

品名: 高圧LPヘッダー用LP HTR NO.4  
 仕様書番: JKS4009619-9  
 図面番: E KV601998-c

WEIGHTS	
COMPLETE-DRY (EMPTY LOAD)	35 TON
OPERATING (NWL LOAD)	48 TON
FLOODED (HYDROTEST LOAD)	66 TON
SEISMIC LOAD**	48 TON

TUBE SPECIFICATION	
MATERIAL	ASME SA688M TP304
OUTER DIA. * THICKNESS	φ19.05x0.9 mm
MEAN EFFECTIVE LENGTH	21190.1 mm
NUMBER OF TUBES	1238
SURFACE AREA	1570 m <sup>2</sup>
ACCEPTABLE TUBE PLUG RATIO	5.0 %

SHELL SIDE		TUBE SIDE	
DESIGN PRESSURE	3.5 bar (g) / Full Vacuum	DESIGN PRESSURE	237 bar (g)
DESIGN TEMPERATURE	146 °C	DESIGN TEMPERATURE	148 °C
HYDROSTATIC TEST PRESS.	5.25 bar (g)	HYDROSTATIC TEST PRESS.	35.55 bar (g)
FLUID	STEAM & DRAIN	FLUID	CONDENSATE WATER
RADIOGRAPHIC EXAMINATION	YES / FILL	RADIOGRAPHIC EXAMINATION	YES / FILL
POST WELD HEAT TREATMENT	NO	POST WELD HEAT TREATMENT	NO
APPROX. CAPACITY	20.6 m <sup>3</sup>	APPROX. CAPACITY	10.5 m <sup>3</sup>
MONIT.	0 °C	MONIT.	0 °C

● \*\* (1) TO FINAL WELD IN UEL OF RT.  
 KKS CODES  
 UNITS: LP HEATER 4  
 UNITS: 50CC40 4C010  
 UNITS: 60CC40 4C010

MAIN PARTS LIST		
REF. NO.	PART NAME	MATERIAL
C-1	TUBE SHEET	ASME SA688M TP304
C-2	CHANNEL SHEET	ASME SA688M TP304
C-3	CHANNEL HEAD PLATE	ASME SA688M TP304
C-4	MANHOLE COVER	ASME SA688M TP304
C-5	SHEET	ASME SA688M TP304
C-6	SHEET HEAD PLATE	ASME SA688M TP304
C-7	WELD PIPE	ASME SA688M TP304
C-8	TUBE	ASME SA688M TP304
C-9	SPACER	ASME SA688M TP304
C-10	MANHOLE PLATE	ASME SA688M TP304
C-11	WARRANTY PLATE	ASME SA688M TP304

CONN.	NO. OF CONN.	ALLOWABLE FORCE (kg)	ALLOWABLE MOMENT (kg-m)
C-1	1	6566	11802
C-2	1	6566	11802
C-3	1	6566	11802
C-4	1	6566	11802
C-5	1	6566	11802
C-6	1	6566	11802
C-7	1	6566	11802
C-8	1	6566	11802
C-9	1	6566	11802
C-10	1	6566	11802
C-11	1	6566	11802

DETAIL OF WELD END PREPARATION	
CONN. #A	#B
C-1, C-2	508 477.82 15.09
S-1	559 539.94 9.53
S-2, S-3	219.1 202.74 8.18
S-3	114.3 102.26 8.02

REFERENCE DOCUMENT:  
 1. OUTLINE DRAWING FOR LP HEATER: 4-TUBES-1-OFF-C-CC-M-DRD-2629 / TKV00824.  
 2. FOUNDATION OUTLINE FOR LP HEATER 3 & 4: TUBES-1-OFF-C-CC-C-UPN-3019 / TKV008781.  
 3. SIZING CALCULATION FOR LP AND HP HEATERS: TUBES-1-OFF-C-CC-M-CAL-2304 / DRK017123.

LIST OF CONNECTIONS		
CONN. DESCRIPTION	NO. OF CONN.	REMARKS
C-1 CONDENSATE WATER INLET	DN500 1	ASME B16.11, #4000
C-2 CONDENSATE WATER OUTLET	DN500 1	ASME B16.11, #4000
C-3 CHANNEL AIR VENT CONN.	DN25 1	ASME B16.11, #4000
C-4 MANHOLE	DN150 1	ASME B16.11, #4000
S-1 STEAM INLET	DN500 2	ASME B16.11, #4000
S-2 DRAIN OUTLET	DN200 1	ASME B16.11, #4000
S-3 AIR OUTLET	DN100 1	ASME B16.11, #4000
S-4 RELIEF VALVE CONN.	DN40 1	ASME B16.11, #4000
S-5 N2 SEAL CONN.	DN50 1	ASME B16.11, #4000
S-6 LEVEL TRANSMITTER CONN.	DN50 6	ASME B16.11, #4000
S-9 EMERGENCY DRAIN OUTLET	DN200 1	ASME B16.11, #4000
S-10 LEVEL INDICATOR CONN.	DN50 2	ASME B16.11, #4000

NOTES:  
 1. B.W. SHOWS BUTT WELDED CONNECTION.  
 2. S.W. SHOWS SOCKET WELDED CONNECTION.  
 3. F.S. SHOWS FACE SIDE 'S'. SHOWS REAR SIDE.  
 4. R.F. SHOWS RAISED FACE FLANGE.  
 5. APPLICABLE DESIGN CODE: 1. ASME SEC. VIII DIV.1, 2015 EDITION.  
 2. TEMA TUBULAR EXCHANGER MANUFACTURERS ASSOCIATION NINTH EDITION

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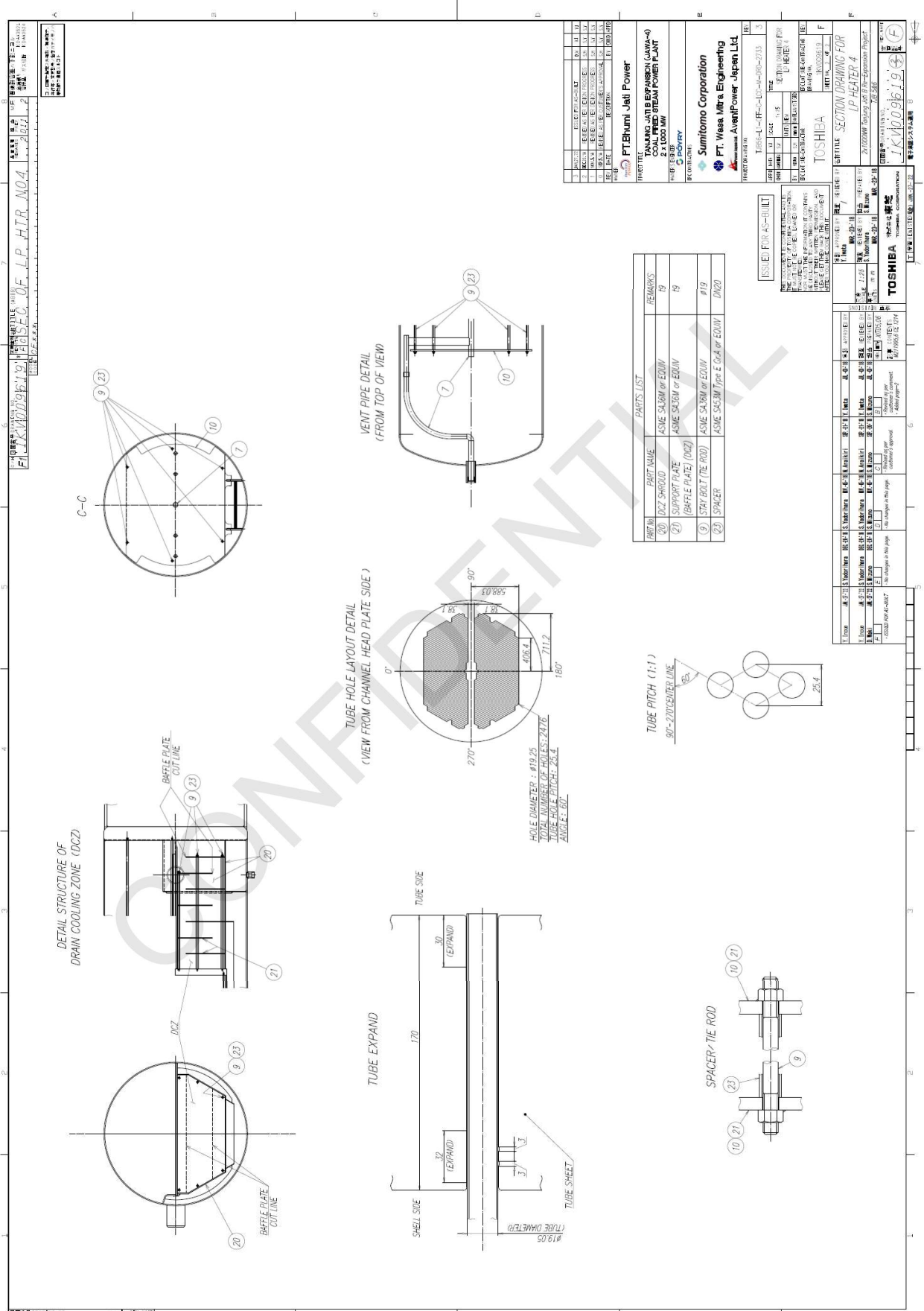
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