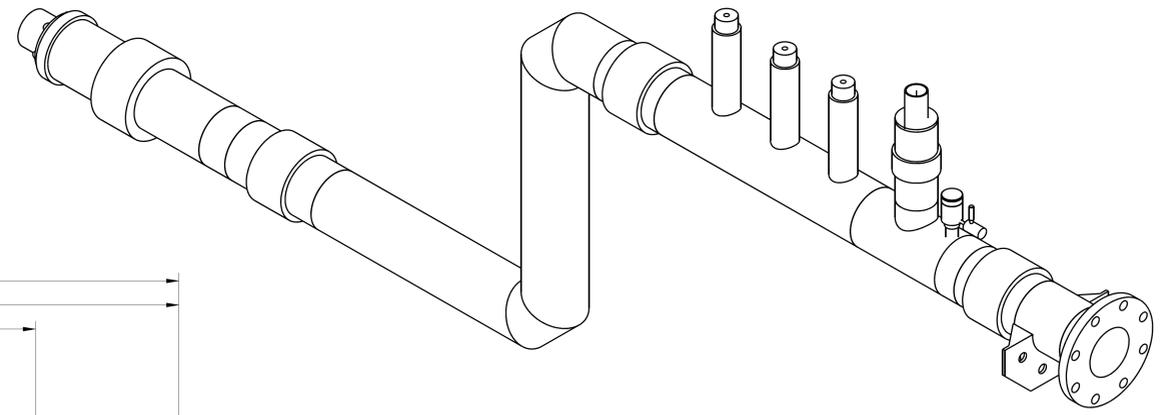
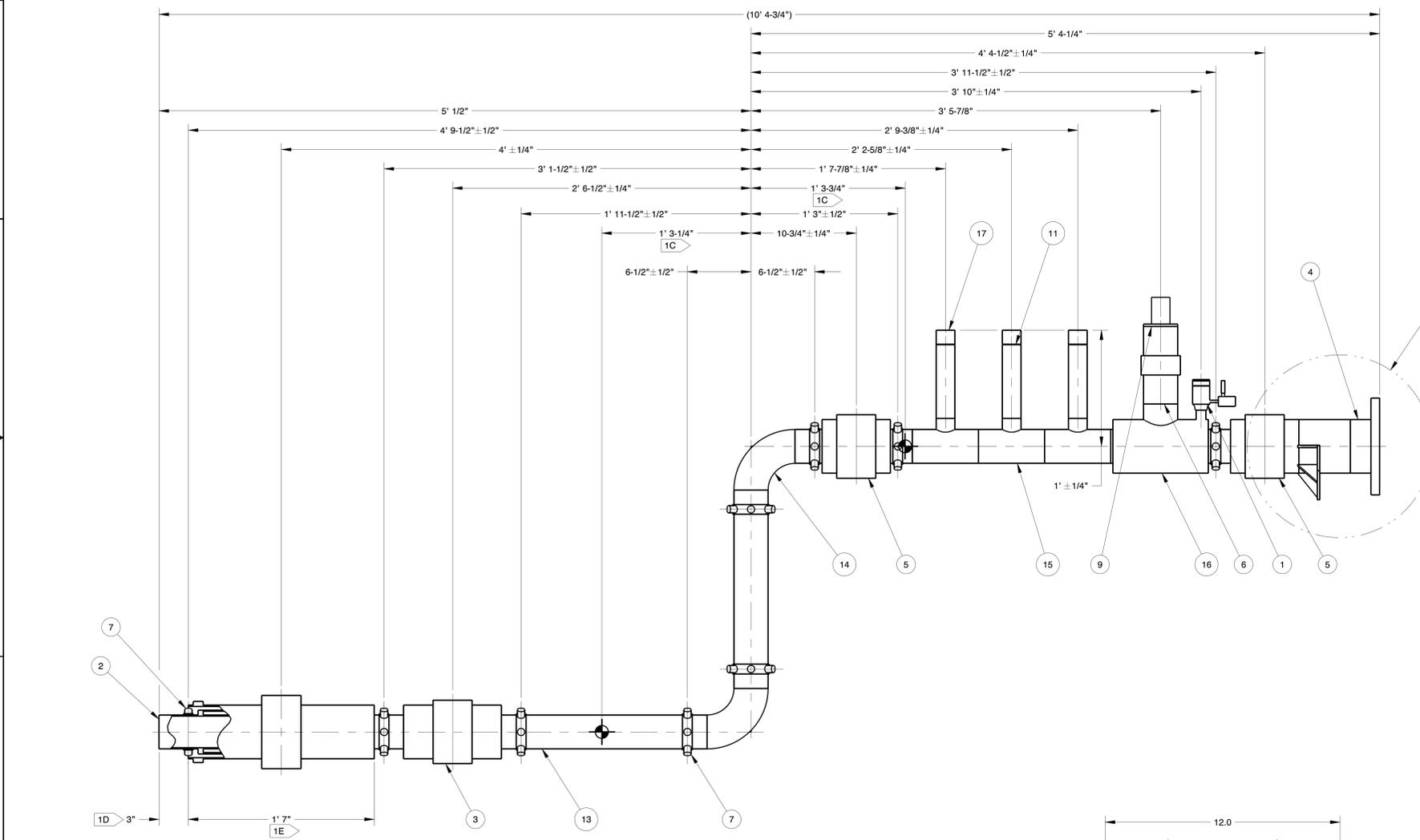


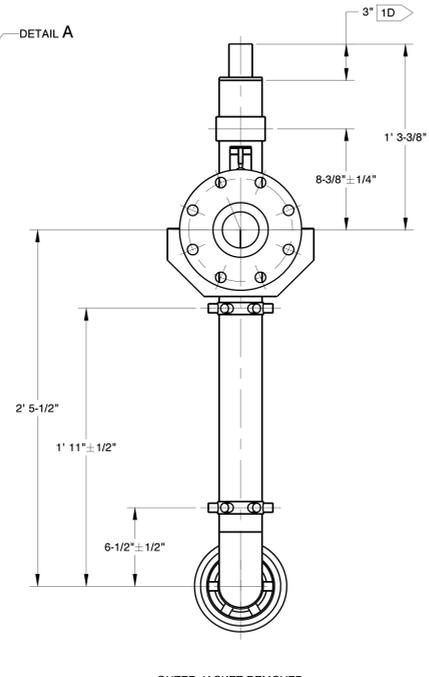
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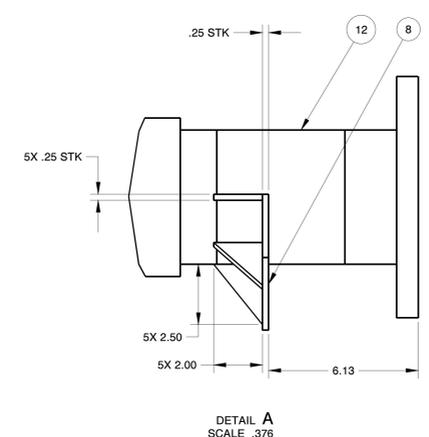
- NOTES:
- GENERAL
- 1A. INTERPRET THIS DRAWING PER ASME Y14.5-2009.
- 1B. THIS DRAWING PROVIDES THE PHYSICAL DIMENSIONS AND PARTS LIST FOR PIPE SPOOL ASSEMBLY. REFER TO PROCUREMENT SPECIFICATION K0000146597 FOR TECHNICAL, FABRICATION, TEST AND INSPECTION REQUIREMENTS.
- 1C. NOTED DIMENSION INDICATES CENTER LINE LOCATION FOR EXTERNAL SUPPORTS OF PIPE SPOOL ASSEMBLY. SUPPORT CONTACTS PIPE SPOOL FOR 2.0 INCHES ON EACH SIDE OF NOTED DIMENSION. WELDS ON EXTERNAL PIPE (EXCEPT PIPE SEAM WELD IF APPLICABLE) SHALL BE AVOIDED IN THIS AREA.
- 1D. NOTED DIMENSION INDICATES NOMINAL LENGTH OF INNER PIPE REQUIRED AT NEXT LEVEL OF ASSEMBLY. ADDITIONAL LENGTH OF INNER PIPE AND PACKAGING CLOSE-OUT MUST BE ADDED DURING FABRICATION PER SPECIFICATION REQUIREMENT.
- 1E. NOTED DIMENSION INDICATES MAXIMUM ALLOWABLE LENGTH OF FIELD WELDED TRANSITION JOINT. SEE SPECIFICATION FOR TRANSITION JOINT REQUIREMENT.
- 1F. PIPE SPOOL REFERENCE DESIGNATOR NUMBER IS 4185.
- 1G. CAGE CODE NUMBER TO BE REPLACED WITH VENDOR PART NUMBERS AND VENDOR CAGE CODE NUMBER AFTER PROCUREMENT.
- 1H. FITTING AAB1002-04-K-1.50-10 SHALL HAVE A THROUGH CLEARANCE DIAMETER OF .346-.353 INCHES TO ACCOMMODATE TEMPERATURE PROBE. FITTING MAY BE DRILLED TO MEET REQUIREMENT.



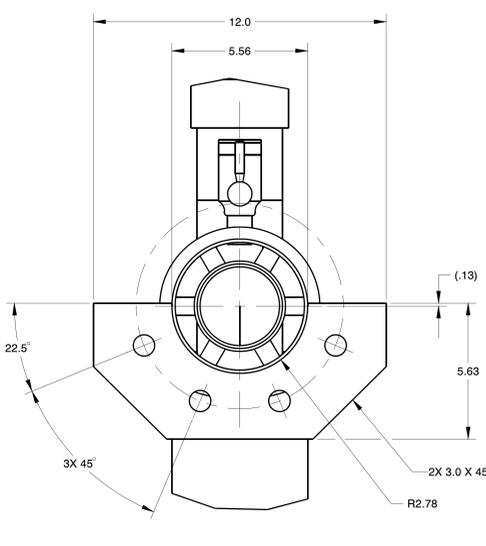
ISOMETRIC



OUTER JACKET REMOVED



DETAIL A SCALE .376



FLANGE REMOVED

QTY	FIG. NO. OR REV. NO.	DESCRIPTION
3	17	WELD FITTING, FEMALE BOSS TO BUTT WELD, FOR PIPE
1	16	TEE, REDUCER, B16.9 SCHED 10
4	15	TEE, REDUCER, B16.9 SCHED 10
2	14	ELBOW, 90 DEG, LONG, B16.9, SCHED 10
AR	13	PIPE 3 NPS, SCHED 10, ASTM A312
AR	12	PIPE 5 NPS, SCHED 10, ASTM A312
AR	11	PIPE 1-1/2 NPS, SCHED 10, ASTM A312
AR	10	CRYO INSTRUMENT JACKET
1	9	PLATE
1	8	PLATE
9	7	SUPPORT, INTERNAL PIPE
1	6	BELLOWS 3 NPS 8 LG CONVOLUTE 2 LG
2	5	BELLOWS 5 NPS 7 LG CONVOLUTE 4 LG
1	4	BAYONET, FEMALE, 3X5
1	3	BELLOWS 5 NPS 10 LG CONVOLUTE 4 LG
1	2	TRANSITION JOINT, 3X5 FIELD WELDED, WITH 4LG EXPANSION JOINT
1	1	ASSEMBLY, VACUUM VALVE

PROCUREMENT CONTROL DRAWING CAD MAINTAINED. CHANGES SHALL BE INCORPORATED ONLY BY THE DESIGN ACTIVITY. PRO/ENGINEER K0000065257D NOTED: K0000061124 SLS ML NEXT ASSY USED ON APPLICATION		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994. TOLERANCES ON: FRACTIONS DECIMALS ANGLES $\pm 1/16$ 1 PL $\pm .060$ 1 PL $\pm 1^\circ$ $\pm 1/32$ 2 PL $\pm .030$ $\pm 1/64$ 3 PL $\pm .010$		ORIGINAL DATE OF DRAWING (YY/MM/DD) 2013/03/19 DESIGNED BY D. C. STANIFER J. A. STAGI CHECKED BY W. C. PATRICK L. C. KAYLOR DRAWN BY J. K. TUCKERMAN V. J. WARD C. T. O'CONNOR T. O. ADAMS A. C. LITTLEFIELD	
JOHN F. KENNEDY SPACE CENTER, NASA KENNEDY SPACE CENTER, FLORIDA SPOOL 3 X 5, VACUUM JACKET PIPE, LIQUID OXYGEN, FILL DRAIN		SHEET NO. 22264 SCALE 1:188 UNIT WEIGHT 242.00 SHEET 1 OF 1		PART NO. ZONE REV. DESCRIPTION DATE APPROVAL	