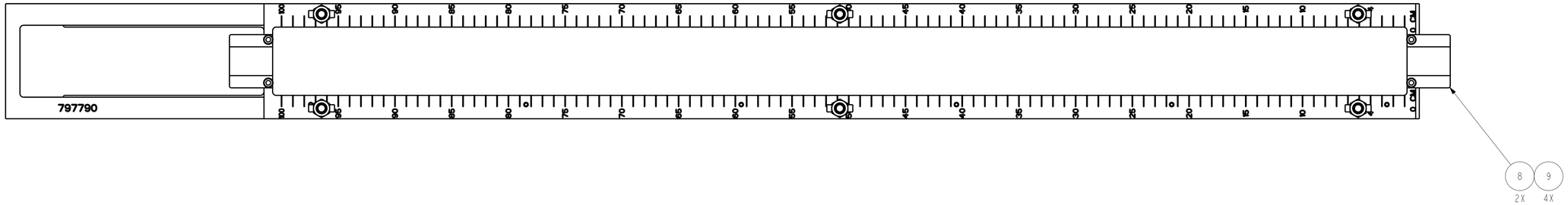
http://www.inl.gov

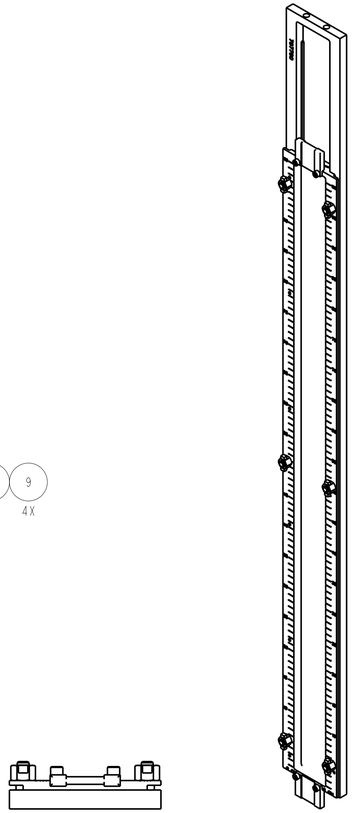
Prepared for the
U.S. Department of Energy
Under DOE Idaho Operations Office
Contract DE-AC07-05ID14517

REVISIONS		
REV.	DESCRIPTIONS	EFFECTIVE DATE

NOTES:

1. INSTALLATION TORQUE OF ITEM 6: 16-20 LB-FT.
2. APPLY BORON NITRIDE AEROSOL LUBRICOAT TO NUT THREADS AND NUT FACE PRIOR TO INSTALLATION.





-1 ASSEMBLY

	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL/SPECIFICATION OR VENDOR NAME	ITEM NO.
	4		SCREW, HEX SOC HD CAP #12-24 UNC-3A X 3/8 LG	CARBON STEEL BLACK OXIDE FINISH	9
	2	797797-1	INSERT GRIP		8
	6	797795-1	AFIP-7 CASSETTE INSERT NUT		7
	6	797794-1	AFIP-7 CASSETTE STUD		6
	1	797791-1	AFIP-7 CASSETTE INSERT		5
	1	797790-1	AFIP-7 CASSETTE FRAME		4
					3
					2
		-1	AFIP-7 CASSETTE		1

PARTS LIST

-1	797798
DASH NO.	NEXT ASSY
APPLICATION	

UNLESS OTHERWISE NOTED
ALL DIMENSIONS ARE IN INCHES. ANGULAR TOL. ±1/4°
REMOVE ALL BURRS AND SHARP EDGES. ALL MACHINED SURFACES TO BE 125/ OR FINER. STOCK FINISHES AS RECEIVED, ARE IN ACCORDANCE WITH THE LATEST REVISION OF ANSI/ASME B46.1. DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5-2009.

REQUESTER:	F. J. RICE
RESP ENGR:	D. L. WAHLQUIST
DESIGN:	E. E. CHAMBERS
DRAWN:	D. DUNCAN
PROJECT NO.	
SPCL CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE ECR NO.	639044
EFFECTIVE DATE:	9/13/16

Idaho National Laboratory

MEC 785
GTRI LARGE BLISTER THRESHOLD FURNACE

AFIP-7 CASSETTE
ASSEMBLY

SIZE	CAGE CODE	INDEX CODE NUMBER				DWG NO.	REV
		AREA	TYPE	CL	ORIG		
D	01MF3	273	0785	41	081	797792	0

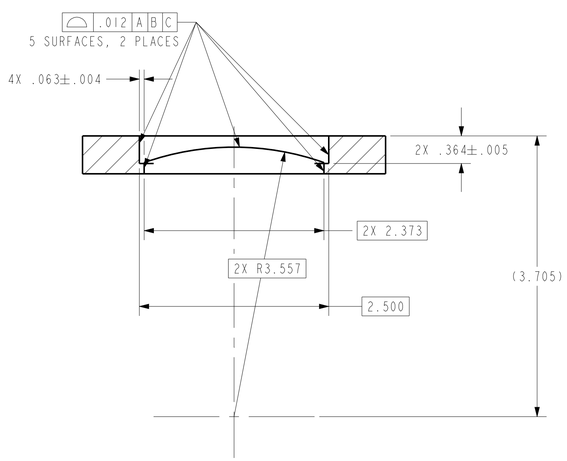
SCALE: 1/2 SHEET 1 OF 1

PROE MODEL: 797792 PDM/LINK RELEASE LEVEL: Design PDM/LINK VERSION: 0.9

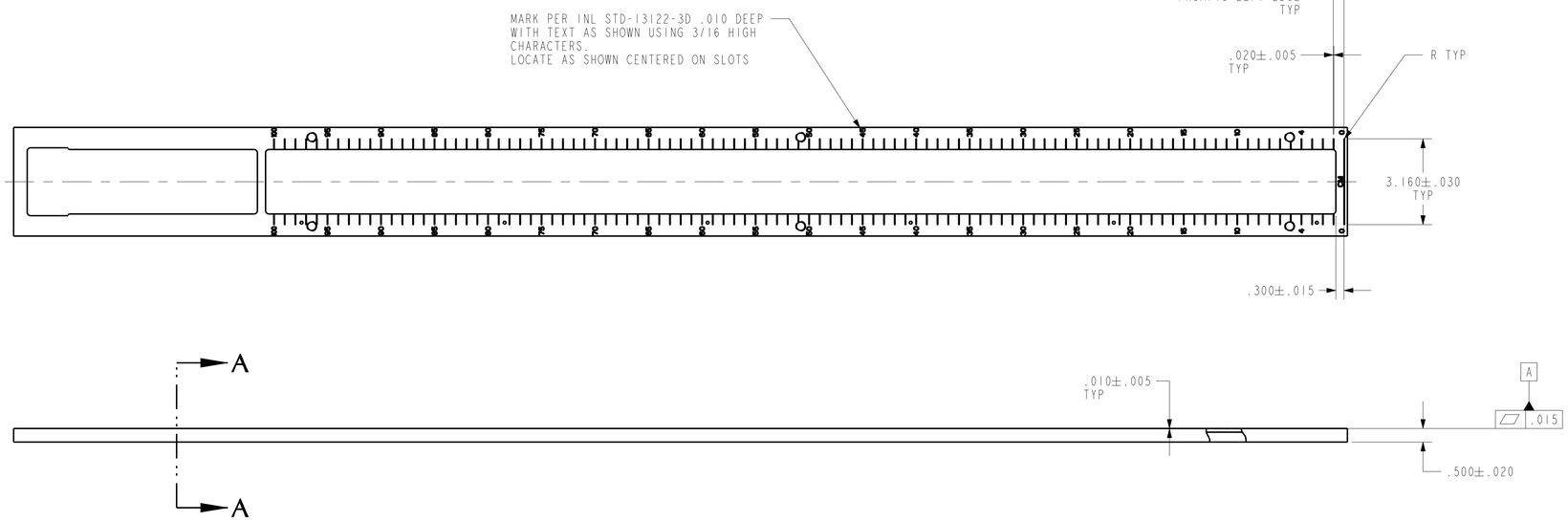
REVISIONS		
REV	DESCRIPTIONS	EFFECTIVE DATE

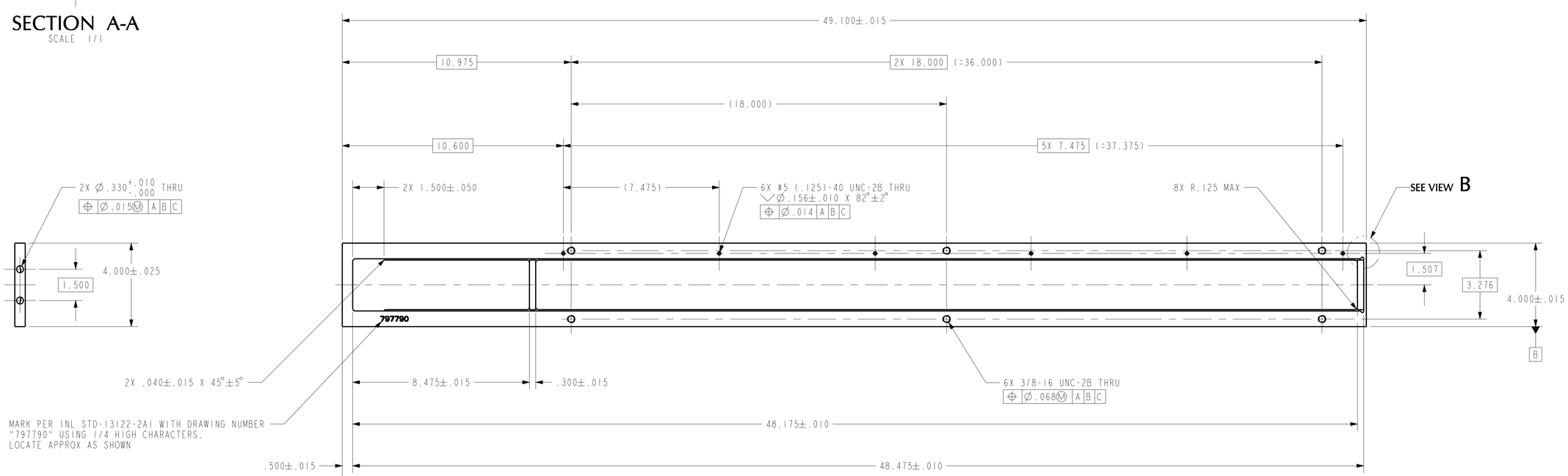
NOTES:

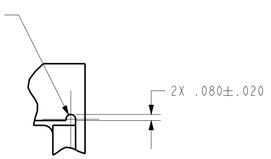
1. DIMENSIONS AND TOLERANCES APPLY AFTER HEAT TREATMENT AT 550°C FOR 1 HOUR IN THE BLISTER ANNEAL FURNACE.
2. SEE NCR 2016-0138.



SECTION A-A
SCALE 1/1







VIEW B
SCALE 1/1

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL/SPECIFICATION OR VENDOR NAME	ITEM NO.
	-1	AFIP-7 CASSETTE FRAME	PLATE SST 316L ASTM A240	1

PARTS LIST

-1	797792
DASH NO.	NEXT ASSY
APPLICATION	

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Idaho National Laboratory

MEC 785
GTRI LARGE BLISTER THRESHOLD FURNACE

AFIP-7 CASSETTE FRAME

SIZE	CAGE CODE	INDEX CODE NUMBER AREA	TYPE	CL	ORIG	DWG NO.	REV
D	01MF3	273	0785	41	081	797790	0

SCALE: 3/8 & NOTED
SHEET 1 OF 1

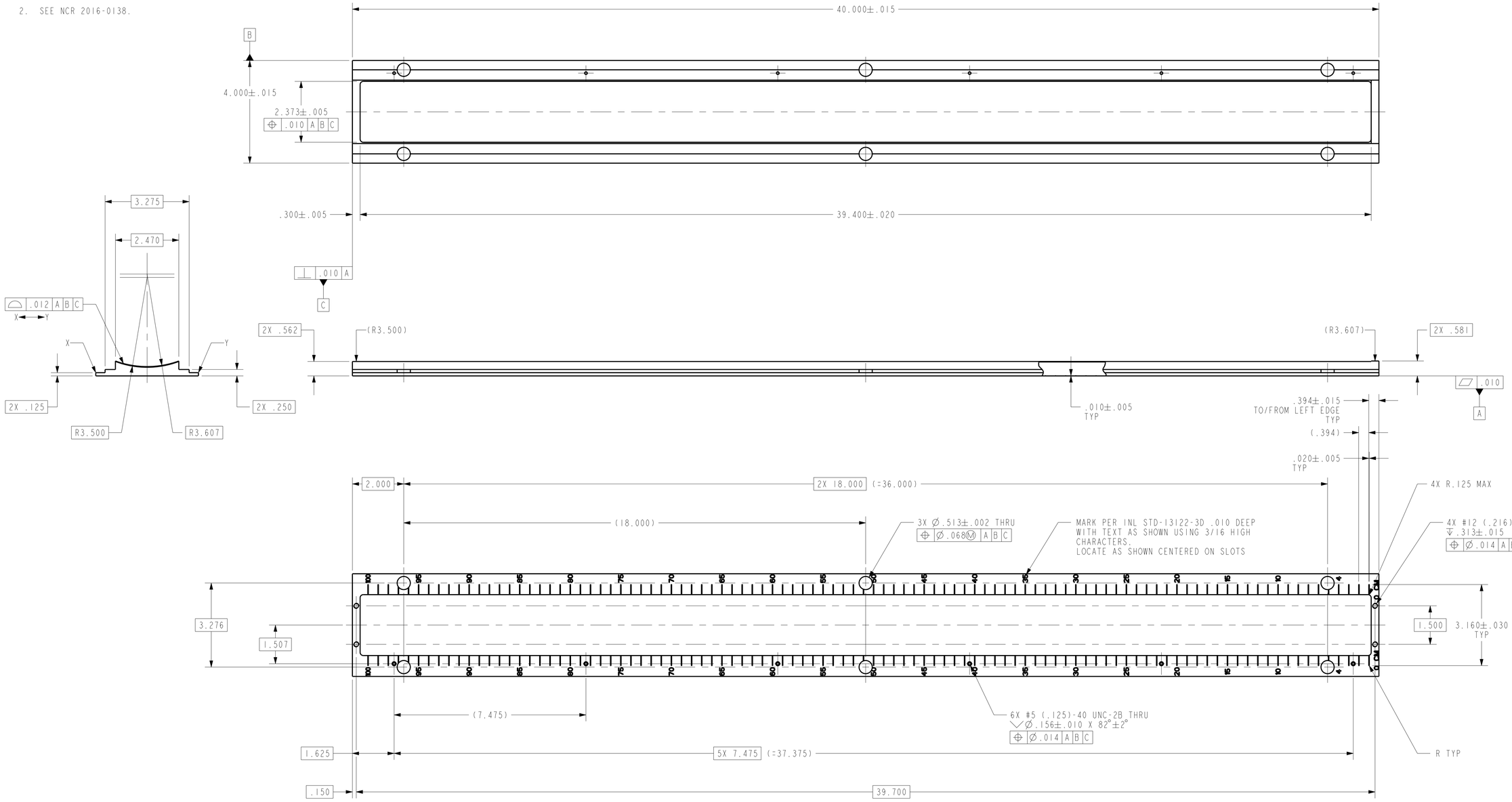
PROE MODEL: 797790 PDM/LINK RELEASE LEVEL: Design PDM/LINK VERSION: 0.10

INL_FORMAT-D.FRM REV 0

REVISIONS		
REV	DESCRIPTIONS	EFFECTIVE DATE

NOTES:

1. DIMENSIONS AND TOLERANCES APPLY AFTER HEAT TREATMENT AT 550°C FOR 1 HOUR IN THE BLISTER ANNEAL FURNACE.
2. SEE NCR 2016-0138.



QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL/SPECIFICATION OR VENDOR NAME	ITEM NO.
	-1	AFIP-7 CASSETTE INSERT	PLATE SST 316L ASTM A240	1

PARTS LIST

-1	797792
DASH NO.	NEXT ASSY
APPLICATION	

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EFFECTIVE DATE:	9/13/16

Idaho National Laboratory

MFC 785
GTRI LARGE BLISTER THRESHOLD FURNACE

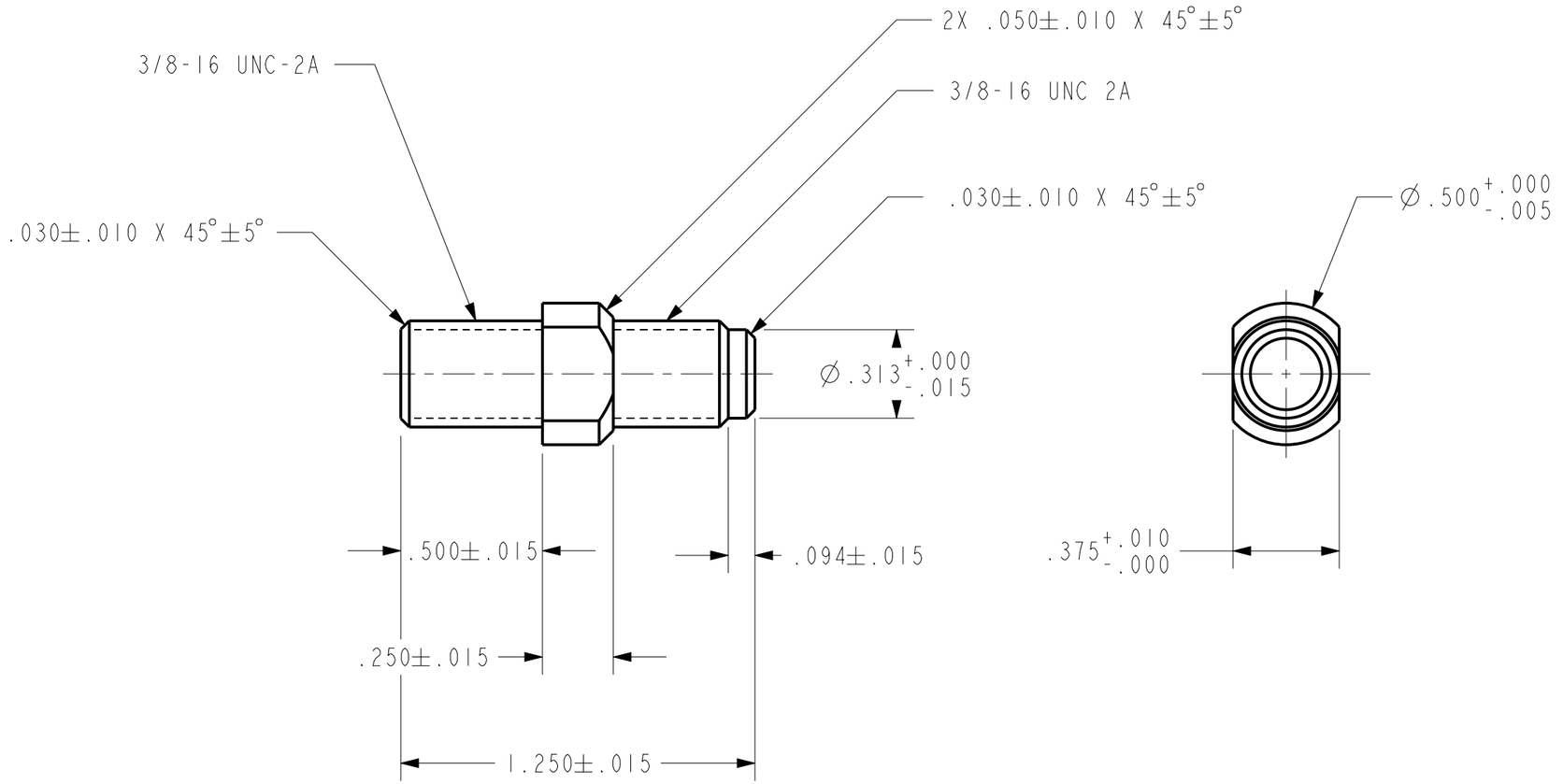
AFIP-7 CASSETTE INSERT

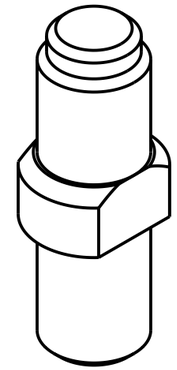
SIZE	CAGE CODE	INDEX CODE NUMBER AREA	TYPE	CL	ORIG	DWG NO.	REV
D	01MF3	275	0785	41	081	797791	0

SCALE: 1/2 SHEET 1 OF 1

PROE MODEL: 797791 PDM/LINK RELEASE LEVEL: Design PDM/LINK VERSION: 0.6

REVISIONS		
REV	DESCRIPTIONS	EFFECTIVE DATE





QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL/SPECIFICATION OR VENDOR NAME	ITEM NO.
	-1	AFIP-7 CASSETTE STUD	ROUND BAR NITRONIC 60 ASTM A276	1

PARTS LIST

-1	797792
DASH NO.	NEXT ASSY
APPLICATION	

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DRAWN:	D. DUNCAN
PROJECT NO.	
SPCL CODE	
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EFFECTIVE DATE:	9/13/16

Idaho National Laboratory

MFC 785
GTRI LARGE BLISTER THRESHOLD FURNACE
AFIP-7 CASSETTE STUD

SIZE	CAGE CODE	INDEX CODE NUMBER				DWG NO.	REV
		AREA	TYPE	CL	ORIG		
B	01MF3	273	0785	41	081	797794	0

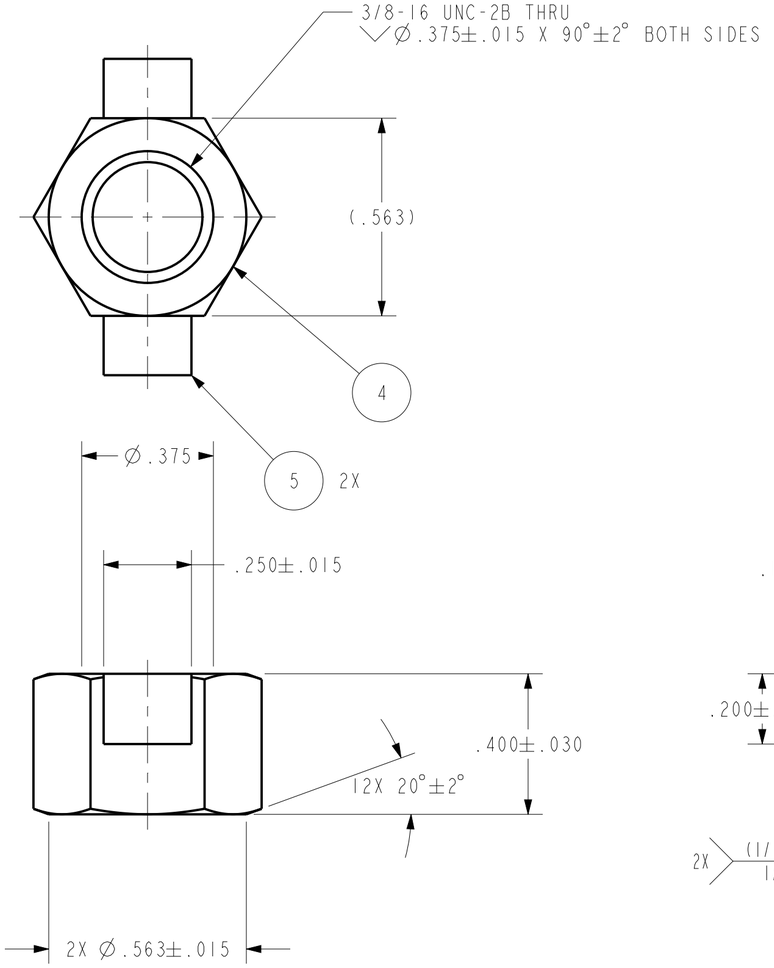
SCALE: 2/1

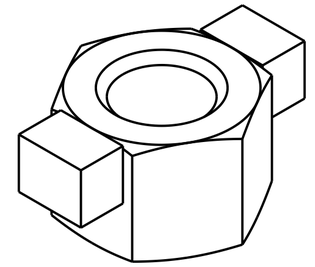
SHEET: 1 OF 1

REVISIONS		
REV	DESCRIPTIONS	EFFECTIVE DATE

NOTES:

1. WELD SYMBOLS PER AWS A2.4.
2. WELD PER INL WELDING PROCEDURE S2.0, USING ER308 PER AWS A5.9.
3. MAY FABRICATE FROM SOLID STOCK.





-1 WELDMENT

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL/SPECIFICATION OR VENDOR NAME	ITEM NO.
	-1			
	-1	AFIP-7 CASSETTE INSERT NUT		1
				2
				3
	2	-5	WING	PLATE OR BAR SST 304 ASTM A240 OR A276	5
	1	-4	HEX NUT	HEX BAR, 9/16 AF SST 304 ASTM A276	4

PARTS LIST

DASH NO.	NEXT ASSY
-1	797792
APPLICATION	

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MFC 785
GTRI LARGE BLISTER THRESHOLD FURNACE
AFIP-7 CASSETTE INSERT NUT
WELDMENT

SIZE	CAGE CODE	INDEX CODE NUMBER AREA	TYPE	CL	ORIG	DWG NO.	REV
C	01MF3	273	0785	41	081	797795	0

SCALE: 3/1 SHEET: 1 OF 1

PROE MODEL: 797795 PDM/LINK RELEASE LEVEL: Design PDM/LINK VERSION: 0.2