INLET DUCT STRUCTURAL MEMBERS

COLUMN LINE	COLUMN	TOP TRANS. BEAM	BOTTOM TRANS. BEAM
"A"	H400X400X13X21	H340X250X9X14	H400X400X13X21
"B"	H400X400X13X21	H340X250X9X14	H400X400X13X21
"C"	H588X300X12X20	H390X300X10X16	H588X300X12X20
"D"	H900X300X16X28	H900X300X16X28	H900X300X16X28

INLET DUCT INTERMEDIATE STRUCTURAL MEMBERS

BETWEEN	SIDE CASING	TOP CASING	BOTTOM CASING
INLET FLANGE & "A"	NONE	NONE	NONE
COLUMNS "A" & "B"	NONE	NONE	NONE
COLUMNS "B" & "C"	C380x100x10.5x16	C380x100x10.5x16	C380x100x10.5x16
COLUMNS "C" & "D"	C380x100x10.5x16	(2)C380x100x10.5x16	C380x100x10.5x16
COLUMNS "D" & "E"	C380x100x10.5x16	(2)C380x100x13x20	C380x100x10.5x16

INLET DUCT LONGITUDINAL CASING STIFFENERS

BETWEEN	SIDE CASING	TOP CASING	BOTTOM CASING
INLET FLANGE & "A"	C200x80x7.5x11	C200x80x7.5x11	C200x80x7.5x11
COLUMNS "A" & "B"	C200x80x7.5x11	C200x80x7.5x11	C200x80x7.5x11
COLUMNS "B" & "C"	C200x80x7.5x11	C200x80x7.5x11	C200x80x7.5x11
COLUMNS "C" & "D"	C200x80x7.5x11	C200x80x7.5x11	C200x90x8x13.5
COLUMNS "D" & "E"	C200x80x7.5x11	C200x80x7.5x11	C200x90x8x13.5

NOTE: LONGITUDINAL CASING STIFFENERS SHALL BE COPED INTO ADJACENT MAIN AND INTERMEDIATE STRUCTURAL MEMBERS.

MATERIAL NOTES:

1) CASING:
   INLET FLANGE TO FIELD JOINT PAST COLUMN "D" - 3/8"(10mm) ASTM A36 (JIS G3101-SS400)
   THE REMAINDER OF DUCT - 1/4"(6mm) ASTM A36 (JIS G3101-SS400)

2) COLUMNS,BEAMS,STIFFENERS,ANGLE AND PLATE - JIS G3101-SS400 U.N.O.

3) INSULATION: 8# SUPERWOOL PLUS
   TOP & SIDES - 6"(152mm) INSULATION COMPRESSED TO 5 1/4"(133mm)
   BOTTOM - 10"(254mm) INSULATION COMPRESSED TO 8 3/4"(222mm)

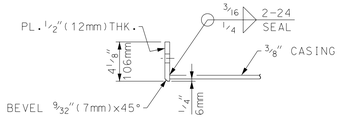
4) LINERS: A-240 TP409 STAINLESS STEEL
   TOP & SIDES - INLET FLANGE TO FIELD JOINT PAST COLUMN "D" 12GA (3mm)
   - THE REMAINDER 16GA (1.5mm)
   BOTTOM - 12GA (3mm) THROUGHOUT

5) ALL LINERS TO BE ATTACHED WITH 1/2"(12mm) DIA. A479 TP304* STAINLESS STEEL STUDS WITH REGULAR SERIES 1/2"(12mm) DIA. F-594 TP304* STAINLESS STEEL NUTS.
   INLET FLANGE TO FIELD JOINT PAST COLUMN "D" TO HAVE 7 1/2"(191mm) STAGGERED PITCH AND THE REMAINDER TO HAVE 15"(381mm) SQUARE PITCH.

6) LINER REINFORCING CHANNELS TO BE USED THROUGHOUT

7) ALL WASHERS TO BE 12GA (3mm) A-240 TP409 STAINLESS STEEL.

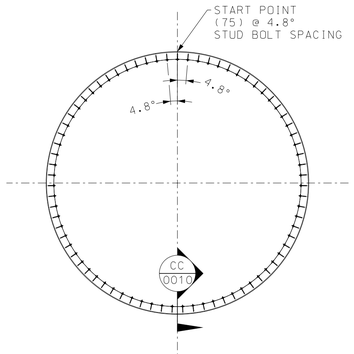
8) 304* DENOTES 304H & 304 WITH MINIMUM CARBON CONTENT OF 0.04%



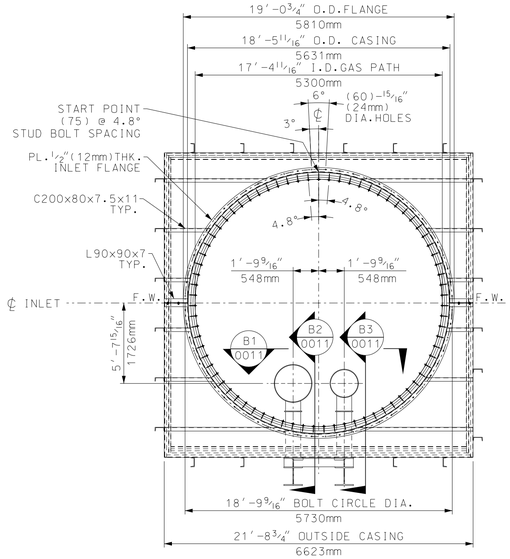
GAS FLOW

INLET FLANGE DETAIL

SCALE: 1 1/2"=12"

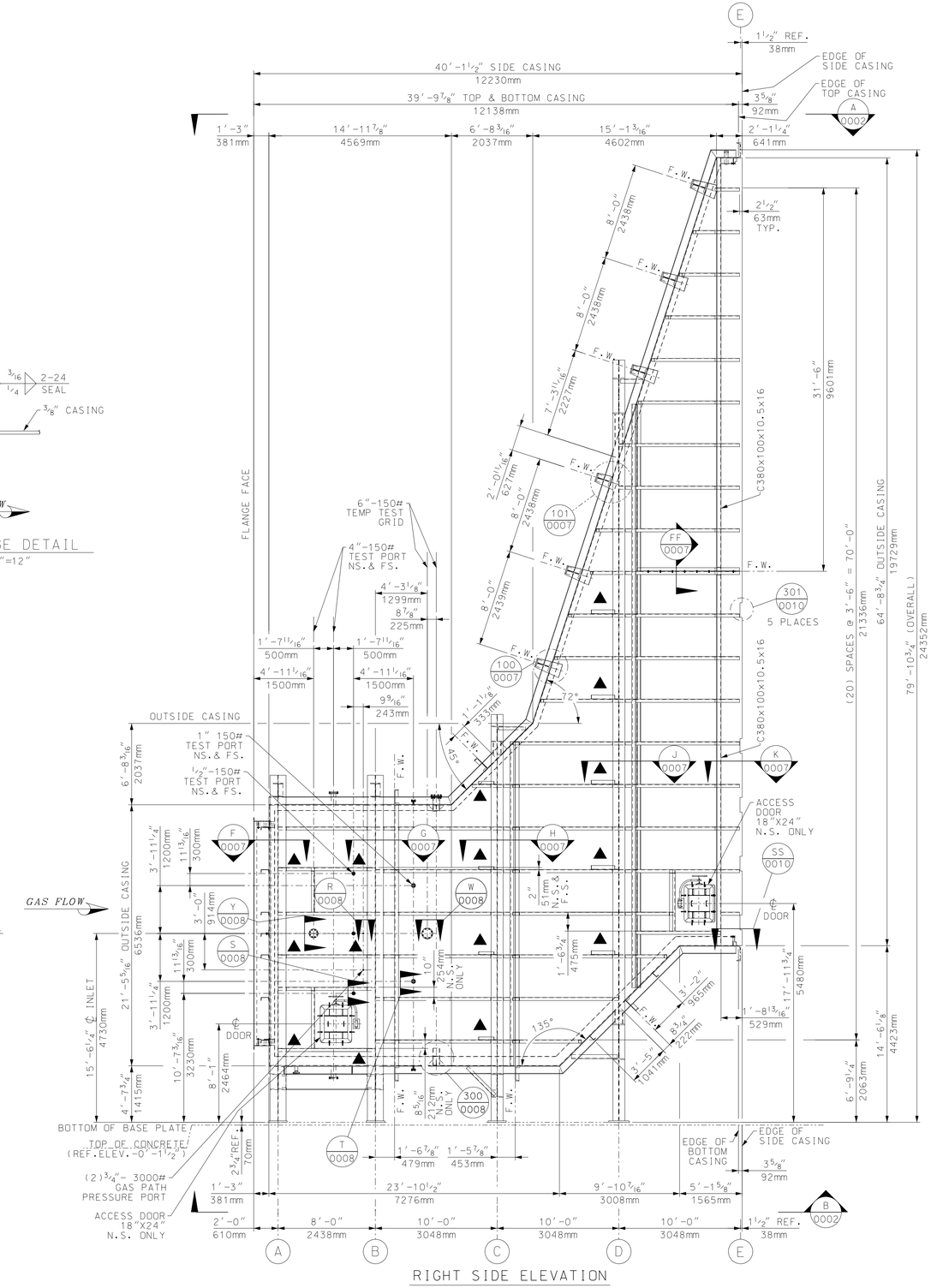


GT OUTLET STUD SPACING



INLET VIEW

GT FLOW IS NON-ROTATIONAL



RIGHT SIDE ELEVATION

GENERAL NOTES:

1. ALL FABRICATION AND PAINTING SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS AND SPECIAL INSTRUCTIONS SUPPLIED BY VOGT POWER AS PART OF THE PURCHASE ORDER. THESE SPECIFICATIONS AND INSTRUCTIONS SHALL COMPLY WITH THE LATEST EDITION OF SPECIFIED CODES AND STANDARDS.
2. FABRICATION TOLERANCES SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION A6 AND THE CODE OF STANDARD PRACTICES FOR STEEL BUILDINGS AND BRIDGES, LATEST EDITION. DIAGONAL DIMENSIONS TO BE WITHIN 1/2" (13mm) OF EACH OTHER.
3. SEE DETAILS ON DRAWING V17494-DWND-0009 FOR TYPICAL FIELD JOINTS. SHOP TO USE RECOMMENDED FIELD WELD LOCATIONS SHOWN ON DRAWING. ANY DEVIATION FROM FIELD JOINTS SHOWN MUST BE APPROVED BY VPI ENGINEERING.
4. FABRICATOR SHALL PROVIDE TEMPORARY BRACING, CRIBBING, AND SUPPORT AS REQ'D TO PREVENT DAMAGE DURING SHIPMENT.
5. LUGS NECESSARY FOR HANDLING, LOADING AND OFF LOADING OF INDIVIDUAL DUCT PANELS ARE TO BE PROVIDED BY THE FABRICATOR. LUGS NECESSARY TO ERECT THE DUCT ARE TO BE DESIGNED BY VPI AND PROVIDED BY FABRICATOR.
6. FABRICATOR TO SUPPLY ALL FIELD INSTALLED LINERS. VPI WILL PROVIDE FIELD INSTALLED INSULATION WITHIN THE DUCT ASSEMBLY. IN ADDITION, FABRICATOR SHALL SUPPLY FIELD INSTALLATION DRAWINGS AND DETAILS FOR FIELD INSTALLED LINER PANELS.
7. PROVIDE 3/4" (19mm) DIA. DRAIN HOLES IN STRUCTURALS WHERE NECESSARY TO INSURE WATER DRAINAGE DURING SHIPMENT AND AFTER ERECTION.
8. VOGT POWER TO SUPPLY FIELD INSTALLED LINERS AT DUCT OUTLET TO ADJACENT CASING.
9. SEAL WELD ALL STRUCTURALS TO CASING AND OTHER STRUCTURALS. PRESSURE CASING TO BE SEAL WELDED GAS TIGHT. WELD STRUCTURAL MEMBERS TO CASING WITH MIN. OF 3/16" FILLET. ALL WELDS TO BE P1-P1 UNLESS NOTED OTHERWISE.
10. ALL WELDING TO BE DONE IN ACCORDANCE WITH AWS D1.1 STRUCTURAL WELDING CODE, CURRENT EDITION USING E70XX ELECTRODES. VENDOR IS RESPONSIBLE FOR THE WELD END PREPARATION OF ALL FIELD WELDS.
11. ▲ DENOTES LOCATION FOR BRACE TO BE ADDED TO COLUMN OR BEAM, PER DETAIL DRAWING.
12. FABRICATOR SHALL APPLY PAINT AND PRIMER PER SPEC. V17494-EBNC-0001.
13. BOLTING HARDWARE FOR FIELD JOINTS WITHIN THE DUCT ASSEMBLY TO BE BY DUCT FABRICATOR. USE A307 HEX BOLTS AND HEX NUTS. 10% EXTRA SHALL BE SUPPLIED.
14. BOLTS TO BE TIGHTENED USING THE NATIONAL STANDARD WHERE FABRICATION OCCURS. UNLESS NOTED OTHERWISE.
15. SEE V17494-DWNC-0001 FOR EQUIPMENT SPECIFICATION FOR SHOP FABRICATED INTERNALLY INSULATED DUCTWORK.
16. ACCESS DOOR PER V17494-DRND-0001 SHALL BE SUPPLIED AND INSTALLED BY FABRICATOR.
17. GAS MAXIMUM TEMPERATURE IN DUCT WORK IS APPROX. 1197°F(647°C).
18. PAINT WEIGHT ON SIDE OF DUCT IN 3" (76mm) HIGH NUMBERS. NUMBERS TO BE VISIBLE AT ALL TIMES DURING SHIPMENT.
19. TOTAL APPROX. WEIGHT: 282,323 LBS. (128,060 kg). WEIGHT MAY BE GREATER IF INSULATION IS WET.
20. QUANTITIES SHOWN ARE FOR ONE (1) UNIT:
    (1)ONE UNIT REQUIRED FOR MIDDLETOWN PROJECT
    (1)ONE UNIT REQUIRED FOR KINGS MOUNTAIN PROJECT
21. IMPERIAL DIMENSIONS TAKE PRECEDENCE OVER METRIC. METRIC DIMENSIONS ARE TO BE VERIFIED TO THE IMPERIAL BEFORE USE.
22. ASSEMBLIES EXCEEDING A LEGAL LOAD (8'-6" WIDE x 13'-6" HIGH x 80'-0" LONG OR 44,000 LBS NET. WHEN LOADED ON A FLATBED TRUCK) SHALL REQUIRE VPI LOGISTICS APPROVAL PRIOR TO START OF DETAILED DESIGN.

REFERENCE DRAWINGS:

V17494-DWND-0002 - INLET DUCT PLAN & BOTTOM VIEW
V17494-DWND-0003 THRU 0010 -INLET DUCT SECTIONS AND DETAILS
V17494-DWND-0011 & 12 - BLEED TURBULENCE BREAKER AND DETAILS
V17494-DWND-0050 - INSTALLATION OF LINER PANELS IN DUCTWORK CRITICAL AREAS.7 1/2"(191mm)STAGGERED PITCH STUD SPACING
V17494-DWND-0051 - INSTALLATION OF LINER PANELS IN DUCTWORK & CASING WITH FIELD INSULATED JOINTS. 15"(381mm)STUD SPACING
V17494-DWND-0052 - STANDARD INTERNALLY INSULATED CASING DETAILS
V17494-DRND-0001 - PERIMETER CLAMPING 18"x24" ACCESS DOOR ASSEMBLY FOR 6" INSULATION

Rev.	Description	Date	Drawn	Chkd. 1	Chkd. 2	Appr.
04	REVISED NOTE 6	23-MAY-16	DR	REEVES	--	FRY
03	ADDED NOTCHES TO SIDE CASINGS	18-FEB-16	JP	REEVES	--	FRY
02	REVISED LINERS FROM 309 TO 409 UNDO SDR-012 - FILIZED BTB	17-DEC-15	DR	REEVES	--	FRY
01	REVISED LINERS FROM 409 TO 309 PER SDR-012	07-DEC-15	DR	REEVES	--	FRY
00	FIRST ISSUE	17-NOV-15	PK	BP	--	FRY

Revisions

MIDDLETOWN ENERGY CENTER
and
KINGS MOUNTAIN ENERGY CENTER
for
NTE ENERGY and GEMMA POWER SYSTEMS

VOGT POWER PROJECTS V17494 & V17495

3rd ANGLE PROJECTION

Scale: 3/16"=1'-0"

Title

HRSG INLET DUCT ASSEMBLY

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Internal Drawing Status	Size	Drawing No.	Rev.
FOR RECORD	D	V17494-DWND-0001	04