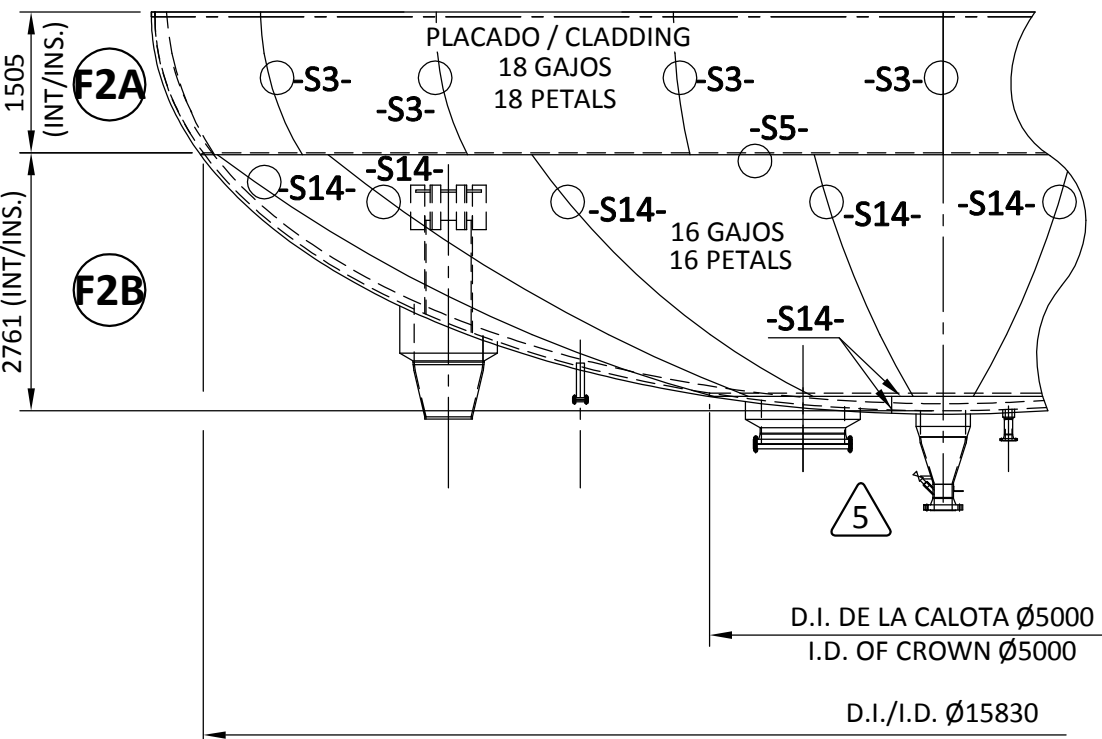
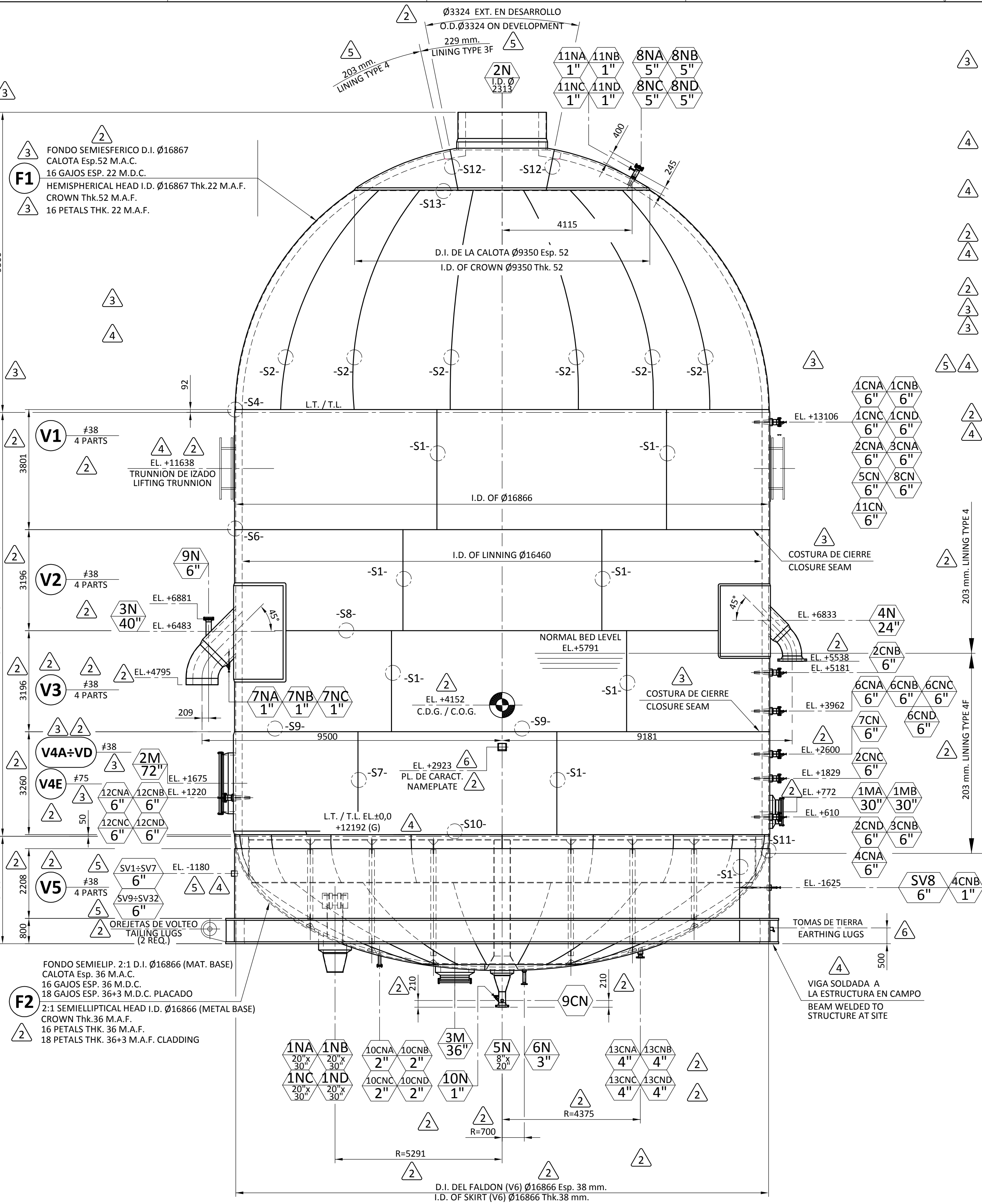


DIMENSION / DIMENSION	DIMENSION / DIMENSION	DIMENSION / DIMENSION	DIMENSION / DIMENSION	DIMENSION / DIMENSION	DIMENSION / DIMENSION
MACHINING / MACHINING	MACHINING / MACHINING	MACHINING / MACHINING	MACHINING / MACHINING	MACHINING / MACHINING	MACHINING / MACHINING
GENERAL TOLERANCES	GENERAL TOLERANCES	GENERAL TOLERANCES	GENERAL TOLERANCES	GENERAL TOLERANCES	GENERAL TOLERANCES
PROJECTION	PROJECTION	PROJECTION	PROJECTION	PROJECTION	PROJECTION

LISTA DE TUBULADURAS / NOZZLE DATA									
MARCA ITEM	CANTIDAD QUANTITY	TAMAÑO SIZE [DN]	TIPO TYPE	CLASE RATING	SCH. FINAL/AT END NOZ.	UNION/AT SHELL INT.	PROYEC.(1) STANDOUT	INSERT o SELF-REINF.	SERVICIO SERVICE
1NA÷D	4	20"[500] /30"[750] O.D. Ø2803 (I.D. Ø2313 REFRACTORY)	B.W.	----	XS	I.D. Ø736	4118	SELF-REINF.	AIR INLET
2N	1	8"[200] (Ins. Ø585 REFRACTORY)	B.W.	----	Thk. 16	Thk. 52	9500	----	GASIFIER OVERHEAD
3N	1	24"[600] (Ins. Ø268 REFRACTORY)	B.W.	----	XS	Thk. 68	SEE DWG	----	GASIFIER COKE RETURN
4N	1	8"[200] / 20"[500]	WN.RF.	300	XS	Thk. 58	SEE DWG	----	GASIFIER FEED COKER
5N	1	3"[80]	WN.RF.	150	XS	I.D. Ø73	4692	SELF-REINF.	DRAIN
6N	1	1"[25]	WN.RF.	300	XS	I.D. Ø109	1013	----	ATION NOZZLE EMERGENCY SPRAYS
7NA÷C	3	5"[125]	WN.RF.	300	160	I.D. Ø109	SEE DWG	SELF-REINF.	W/ B. FLG.&COUPLING 1½" START-UP COKE ADDITION +BLIND FLG.
8NA÷D	4	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	WITHDRAWAL AERATION NOZZLE
9N	1	1"[25]	WN.RF.	300	XS	I.D. Ø146	8775	SELF-REINF.	EMERGENCY SPRAY ANNUAL PURGE STEAM
10N	1	1"[25]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	TI DILUTE PHASE (RETRACT.) W/ B. FLG.&COUPLING 1½" PDI DENSE PHASE
11NA÷D	4	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	W/ B. FLG.&COUPLING 1½" LI BED
1CNA÷D	4	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	W/ B. FLG.&COUPLING 1½" PDR GRID (UPPER & LOWER) W/ B. FLG.&COUPLING 1½"
2CNA÷D	4	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	TI DILUTE PHASE W/ B. FLG.&COUPLING 1½" TI UPPER DENSE PHASE (RET.) W/ B. FLG. & 1½" COUPL.
3CNA/B	2	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	TI DILUTE PHASE W/ B. FLG. & 1½" COUPL. U UPPER TAP FOR OVERFLOW (RET.) W/ B. FLG. & 1½" COUPL.
4CNA	1	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	TI METAL-WITHDRAWAL WALL STANDPIPE
4CNB	1	1"[25]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	KNIFE EDGE THERMOCOUPLE
5CN	1	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	TI AIR BELOW GRID
6CNA÷D	4	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	PDI DILUTE PHASE W/ B. FLG. & COUPLING 1½" TI LOWER DENSE PHASE (RET.) W/ B. FLG. & COUPLING 1½"
7CN	1	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	TI AIR BELOW GRID & GRID METAL
8CN	1	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	DENSE BED MANWAYS W/BLIND FLG. & DAVIT
9CN	1	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	DENSE BED MANWAYS W/BLIND FLG. & DAVIT
10CNA÷D	4	2"[50]	LWN.RF.	300	--	--	3962	----	BOTTOM HEAD MANWAY W/BLIND FLG. & DAVIT
11CN	1	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	SKIRT VENT
12CNA÷D	4	6"[150]	WN.RF.	150	XS	I.D. Ø146	8775	SELF-REINF.	
13CNA÷D	4	4"[100]	WN.RF.	300	I.D. Ø97	--	3850	SELF-REINF.	
1MA/B	2	30"[750]	WN.RF. Serial-B	150	Thk. 13	I.D. Ø736	8850	SELF-REINF.	
2M	1	72"[1800]	WN.RF. SPECIAL	150	Thk. 70	I.D. Ø1789	8895	----	
3M	1	36"[900]	WN.RF. Serial-B	150	Thk. 13	I.D. Ø889	4580	SELF-REINF.	
SV1÷SV32	32	6"[150]	PIPE	--	--	--	--	----	



PARTES DEL FONDO "F2"  
HEAD "F2" PARTS



ALZADO / ELEVATION

CONDICIONES DE OPERACION OPERATION CONDITIONS				
DESIGN CASE 1	DESIGN CASE 2	60% TURNDOWN	FAILED COS REACTOR	
DENSE BED TEMPERATURE °C	935	946	935	935
DENSE BED HEIGHT, METERS	5.79	5.79	5.79	5.79
DENSE BED HEIGHT, METERS	899	899	899	899

CONDICIONES DE DISEÑO DESIGN CONDITIONS					
LOCATION	DESIGN PRESSURE kg/cm2 (g) or DESIGN AP kg/cm2	DESIGN FLUID TEMPERATURE °C	METAL DESIGN TEMPERATURE °C	TIME	
TOP HEAD & STRAIGHT SIDE ABOVE BED LEVEL (DILUTE PHASE)	4.8	982	343	LONG	
STRAIGHT SIDE BELOW BED LEVEL TO BOTTOM TANGENT LINE (DENSE PHASE)	4.8	982	343	LONG	
BOTTOM HEAD	4.8	260	343	LONG	
GRID AP (Up)	0.63		288	LONG	
GRID AP (DOWN)	0.63		427	SHORT	

ESPECIFICACIONES APLICABLES / LIST OF APPLICABLE SPECIFICATIONS:  
-020700342/1213-CP REV. 0

PLANOS DE REFERENCIA / REFERENCE DWG.:  
2/982-302 DETALLES / DETAILS  
2/982-303 TUBULADURAS DE LOS FONDOS HEAD NOZZLES  
2/982-304 TUBULADURAS DE LA ENVOLVENTE SHELL NOZZLES  
2/982-305 ENTRADAS DE HOMBRE / MAWAYS  
2/982-306 PLACA DE CARACT. / NAMEPLATE  
2/982-307 DETALLES DEL "GRID" "GRID" DETAILS  
2/982-308 SOPORTES DE REFRACTARIO REFRACTORY SUPPORTS  
2/982-309 PLANO DE TRANSPORTE TRANSPORT DWG.  
2/982-310 CLIPS DE PLATAFORMAS Y ESCALERAS PLATFORMS & LADDERS CLIPS  
2/982-311 CLIPS DE TUBERIA PIPING CLIPS

CODIGO	ASME VIII Div. 1 Ed. 2013	CODE
SELLO U / 42 / 5	YES	STAMP U / 42 / 5
REG. "NATIONAL BOARD"	NO	NATIONAL BOARD REGISTRATION
ESPECIFICACIONES	020700342/1213	SPECIFICATIONS
INSPECCION	SEE 2/982-300 (V-020700342-1213-FCK-R-103-0012)	INSPECTION
MARCADO CE (MODULO)	NO	CE MARKING (MODULE)
DATOS DE DISEÑO		DESIGN DATA
PRESION DE DISEÑO	4.8 Kg/cm2 (g) (VER TABLA 1 / SEE TABLE 1)	DESIGN PRESSURE
TEMPERATURA DE DISEÑO	343°C (METAL) (VER TABLA 1 / SEE TABLE 1)	DESIGN TEMPERATURE
PRESION DE TRABAJO		OPERATING PRESSURE
TEMPERATURA DE TRABAJO	(VER TABLA 2 / SEE TABLE 2)	OPERATING TEMPERATURE
PRESION PRUEBA HIDROSTATICA	SHOP TEST: 7.80 Kg/cm2 / 7.65 Barg FIELD NEW TEST: 7.80 Kg/cm2 / 7.65 Barg FIELD CORRODED TEST: 7.80 Kg/cm2 / 7.65 Barg	HYDROSTATIC TEST PRESSURE
MARGEN CORROSION	1.5 / (INTERNAL SEE DWG DETAILS)	CORROSION ALLOWANCE
SERPENTIN/CAMISA		COIL/JACKET
DENSIDAD DEL LIQUIDO		LIQUID DENSITY
SERVICIO ACIDO / LETAL		ACID / LETHAL SERVICE
TIPO DE FONDOS	"F1" HEMISPHERICAL / "F2" 2:1 SEMIELLIPICAL	TYPE OF HEADS
RADIOGRAFIADO	RT-1	RADIOGRAPHY
OTROS E.N.D.	VER NOTA 11 / SEE NOTE 11	OTHER N.D.T.
TRATAMIENTO TERMICO	VER NOTA 9 / SEE NOTE 9	STRESS RELIEVING
COEFICIENTE SOLDADURA	1	JOINT EFFICIENCY
AISLAMIENTO	N/A	INSULATION
PROTECCION CONTRA FUEGO	NO	FIREPROOFING
PRESION DE VIENTO	CODE E020	WIND PRESSURE
FACTOR DE TERREMOTO	CODE ASCE 7-10	EARTHQUAKE FACTOR
TEMP. MIN. DE DISEÑO (°C)	12.8 °C	MIN.DESIGN METAL TEMP. (°C)
ENSAYO DE IMPACTO	VER NOTA 7 / SEE NOTE 7	IMPACT TEST
M.A.W.P.	5.37 Kg/cm2 (LIMITED BY BLIND FLANGE OF "2M")	M.A.W.P.
ESPECIFICACION MATERIALES		MATERIALS SPECIFICATION
CUERPO	SA-516 Gr. 70N	SHELL
FONDOS	SA-516 Gr. 70N / SA-516 Gr. 70N+58-443 UNS N06625	HEADS
SOPORTES	SA-516 Gr. 70 / S-355 JR	SUPPORTS
ANILLOS RIGIDIZADORES	---	STIFFENING RINGS
CLIPS EXTERNOS	SA-516 Gr. 70	EXTERNAL CLIPS
CHAPAS REFUERZO	SA-516 Gr. 70N	REINFORCING PADS
BRIDAS / FORJAS	SA-105 / SA-182-347H	FLANGES / FORGINGS
TUBOS CHAPA	SA-516 Gr. 70	NECK PLATES
TUBOS	SA-106 Gr. B / SA-312 Tp 347H	NECK PIPES
ACCESORIOS	SA-234 WPB / SA-403 WP347H	FITTINGS
SERPENTIN / CAMISA	---	COIL / JACKET
TORNILLOS / TUERCAS PRESION	SA-193 Gr. B7 / SA-194 Gr. 2H	PRESSURE BOLTS / NUTS
JUNTAS	4.5 Thk. SPIRAL WOUND GRAPHITE FILLER WITH SS 316 WINDING, CS SOLID CENTER RING & SS 316 INNER RING.	GASKETS
ELEMENTOS INTERNOS	BRIDAS / FORJAS	FLANGES / FORGINGS
	TUBOS	PIPES
	ACCESORIOS	FITTINGS
	CHAPAS	PLATES
	SOPORTES Y CLIPS	SUPPORTS & CLIPS
TORNILLOS/TUERCAS	JUNTAS	BOLTS / NUTS
	JUNTAS	GASKETS
PESO Y CAPACIDAD (APROX.)		WEIGHT AND CAPACITY (EST.)
PESO FABRICADO	630.000 Kg.	FABRICATED WEIGHT
PESO TRANSPORTE	SEE DWG 2/982-309	SHIPPING WEIGHT
CAPACIDAD	4909 m3	CAPACITY
PESO PRUEBA HIDRAULICA TALLER	5.418.900 Kg.	HYDRAULIC TEST WEIGHT-SHOP
IZADO (SIN EL REFRACTARIO INSTALADO EN CAMPO)	650.000 Kg.	LIFTING (WITHOUT LINING SUPPLY SITE)
PREPARACION SUPERFICIES		SURFACE PREPARATION
CHORREADO GRADO	YES AS PER DOCUMENT NUMBER: V-020700342-1213-FCK-R-101-0065 (IDESIA REF-2/982-FP-1)	SANDBLASTING GRADE
PINTURA	YES	PAINTING
DECAPADO Y PASIVADO (INT./EXT.)	NO	PICKLING & PASSIVAT. (INT./OUT.)

MODERNIZACION REFINERIA de TALARA  
PETROPERU, S.A.



PROJECT:	MODERNIZACION REFINERIA DE TALARA	CONTRAC TR PROJECT N°:	02070
PURCHASE ORDER No.	020700342-1213	EQUIPMENTS / TAGS No.	FCK-R-103
DOCUMENT CODE :	PLG-0003	DOCUMENT No.	V-020700342-1213-FCK-R-103-0001-H
REVIEW RESPONSE BY PURCHASER: :			
<input type="checkbox"/> REJECTED	<input type="checkbox"/> REVIEWED WITH COMMENTS	<input checked="" type="checkbox"/> REVIEWED WITHOUT COMMENTS	
<input type="checkbox"/> COMMENTS AS NOTED	<input type="checkbox"/> REVIEWED AS BUILT	<input type="checkbox"/> FOR INFORMATION	
<input type="checkbox"/> VOID			
DATE: 26-10-2016			
VENDOR IDENTIFICATION :	IDESIA		
DOCUMENT TITLE :	GENERAL ASSEMBLY		
VENDOR DOCUMENT NUMBER	2/982-301 (1/3)	Rev.	7

7	DONDE SE INDICA / AS INDICATED	26.10.16	JUAN D.	26.10.16	BEGOÑA
6	DONDE SE INDICA / AS INDICATED	06.10.16	JUAN D.	06.10.16	BEGOÑA
5	DONDE SE INDICA / AS INDICATED	06.04.16	JUAN D.	06.04.16	BEGOÑA
4	DONDE SE INDICA / AS INDICATED	18.01.16	JUAN D.	18.01.16	BEGOÑA
3	DONDE SE INDICA / AS INDICATED	19.10.15	JUAN D.	19.10.15	BEGOÑA
REV.	OBJETO DE LA REVISION Subject of Revision	DATE ISSUED (D)	SIGNAT. REVIEWED (Pr.E.)	DATE APPROVED (T.M.)	SIGNAT.
CLIENTE:	T.R. /PETROPERU	Nº. ORDEN:	2/982		
Client:		Job N°:			
OBRA:	GASIFIER (FCK-R-103)				
Job:					
DESIGNACION:	CONJUNTO GENERAL				
Designation:	GENERAL ASSEMBLY				
PLANO N°:	2/982-301 (1/3)	REV.	7	SIZE	A1
Drawing N°:				SCALE	1:80
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