

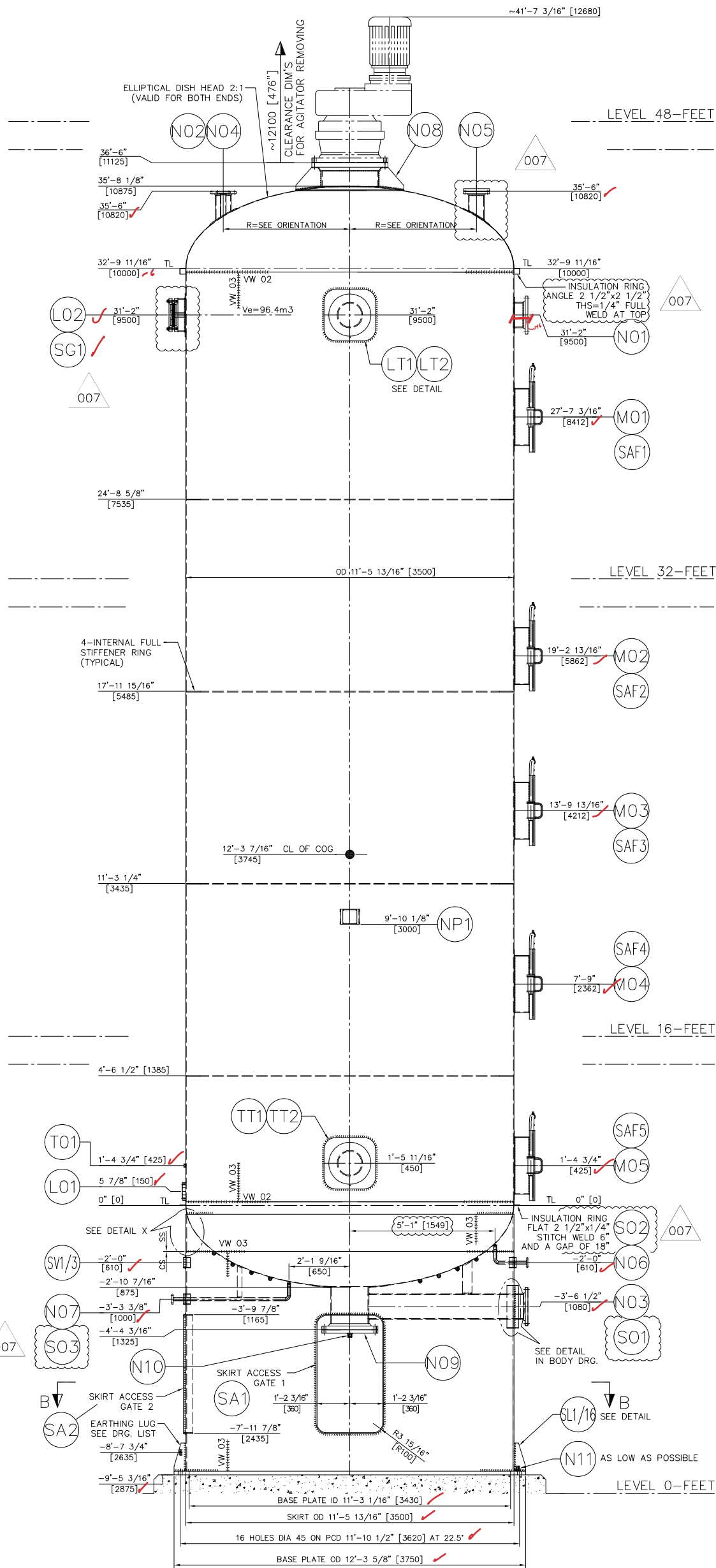
ACCORDING TO THE LAW OUR SURVEYS AND
INTERVIEWS ARE CONDUCTED IN CONFIDENCE
AND WE NEVER REPRODUCE NOR
COMMUNICATE TO THIRD PARTIES EVEN
THE MODIFICATIONS WITHOUT OUR
WRITTEN CONSENT

DE CONFORMIDAD CON LA LEY NUESTROS
ENCUESTAS Y ENTREVISTAS SON REALIZADAS
EN ESTRICTA CONFIDENCIA. NUNCA
REPRODUCIMOS NI COMUNICAMOS A
TERCERAS PERSONAS SIN NUESTRA
AUTORIZACIÓN, NI ALGUNAS
HAYAN SIDO MODIFICADAS

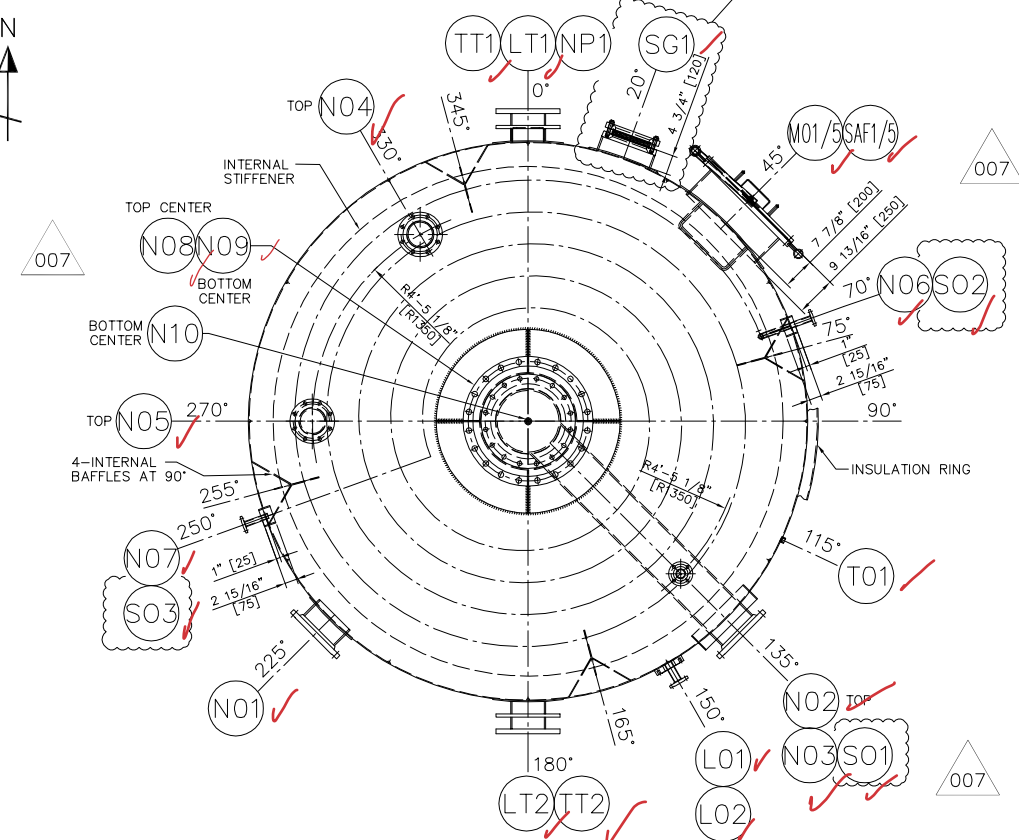
CONFORMEMENT A LA LOI NOS ETUDES
PERSONNELLES SONT AINSI PROPREMENT
EXCLUSIVE ET NE PEUVENT ETRE REPRODUITS
OU COMMUNIQUEES A DES TIERS MEME APRES
MODIFICATIONS SANS NOTRE AUTORISATION
ECRITE

IF IN DOUBT, ASK – DO NOT SCALE !

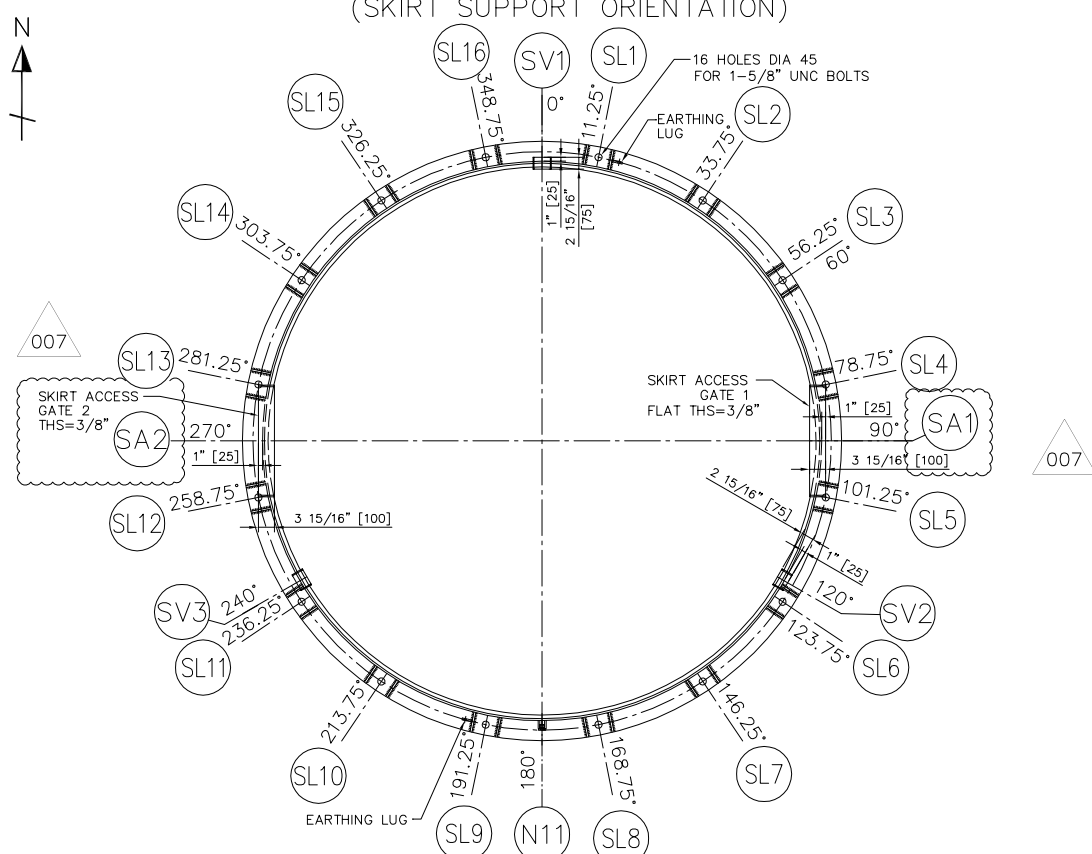
DIMENSIONAL DRAWING
NOT VALID FOR ORIENTATION



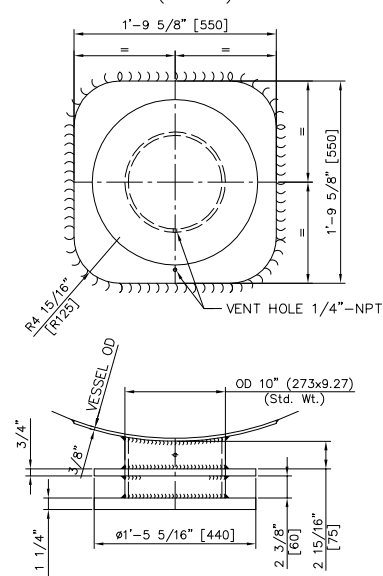
PLAN-ORIENTATION



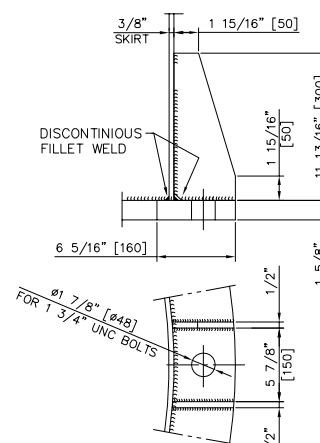
SECTION BB
(SKIRT SUPPORT ORIENTATION)



DETAIL POS. LT1/LT2-TT1/TT2
(4 OFF)



SKIRT SUPPORT DETAIL

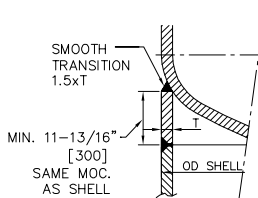


WARNING PLATE
(TYPE-4)



MOUNTED ON MANHOLE
TOP COVER WITH SUPPORTS

DETAIL X



NOZZLES

POS.	SERVICE	QTY	NOMINAL SIZE	FLANGE RATING	TYPE	SCHE./ TCHD.	REIN. COX/TK	PAD PROT.	UTG. LUG.	REMARKS REF. REM.	MELD TYP.
N01	OIL INLET	1	10"	CLASS 150	SO-RF	SOCH.10S	1-4 5/16"	4-1 9/16"		SEE BOD FW02	
N02	SYMPHON VENT CONNECTION	1	2"	CLASS 150	SO-RF	SOCH.40S	5 1/2"	4-1 9/16"		SEE BOD FW02	
N03	OUTLET TO PUMP	1	10"	CLASS 150	SO-RF	SOCH.10S	4-1 9/16"	4-1 9/16"		SEE BOD FW02	
N04	VENT	1	6"	CLASS 150	SO-RF	SOCH.10S	11 5/8"	4-1 9/16"		SEE BOD FW02	
N05	SPARE NOZZLE-BLUNDED	1	6"	CLASS 150	SO-RF BF-RF	SOCH.40S	11 5/8"	4-1 9/16"		SEE BOD FW02	
N06	STEAM INLET	1	1"	CLASS 150	SO-RF	SOCH.10S	4-1 9/16"	4-1 9/16"		FW02/NG	
N07	CONDENSATE OUTLET	1	1"	CLASS 150	SO-RF	SOCH.40S	4-1 9/16"	4-1 9/16"		FW02/NG	
N08	SEAT FOR AGITATOR	1	24"	CLASS 150	SO-RF	SOCH.40S	1-5 1/4"	4-1 9/16"		FW02/NG	
N09	SEAT FOR DRAIN BEARING	1	16"	CLASS 150	SO-RF BF-RF	SOCH.80S	2-7 1/2"	4-1 1/8"	SEE DRG. LIST	NW02/FW	
N10	DRAIN WITH PLUG	1	1"-NPS	CLASS 3000	FULL COUPLING					SEE DRG.	
N11	SKIRT DRAIN WITH PLUG	1	1"-NPS	CLASS 3000	FULL COUPLING						
T01	SEAT FOR TT	1	3/4"	CLASS 3000	HAIF COUPLING					NW01/F SEE BOD	
L01	SEAT FOR LEVEL TRANSMITTER	1	3"	CLASS 150	PAD FLANGE					NW01/F SEE BOD	
L02	SEAT FOR LEVEL SWITCH (4L)	1	1/2"	CLASS 150	SO-RF	SOCH.40S	4-1 9/16"	4-1 9/16"		NW02/FW	
S01	SIGHTGLASS SIZE 6	1	14"			SOCH.40S	5-5 1/8"	4-1 9/16"	00454364	NW01/F	
M01/M05	MANHOLE DIA 24" WITH VERTICAL DRAIN ARW	5	24"			SOCH.40S	2-5 1/8"	4-1 9/16"	10017732	NW01/F	
S01	SKIRT OPENING	1	18"			1-5 5/8"				SEE BODY	NW03
S02/S	SKIRT OPENINGS	2	4"			Std.Wt.					NW03
S03/S	SKIRT VENTS	3	4"			Std.Wt.					NW03
SA1/S	SKIRT ACCESS	2	4"			Std.Wt.					NW03

ACCESSORIES

LT1/12	LIFTING TRUNNIONS	2					SEE DETAIL
TT1/ TT2	TAILING TRUNNIONS	2					SEE DETAIL
SL1/ SL16	SKIRT SUPPORTS	16					SEE DETAIL
NP1	NAMEPLATE	1					SEE DWG
SAFT- SAFS	WARNING PLATE TYPE-4	5					004.305.529

MATERIALS / CERTIFICATES

ITEM	MATERIAL	QTY	ITEM	MATERIAL	QTY
SHELL/DISHEND	SA-240 304L	4	SKIRT / SUPPORTS	SA-240 304/SA-36	6
NOZZLE NECKS	SA-312 TP304L	4	TRUNNIONS	FLD PLATE	SA-240 304
NOZZLE FLANGES	SA-182 304	4	FLANGE PLATE	SA-240 B-36	1
MANHOLE NECKS	SA-240 F304L	4	INTERNAL STIFFENERS	SA-240 304L	36
MANHOLE FLANGES	SA-240 F304L	4	GASKETS	GARLOCK	3050
EXTERNAL COOLING COIL	SA-182 F304	4	EXTERNAL BOLTS/NUTS/UNCS	SA-182 B7-14 194	2
EXTERNAL COOLING COIL FLANGE	SA-182 F304	4	EXTERNAL BOLTS/NUTS/UNCS	SA-182 B7-5A-1504	28
EXTERNAL COOL SUPPORT	SA-240 304	3	SUPPORT FOR NAMEPLATE	SA-240 304	3
INTERNAL COOLING COIL	SA-240 TP304L	4	SUPPORT FOR WARNING PLATE	SA-240 304	3
VENT FOR SIGHTGLASS	SA-322 W304/SA-240 304	4	REINFORCING PADS	SA-240 304	4
VENT FOR 11 & DRAN NOZZLES	SA-106/514/11	4	SUPPORT FOR LEVEL TRANSMITTER	SA-240 304L	3
INTERNAL COOLING COIL	SA-479 TP304L	4	INSULATION RINGS/FL/WRAP	SA-240 304	3

DESIGN DATA

EQUIPMENT		SHELL		EXTERNAL COIL	
PRESSURE	OPERATING	bar/g	-0.1/TM (-1.47 psig)	3 (43.5" F)	
	DESIGN	bar/g	-0.25/0.25 (-3.67/3.67 psig)	+1/+6 (-14.5/87 psig)	
	TEST	bar/g	0.325 (4.78 psig) ✓	7.8 (114.6 psig)	
TEMPERATURE	OPERATING	°C	75 (167° F)	144 (291.2° F)	
	DESIGN	°C	0/120 (248° F)	193.3 (380° F)	
	TEST	°C	AMBIENT	AMBIENT	
MIN. DESIGN	METAL TEMP.	°C	-10 (14° F)		
CORROSION ALLOWANCE	STAINLESS STEEL	mm	0	0	
	CARBON STEEL	mm	1/16" (1.6)	1/16" (1.6)	
RADIOGRAPHY			NONE <i>SPOT</i>	NONE <i>SPOT</i>	
MIN. JOINT EFFICIENCY			0.7	0.85	
HEAT TREATMENT			NONE		
DESIGN CODE			ASME SEC VII Div I Ed.2019	ASME B31.3	
WIND / SEISMIC DESIGN			101 mph SDS = 1.077g, SDI = 0.664g (ASCE 7-16)		
FLUID			OIL-ENZYME	STEAM	
FLUID - GROUP			NA	NA	
PED 2014/68/EU			NA		
ASME "U" STAMP			NO		
WEIGHT	EMPTY	kg	16120 (35539 Lbs)		
	ASSEMBLED	kg	17706 (39035 Lbs) - (AGITATOR WEIGHT INCLUDED)		
	INSULATION	kg	840 (1852 Lbs)		
	OPERATING	kg	10419 (229609 Lbs)		
	FULL OF WATER	kg	125346 (276341 Lbs)		
VOLUME		m³	106.8 (3772 FL. L)	0.016 (0.566 FL. L)	
HEAT TRANSFER AREA		m²	-	28 (28 FL. L)	
INSULATION		SURFACE AREA / THK.	140/50 (1507 FL. L) 2"		
INSPECTED BY			DuMet Ballester		

NOTES : - LIQUID DENSITY : 888 kg/m³ (55.43 Lbs/Ft.³)
- USE SPREADER BEAM FOR LIFTING

007	01.12.2021	POS, SGI RELOCATED AND S01:S02:KS03 RE-ARRANGED-UPDATED AS MARKED	RSS
006	25.10.2021	POS, N09 W/REVIEW DETAIL, MODIFIED	RSS
005	19.10.2021	UPDATED AS MARKED	RSS
004	13.09.2021	OPERATION HOLD BURNED-AND POS, N09:K04:K05:K06:K07:K08:K09 PADFILE SIZES ARE INCREASED-UPDATED AS MARKED	RSS
003	27.05.2021	POS, N01 PADFILE, DATA REVISED	RSS
002	16.04.2021	UPDATED AS MARKED	RSS
REV	DATE	DESCRIPTION OF MODIFICATION	NBR OF MODS BY
		DOCUMENT TYPE	ASSY
Desmet Ballestra Group		PROJECT DESCRIPTION	WORPAR
ITEM NBR DESCRIPTION	W503E2.2 (19-RA-854B)	SEC'D PROJ'L JCC	SAA SCALE FORMAT A0
DOCUMENT DESCRIPTION	ENZYME REACTOR	DOM DATE	PRA DRAWING AUTHOR REVISION
Ve=96.4-D=3500-H=10000-S=2.6		13.03.2021	100174595 007
ARRANGEMENT			



INSPECTION REPORT

A. FINAL INSPECTION REPORT: BY RDR

B. Project code : WORPAR
Workshop : EQUIPROMEX
Item : W503E2.2
Drawing Nr : ASSY 100174595 Rev07, BODY 100174596 Rev05
Order Nr : 2743
PO nr : 2743
Inspector : RODRIGO DIAZ
Date : 06/21/2022

C. ACCEPTED FOR DELIVERY BY: RDR

PROGRESS : 100%
ESTIMATED READINESS DATE: 06/21/2022

D. GENERAL CONSIDERATIONS

✓ Painting quality : OK
✓ Welding quality : OK
✓ Cleanliness : OK
✓ Material certificates : OK
✓ Packing quality : OK
✓ Handling, securing facilities: OK
✓ Vessel thickness : OK
✓ Dimensions according drawings : OK
✓ Nozzles orientation and projections : OK
✓ Internals attachments :OK

This inspection does not in any way discharge the responsibility of the workshop nor impact on the mechanical warranty



E. TESTING RESULTS : All tests have been completed with satisfactory results.

Type of test	Degree of examination	Results
Pneumatic test shell side	100%	Satisfactory
R.T. Coils	Spot	Satisfactory
R.T. on dished ends welded seams.	100%	Satisfactory
Hydrotest coil's side.	100%	Satisfactory
PMI	SS material.	Satisfactory
Vertical Alignment Check	100%	Satisfactory
Visual inspection	100%	Satisfactory



Enzyme reactor W5032.2 (19-RA-854B) fabrication and shipments preparations are complete. Final visual appearance of base metal and welding is satisfactory. The vessel is ready for shipment.

This inspection does not in any way discharge the responsibility of the workshop nor impact on the mechanical warranty

The logo for Desmet Ballestra, consisting of the company name in a white sans-serif font on a dark blue rectangular background.

Top dished end. Final visual appearance satisfactory. RX results on the welded seam satisfactory. Thickness after forming is over 1/4".



Bottom view. Final visual appearance of coil satisfactory. Coil is properly clamped to the bottom dished end.



180 degrees view. Orientation and shipment marks are painted.

This inspection does not in any way discharge the responsibility of the workshop nor impact on the mechanical warranty

desmet ballestra

Name plate will be changed with a new plate with imperial units.

END REPORT.

This inspection does not in any way discharge the responsibility of the workshop nor impact on the mechanical warranty