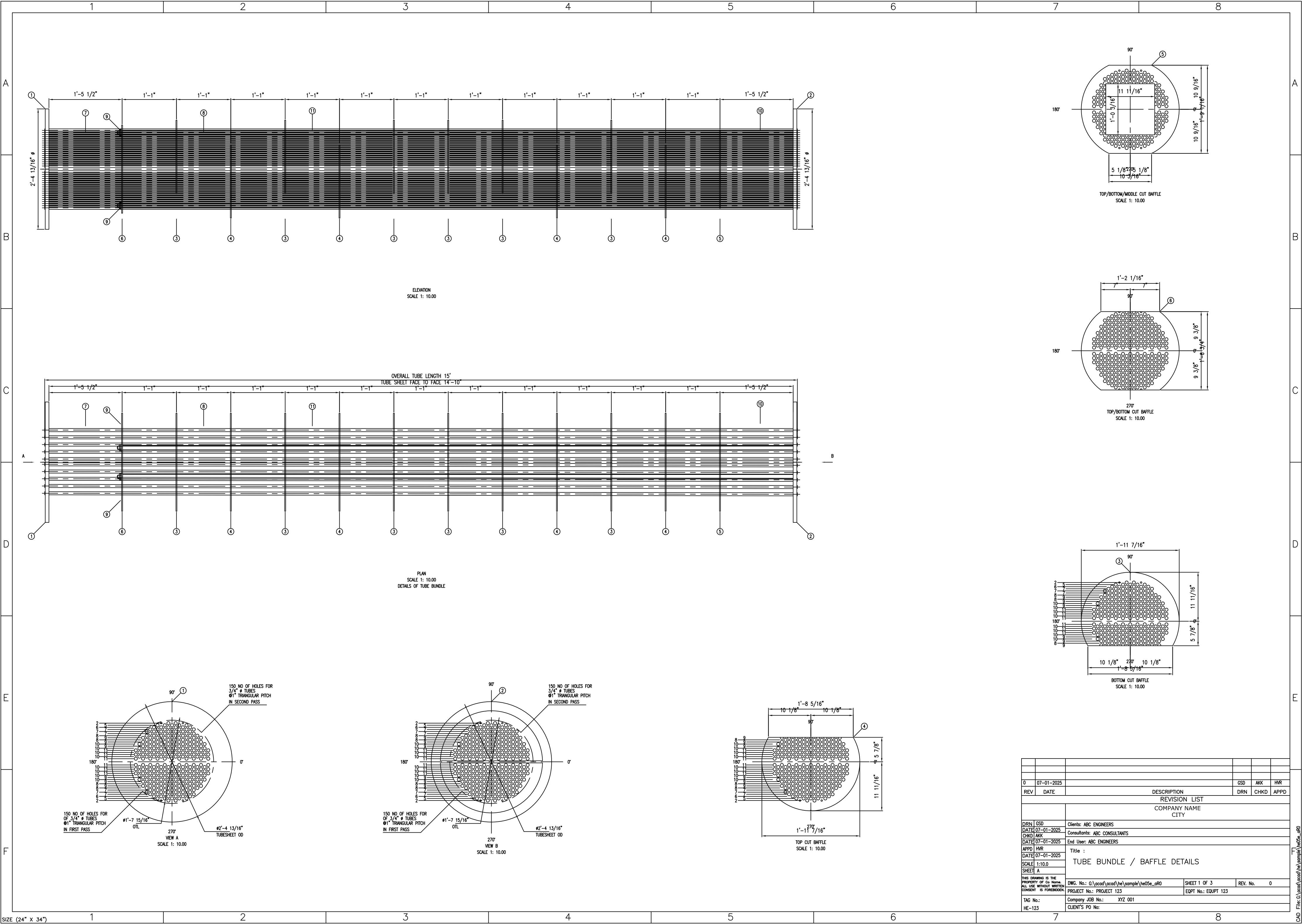
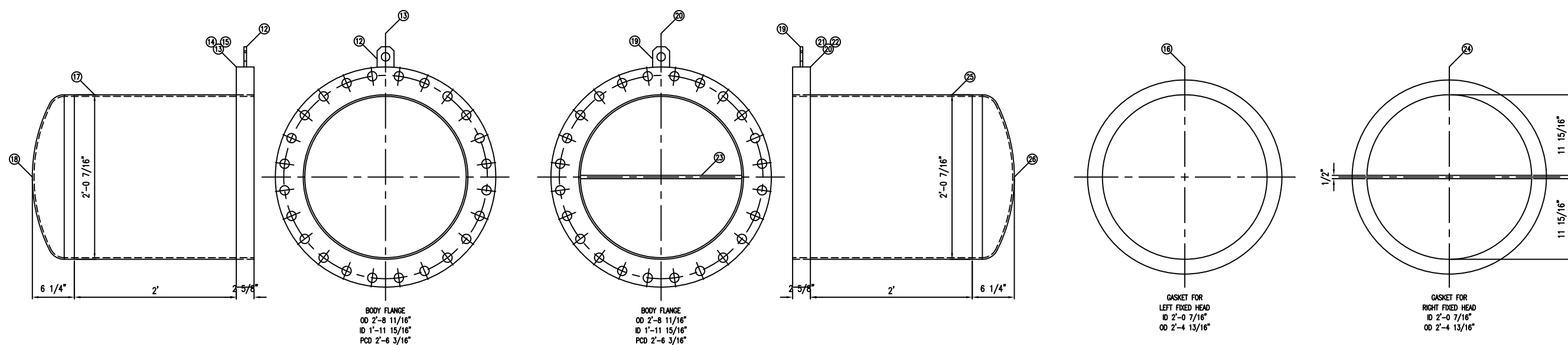






1. ALL DIMENSIONS ARE IN FOOT-INCHES.

2. ALL BOLT HOLES TO STRADDLE BOTH NATURAL CENTER LINES.

3. FOR TOLERANCES REFER SHEET 1 & DRAWING 500-10-1-5-0019 REV-3.

4. HYDRO TEST SHALL BE DONE IN HORIZONTAL POSITION.

5. UNIT TO BE MOUNTED IN HORIZONTAL POSITION.

6. INDICATED THICKNESSES ARE MINIMUM AFTER CONSTRUCTION.

7. FLANGES UP TO 24" SHALL CONFORM TO ASME B16.5.

8. FLANGES ABOVE 24" SHALL CONFORM TO ASME B16.47.

9. ALL NOZZLES 2" AND BELOW SHALL BE PROVIDED WITH STIFFENER.

10. STIFFENER SIZE: 1/4" x 1/4" AT RIGHT ANGLES.

11. AFTER HYDROTEST, EQUIPMENT SHALL BE COMPLETELY DRIED OUT WITH HOT AIR.

12. BEND FLANGES SHALL BE PROVIDED WHERE MENTIONED.

13. OTHER FLANGES SHALL BE COVERED WITH STEEL COVERS.

14. FINISH OF CRACK SEATING FACE OF NOZZLE FLANGES SHALL BE 125-150 ARMS FOR SPINAL WOUND GASKETS.

15. ALL SHARP CORNERS SHALL BE ROUNDED OFF WITH SMOOTH RADII SPECIFIED OTHERWISE.

16. ALL PRESSURE BEARING PLATES SHALL BE SUPPLIED IN NORMALIZED CONDITION.

17. THESE BEARING PLATES CONFORM TO SA-20.

18. TOLERANCE ON PLATE THICKNESS SHALL BE AS PER POSITIVE SIDE ONLY.

19. FINAL ROLLING OF THE PLATES SHALL BE LENGTHWISE.

20. ALL FLANGES SHALL BE 100% EXAMINED IN ACCORDANCE WITH AS308, SEC 6 & 8, BEFORE ANY DRILLING OPERATION.

21. ALL WELDS SHALL BE PENETRATION WELDS, AFTER BACK CHIPPED TO SOUND METAL.

22. ALL WELD BE REVEALED FROM BOTH SIDES FOR CRACKS, LAMINATION OR SEGREGATIONS.

23. THOSE JOINTS THAT ARE NOT ACCESSIBLE FOR BACK CHIPPING, ROOT RUN SHALL BE CARRIED OUT WITH GRINDING.

24. NON DESTRUCTIVE EXAMINATION :

24.1. ALL BUT WELD EDGES SHALL BE EXAMINED FOR A DISTANCE OF 2 TIMES MATERIAL THICKNESS.

24.2. WELD EDGES AND STRAIGHT FACE OF WELDED JOINTS SHALL BE 100% PT EXAMINED, AFTER FORMING.

24.3. 100% EXAMINATION OF DISHED HEADS SHALL BE DONE AFTER HEAT TREATMENT.

24.4. ALL NOZZLE WELDS SHALL BE DP EXAMINED AFTER ROOT RUN AND FINAL PASS.

24.5. OTHER SURFACES OF WELDS WITH THICKNESS MORE THAN 2" SHALL BE DP EXAMINATION AFTER HYDROTEST.

24.6. ALL WELDS SHALL BE WELDING EDGES SHALL BE EXAMINED FOR CRACKS, LAMINATION OR SEGREGATIONS.

24.7. WP/DP TEST SHALL BE CARRIED OUT ON INSIDE/OUTSIDE SURFACES OF DISHED HEADS.

24.8. MACHINED SURFACES OF ALL FORINGS SHALL BE EXAMINED FOR SURFACE DEFECTS BY WP/DP TEST.

24.9. METHODS FOR FASTENING NUTS TO THE RODS :

24.9.1. METHODS FOR FASTENING NUTS TO THE RODS :

24.9.2. WELD SECOND NUT TO THE ROD.

24.9.3. WELD BOTH NUTS.

24.9.4. WELDS TO EXCEED THE LENGTH OF ONE FLAT LENGTH.

24.9.5. TOLERANCE FOR ALL NOZZLES ON TRUE VERTICAL LINE FROM ACTUAL NOZZLE CENTER LINE IS $\pm 1/16"$.

24.9.6. TOLERANCE FOR ALL NOZZLES ON TRUE VERTICAL LINE FROM ACTUAL NOZZLE CENTER LINE IS $\pm 1/16"$.

24.9.7. HEAT EXCHANGER SHALL BE HYDRO TESTED WITH CLEAN CRODDED WATER, SEA WATER SHALL NOT BE USED.

24.9.8. AFTER HYDROTEST, EQUIPMENT SHALL BE DRYED OUT WITH HOT AIR.

24.9.9. EQUIPMENT SHALL BE PERFECTLY CLEANED, AND FREED FROM ALL FOREIGN MATERIAL.

24.9.10. ALL NOZZLES SHALL BE COVERED WITH TEMPORARY CLOSURES, TO AVOID DAMAGE OF FINISH.

31. PAINTING :

31.1. ALL UNPAINTED, UNMACHINED CS SURFACES SHALL BE PAINTED WITH A COAT OF INORGANIC ZINC SULFATE.

31.2. PRIMER DFT-75 MICRON DFT SHALL BE APPLIED AFTER SHOT BLASTING THE SURFACE TO SA 2 1/2 FINISH.

31.3. EXTERIOR LUGS SHALL NOT BE PAINTED OR GALVANIZED.

31.4. CLIENT'S NAME, ADDRESS, EPOCH NO., P.O.NO. SHALL BE PAINTED ON SHIELD WITH WHITE PAINT.

31.5. BOLT HEADS AND OTHER MACHINED SURFACES SHALL BE GRASSED AND PROTECTED FROM RUST.

31.6. BOLT THROUGHS SHALL BE LUBRICATED.

32. GASKETS :

32.1. SERVICE GASKETS SHALL NOT BE USED FOR HYDROTEST.

32.2. GASKET MATERIAL FOR HYDROTEST SHALL BE SAME AS SERVICE GASKET.

32.3. EQUIPMENT SHALL BE SHIPPED IN ASSEMBLED CONDITION, WITHOUT REMOVING GASKETS USED FOR HYDROTEST.

32.4. SERVICE GASKETS SHALL BE SENT LOOSE, AND HYDROTESTED AT SITE BY REMOVING GASKETS.

32.5. GASKET MATERIAL FOR NOZZLE FLANGES SHALL BE SS 316 SPINAL WOUND WITH GRAPH FILLER AND CS OUTER RING.

32.6. GASKETS SHALL BE IN ACCORDANCE WITH ASME B16.5.

32.7. THE m AND n VALUES OF SPINAL WOUND GASKET SHALL BE GUARANTEED AS PER ASME SEC VIII, DIV. 1.

32.8. GASKET CERTIFICATES SHALL INDICATE THE NAME OF THE GASKET AND BE PART OF FINAL DOCUMENT.

32.9. VENT NOZZLES TO BE KEPT OPEN DURING FILLING OF WATER FOR HYDROTEST AND DURING DRAINING.

32.9.1. TOLERANCES SPECIFIED ARE MINIMUM.

32.9.2. LIFTING LUGS ARE DESIGNED FOR LIFTING IN ONE POSITION.

32.9.3. HARDNESS OF METAL IN GASKET SHALL BE MINIMUM 15 SHN LOWER THAN FLANGE GASKET SEATING SURFACE METAL.

32.9.4. THICKNESS IN NO SHOT EXCEED 0.010 IN.

32.9.5. FILLER IN METAL JACKETS SHALL BE OF THE SAME METAL AND NOT BE OF COMPRESSED TYPE.

32.9.6. GASKET SHALL BE MADE IN ONE CONTINUOUS PIECE ALL AROUND.

32.9.7. PASS PARTITION RIBS MUST BE CUT FROM SAME SHEET.

32.9.8. PLATE JACKED FACE OF THE PASS PARTITION SHALL BE THE SAME AS PASS PARTITION PLATE SIDE.

32.9.9. GASKET FOR ORTH FLANGES SHALL BE METAL JACKED ABOVE FIBER.

33. AL RT PADS SHALL BE PROVIDED 2 NOS. OF 1/4" NPT TEST TALE HOLES FOR AIR/SO₂ SOLUTION TEST.

34. HOLES TO BE PROVIDED WITH HARD GRASS AFTER TESTING.

35. APPROPRIATE COUPLERS FOR PIPES AND NOZZLES SHALL BE PROVIDED.

37. ASME B16.9 FOR FORCEY MADE WROUGHT BUT WELD FITTINGS.

37. ASME B16.11 FOR FACTORY DESIGNED, SOCKET WELDING AND THREADED JOINTS.

38. HEAT TREATMENT CYCLE FOR DISHED END

38.1. LOADING TEMPERATURE : 540 DEG F

38.2. RATE OF HEATING : 100 TO 400 DEG F PER HOUR

38.3. SOAKING TEMPERATURE : 1100 $\pm$ 10 DEG F

38.4. SOAKING TIME : 30 TO 50 MINUTES

38.5. RATE OF COOLING : 100 TO 540 DEG F PER HOUR

38.6. RATE OF COOLING (<540 DEG F) : 100 TO 500 DEG F PER HOUR

39. MEAN PLATE SHALL BE TACK WELDED TO BRACKET ON ALL FOUR SIDES IN ADDITION TO RIVETS.

40. SLUING STRIPS SHALL BE CONTINUOUS.

41. STRIP EDGES OF BATTLE PLATES SHALL BE WELDED BACK AFTER WELDING SEALING SURFACES.

42. TOP PORTION OF BATTLE TO BE CUT TO ACCOMMODATE MOUNTING PLATE.

43. TUBE HOLE EDGES IN TUBE SHEET AND BATTLES SHALL BE CHAMFERED TO 1X45 DEG ON BOTH SIDES.

44. FILLING PORTS SHALL BE SUPPLIED AS SPECIFIED.

44.1. 400K GASKETS FOR ORTH JOINTS AND NOZZLES WITH BLIND FLANGES

45.20. 20" (MINIMUM 4 STRIPS) OF STUDS AND NOZZLE JOINTS AND NOZZLES WITH BLIND FLANGES

46. BOTTOM SEALING STRIP SHALL BE CONTINUOUS, AND SHALL EXTEND BETWEEN END BATTLES.

47. RING OF MATERIAL BETWEEN SHEET 3 & 4 SHALL BE 1/4" MIN.

47.1. SLUING END SHALL BE REQUIRED ON SHELL/TUBE SIDE AT 75 18/32 INCH AND AT 300 DEG F.

48. TUBES SHALL BE PAINTED WITH "CAUTION : SLUING END".

49. ALL TUBES SHALL BE COLD DRAIN, SEAMLESS, SINGLE PEECE AND IN ANNEALED CONDITION.

50. ALL TUBE HOLES SHALL HAVE CLOSE FIT AT PER TEMP.

51.

52.

0	07-01-2025					GSD	AKK	HMR	
REV	DATE				DESCRIPTION	DEN	CHKD	APPD	
						COMPANY NAME CITY			
DRWN GSD Client: ABC ENGINEERS DATE 07-01-2025 Consultant: ABC CONSULTANTS CRWD AKK DATE 07-01-2025 End User: ABC ENGINEERS APPD HMR Title : DATE 07-01-2025 SCALE 1/12.5 SHEET B									
PART DETAILS									
This drawing is the property of Co. Name. All use without written consent is prohibited.									
TAG No.: H-123						PROJECT No.: XYZ 001		CLIENT'S PO No:	
DWG. No.: 01.psd(ocd)ocd(ho.vapn)ocd(ho.jard)						SHEET 2 OF 3		REV. No.: 0	
PROJECT No.: PROJECT 123						EQUIP No.: EQUIPT 123			

CAD File: G:\good\good\he\sample\he05e_b90

SIZE (24" X 34")

CAD

