中海油石化工程有限公司 CNOOC Petrochemical Engineering Co.,Ltd.	DATA SHEET FOR PSA NITROGEN GENERATOR PACKAGE(Y-285421) OF FQN	Owner Doc.No.	CMIT-240048-728-PCS-15.17-1002	
		Job's Doc. No.	253001D0728TE01D19-2	
		Phase	Detailed Design	
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Company:	CMIT CNOOC.MOC.IDC.TPAO CNOOC IRAQ LIMITED
Project:	FQN NEW DEGASSING STATION UPGRADING PROJECT
Unit:	FQN DEGASSING STATION
Contract No.:	CMIT-PRT-10.53-240048

Discipline: PCS

Prepared by: Yu H.L.

Checked by: Li Ch.Q.

Approved by: Liu Ming

Rev.	Description	Prepared	Checked	Approved		Date
B	ISSUED FOR APPROVAL	Yu.H.L	Li.CH.Q	Liu.ming		20250721
A	ISSUED FOR REVIEW	Yu.H.L	Li.CH.Q	Liu.ming		20250618

APPLICABLE TO: ○ PROPOSAL ● PURCHASE ○ AS-BUILT	JOB	FQN NEW DEGASSING STATION UPGRADING PROJECT	CLIENT	CNOOC IRAQ LIMITED
	LOCATION	IRAQ	QUANTITY	1
	UNIT	728	MANUFACTURER	

1 SITE CONDITIONS AND GENERAL DATA

AMBIENT TEMPERATURE (°C)	Max.: 55	Min.: -5
RELATIVE HUMIDITY (%)	Max.: 80	Min.: 25
ATMOSPHERIC PRESSURE (kPa)	Max.:102	Min.:98
AREA CLASSIFICATION	SAFE AREA	
NOISE LIMITATION	≤85 [dB(A)]	
ALTITUDE	4~24 m ASL	
INSTALLATION	INDOOR	UNDER SHED
COATING SYSTEM	AS MANUFACTURER'S STANDARD	

2 WEIGHTS AND SPACE REQUIREMENTS

EMPTY WEIGHT (Kg)	VTA	SHIPPING WEIGHTS (Kg)	VTA
OPERATING WEIGHT (Kg)	VTA	APPROXIMATE SPACE (L x W x H)	VTA

3 TESTING REQUIREMENTS

	REQ'D	WITNESS
PERFORMANCE	YES	YES
MECHANICAL RUN TEST	YES	YES
COMPLETE UNIT TEST	YES	YES
HYDROSTATIC TEST	YES	NO
NOISE TEST	YES	NO

TAG NO	E-285421A/B	SERVICE	PRE-COOLER	QUANTITY	2

1 CODE, REGULATIONS AND SPECIFICATIONS

CODES AND REGULATIONS	MANUFACTURER'S STANDARD	OFFICIAL LANGUAGE	ENGLISH
GENERAL SPECIFICATIONS		SPECIAL SPECIFICATION	

2 OPERATING CONDITIONS

1	PRESSURE	MPag	0.9
2	INLET TEMPERATURE MIN/MAX	°C	15/65
3	FLOW NORMAL/DESIGN	Nm^3/h	VTA
4	OUTLET TEMPERATURE	°C	≤40

3 PERFORMANCE DATA

1	PRESSURE DROP (allowed/calculated)	kPa	30/15 (VTC)
2	DESIGN PRESSURE	MPag	1.2
3	DESIGN TEMPERATURE	°C	85
4	INSTALLED ELECTRICAL DUTY	kW	10 (VTC)
5	ELECTRICAL SUPPLY (Voltage/Frequency/Nos of Phases)	V/Hz/-	400/50/3
6	CONDENSING COOLING FLUID	-	Air
7	REFRIGERANT TYPE	-	VTA
8	COMPRESSOR TYPE	-	VTA
9	NOISE LIMITATION (1 m free field)	dBA	≤85
10	NUMBER OF HEAT EXCHANGERS	-	1.0
11	DESIGN LIFE	years	25

TAG NO	DRY-285421A/B	SERVICE	REFRIGERANT DRYER	QUANTITY	2

1 CODE, REGULATIONS AND SPECIFICATIONS

CODES AND REGULATIONS	ASME VIII DIV. 1	OFFICIAL LANGUAGE	ENGLISH
GENERAL SPECIFICATIONS		SPECIAL SPECIFICATION	

2 OPERATING CONDITIONS

1	**CHARACTERISTICS OF WET AIR(INLET)**		
2	PRESSURE	MPag	0.9
3	TEMPERATURE MIN/MAX	°C	5/38
4	FLOW NORMAL/DESIGN	Nm^3/h	VTA
5	**CHARACTERISTICS OF DRY AIR(OUTLET)**		
6	FLOW NORMAL/DESIGN	Nm^3/h	VTA
7	DEW POINT	°C	5°C (at 0.9MPag)
8	OUTLET TEMPERATURE	°C	30°C

3 DRYER CHARACTERISTICS

1	REGENERATION TYPE		○ HEATLESS REGENERATION ○ HEAT REGENERATION ◉ REFRIGERATION
2	INLET AND OUTLET FILTRATION		◉ OIL (2) ○ LIQUID ◉ DUST
3	NUMBER OF INLET FILTERS AND CAPACITY	-	1*100%
4	OUTLET FILTRATION (dust)	μm	≤3
5	NUMBER OF OUTLET FILTERS AND CAPACITY	-	2*100%
6	OUTLET OIL CONCENTRATION	mg/m^3	≤10
7	OVERALL PACKAGE PRESSURE DROP (allowed/calculated)	kPa	50/30 (VTC)
8	DESIGN PRESSURE	MPag	1.2
9	DESIGN TEMPERATURE	°C	85
10	TYPE OF REFRIGERANT		VTA
11	REFRIGERANT USAGE	kG	VTA
12	COOLING AIR VOLUMN	m^3/h	VTA
13	TYPE OF DRAIN VALVE		ELECTRON
14	TYPE OF COMPRESSOR		CLOSED TYPE
15	ELECTRICAL SUPPLY (Voltage/Frequency/Nos of Phases)	V/ Hz/-	400/50/3
16	INSTALLED ELECTRICAL DUTY	kW	20 (VTC)
17	NOISE LIMITATION (1 m free field)	dBA	≤85
18	WEIGHT AND SIZE	kG	

NOTES:

VTC: Vendor to confirm; VTA: Vendor to advise.

1 One air compressor，one pre-cooler, one refrigerant dryer and all other accessories shall be mounted to a skid in the container and equipped with air-conditioner.

2 For scope of supply of this skid, refer to P&ID CMIT-240048-728-PCS-15.11-1003、1004. For general air compression system arrangement, refer to equipment layout drawing CMIT-240048-728-PCS-15.01-1001.

3 Vendor shall provide P&ID, Data Sheet, Caculation, General Arrangement, Erection/Installation Instruction, Spare-Parts List, Operating manual, Testing Certificates, etc. for EPC contractor approval.

4 The interconnecting piping, piping supports and cable trays, etc. shall be prefabricated on vendor's shop. The welding work is not permitted at site.The detail materials of piping system and valves shall comply with CMIT-240048-728-PIP-15.03-3001_A_SPECIFICATION FOR PROCESS PIPING MATERIALS, CMIT-240048-728-PIP-15.03- 3002_SPECIFICATION FOR MANUAL VALVES.All piping systemwelding and NDT shall comply with CMIT-240048-728-EQP-15.03-0001_A_SPECIFICATION FOR PIPING AND PIPELINE WELDING IN NON-SOUR SERVICE.

5 Material certificates shall be furnished as per EN 10204 Type 3.1 for pressure parts / parts directly welded to pressure parts and EN 10204 Type 2.2 for non-pressure/structural parts.

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		Job's Doc. No.	253001D0728TE01D19-2	
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APPLICABLE TO: ○ PROPOSAL ● PURCHASE ○ AS-BUILT	JOB	FQN NEW DEGASSING STATION UPGRADING PROJECT	CLIENT	CNOOC IRAQ LIMITED
	LOCATION	IRAQ	QUANTITY	1
	UNIT	728	MANUFACTURER	

1 SITE CONDITIONS AND GENERAL DATA

AMBIENT TEMPERATURE (°C)	Max.: 55	Min.: -5
RELATIVE HUMIDITY (%)	Max.: 80	Min.: 25
ATMOSPHERIC PRESSURE (kPa)	Max.:102	Min.:98
AREA CLASSIFICATION	SAFE AREA	
NOISE LIMITATION	≤85 [dB(A)]	
ALTITUDE	4~24 m ASL	
INSTALLATION	OUTDOOR	UNDER SHED
COATING SYSTEM	AS MANUFACTURER'S STANDARD AND SPEC: CMIT-230084-1-796-EQP-15.03-00-000	

2 WEIGHTS AND SPACE REQUIREMENTS

EMPTY WEIGHT (Kg)	VTA	SHIPPING WEIGHTS (Kg)	VTA
OPERATING WEIGHT (Kg)	VTA	APPROXIMATE SPACE (L x W x H)	VTA

3 TESTING REQUIREMENTS

	REQ'D	WITNESS
PERFORMANCE	YES	YES
MECHANICAL RUN TEST	YES	YES
COMPLETE UNIT TEST	YES	YES
HYDROSTATIC TEST	YES	NO
NOISE TEST	YES	NO

TAG NO	NG-285421A/B	SERVICE	PSA NITROGEN GENERATOR	QUANTITY	2

1 CODE, REGULATIONS AND SPECIFICATIONS

CODES AND REGULATIONS	ASME VIII DIV. 1	OFFICIAL LANGUAGE	ENGLISH
GENERAL SPECIFICATIONS		SPECIAL SPECIFICATION	

2 OPERATING CONDITIONS

NORMAL FLOWRATE(N_2, OUTLET)	Nm^3/h	100
OPERATING PRESSURE	MPaG	0.85
DISCHARGE OPERATING PRESSURE	MPaG	0.8
OPERATING TEMPERATURE	°C	30
POWER (Voltage/Frequency/Nos of Phases)	-	400V/50HZ/3Phase
MOLECULAR WEIGHT	–	VTA

3 DESIGN DATA

NITROGEN PURITY	%	≥99.9
DESIGN TEMPERATURE	°C	85
DESIGN PRESSURE	MPaG	1.2
DESIGN LIFE	years	25
material of construction,Inspection requirements.Painting		Refer to the MR (CMIT-240048-728-PCS-15.21-1002)

4 SCOPE OF SUPPLY

4.1	PSA nitrogen generator	ASME VIII DIV. 1 & CMIT-240048-728-EQP-15.03-0001	Equipped with MOL sieve vessels (2 columns each), PLC Control System, Instrumentation, automatic valves, piping and all other accessories.For details, refer to the P&ID.
	(NG-285421A/B)		
4.2	O_2 analyzer	-	Type/Design to be advised by Vendor and Approved by the Company.
4.3	Silencer (SIL-285421A/B)	As manufacturer's standard	
4.4	IA buffer vessel (V-285421A/B)	Refer to the data sheet	The size of the Air buffer vessel and nitrogen buffer vessel shall be caculated by vendor and provide to EPC contractor for approval.
4.5	Nitrogen buffer vessel(V-285422A/B	Refer to the data sheet	
4.6	Interconnecting piping, valves, filters	All connections shall be, as minimum, at the Skid	Refer to the P&ID.
	instrumentation & cables	Battary-Limits	
4.7	Foundation bolts		
4.8	Baseplate		

NOTES:

VTC: Vendor to confirm; VTA: Vendor to advise.

1 Two MOL sieve vessels, IA buffer vessel, nitrogen buffer vessel and all other accessories shall be mounted to a skid.

2 For scope of supply of this skid, refer to CMIT-240048-728-PCS-15.11-1003、1004.For general PSA nitrogen generator arrangement, refer to equipment layout drawing CMIT-240048-728-PCS-15.01-1001.

3 Vendor shall provide P&ID, Data Sheet, Caculation, General Arrangement, Erection/Installation Instruction, Spare-Parts List, Operating manual, Vessels Testing Certificates, etc. for EPC contractor approval.

4 The interconnecting piping, piping supports and cable trays, etc. shall be prefabricated on vendor's shop. The welding work is not permitted at site. detail materials of piping system and valves shall comply with CMIT-240048-728-PIP-15.03-3001_A_SPECIFICATION FOR PROCESS PIPING MATERIALS, CMIT-240048-728-PIP-15.03-3002_SPECIFICATION FOR MANUAL VALVES.All piping systemwelding and NDT shall comply with CMIT-240048-728-EQP-15.03-0001_A_SPECIFICATION FOR PIPING AND PIPELINE WELDING IN NON-SOUR SERVICE.

5 Material certificates shall be furnished as per EN 10204 Type 3.1 for pressure parts / parts directly welded to pressure parts and EN 10204 Type 2.2 for non-pressure/structural parts.

6 Equipment shall conform to the specification for welded pressure vessels.

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APPLICABLE TO: ○ PROPOSAL ● PURCHASE ○ AS-BUILT	JOB	FQN NEW DEGASSING STATION UPGRADING PROJECT	CLIENT	CNOOC IRAQ LIMITED
	LOCATION	IRAQ	QUANTITY	1
	UNIT	728	MANUFACTURER	

1 SITE CONDITIONS AND GENERAL DATA

AMBIENT TEMPERATURE (°C)	Max.: 55	Min.: -5
RELATIVE HUMIDITY (%)	Max.: 80	Min.: 25
ATMOSPHERIC PRESSURE (kPa)	Max.:102	Min.:98
AREA CLASSIFICATION	SAFE AREA	
NOISE LIMITATION	≤85 [dB(A)]	
ALTITUDE	4~24 m ASL	
INSTALLATION	OUTDOOR	UNDER SHED
COATING SYSTEM	AS MANUFACTURER'S STANDARD	

2 WEIGHTS AND SPACE REQUIREMENTS

EMPTY WEIGHT (Kg)	VTA	SHIPPING WEIGHTS (Kg)	VTA
OPERATING WEIGHT (Kg)	VTA	APPROXIMATE SPACE (L x W x H)	VTA

TAG NO	V-285421A/B	SERVICE	IA BUFFER VESSEL	QUANTITY	2

1 Process Data

1	SERVICE:		IA
2	OPERATING PRESSURE	MPag	0.85
3	OPERATING TEMPERATURE	°C	30
4	GAS FLOWRATE	Nm³/h	~400
5	SET PRESSURE OF SAFETY VALVES	MPag	1.2

2 Design Criteria

1	Design Code:	ASME Sec. VIII Div. 1 -2023 ED		Design Life:		Years	25
2	Design Temperature:	℃	85	Ambient Temperature:		℃	Min. -5 Max. 55
3	Design Pressure:	MPag	1.2	Min. Design Metal Temperature:		℃	-5
4	External Design Pressure:	MPag	N/A	Max Allowable External Working Pressure:		MPag	N/A
5	Shell Inside Diameter:	mm	VTA	Medium:	☑Sweet ☐Sour ☐Lethal ☐Wet H_2S		
6	Shell Length:	mm	VTA	Location:	☐Indoor ☑ Ourdoor ☐Underground(Buried)		
7	Skirt Inside Diameter:	mm	N/A	Under Shed:		Yes	
8	Skirt/Leg Height:	mm	VTA	Vessel Type:		Horizontal ☐ Vertical ☑	
9	Capacity:	m^3	VTA	Head Type:	2:1 Semi-Ellipse		
10	Corrosion Allowance:	mm	Shell:2, Head:2, Nozzles:2	Liquid Level:		mm	VTA
11	Max. Design Wind Speed:	m/s	**42**	Thickness (Shell/Head):		mm	VTA
12	Seismic Zone:	--	Zone 2B	Thickness (Skirt):		mm	VTA
13	Joint Efficiency:	--	Shell: 1 Head:1	NET WEIGHT		kg	VTA
14	Max. Allowable Working Pressure:	Mpag	VTA	Full of Water WEIGHT		kg	VTA
15	MAP (New & Cold):	MPag	VTA	Operating WEIGHT		kg	VTA
16	Insulation Thickness:	mm		Internal Lining / Coating:		N/A	
17	Hazardous Area Classification:		Non Hazardous	External Paint System:		CMIT-230084-1-796-PIP-15.03-00-2009	
18	General specification	CMIT-230084-1-796-EQP-15.03-00-0001		Official language			ENGLISH

Notes

3 Internal & External Attachments

1	Type of Support:	VTA	Demister:	☐Yes ☑No
2	Manway with Davit/Hinge:	☑Yes ☐No	Trays (sieve):	☐Yes ☑No
3	Vortex Breaker:	☐Yes ☑No	Skid Mounting:	☑Yes ☐No
4	Insulation Supports/Clips:	☑Yes ☐No	Ladders & Platforms:	☐Yes ☑No
5	Heating Coil:	☐Yes ☑No	Inner Ladder Rung:	☐Yes ☑No
6	Lifting Lugs:	☑Yes ☐No	Sacrificial Anodes:	☐Yes ☑No
7	Tailing Lugs:	☐Yes ☑No	Spill Over Weir:	☐Yes ☑No
8	Internal Pipes:	☐Yes ☑No	Inlet Distribution:	☐Yes ☑No
9	Earthing Boss:	☑Yes ☐No		

4 Materials

1	Material Code:	ASME BPVC SEC. Ⅱ 2023 ED	Nozzles (Pipe/Forged):	SA-106Gr.B / SA-105N
2	Shell:	SA516Gr.70	Nozzle Flanges:	SA-105N
3	Head:	SA516Gr.70	Backing Plate Welded to Shell:	SA 516Gr.70
4	Skirt/saddle/leg:	SA 36/SA 516 Gr.70	Basing Ring / Anchor Chair:	SA-36(VTC)
5	Tray:	N/A	Insulation Supports/Clips:	N/A
6	Bolts:(External)	SA 193 Gr.B7	Internals Fixed/Removable:	VTA
7	Nuts:(External)	SA 194 Gr.2H	Name Plate & Earthing Boss:	SS304
8	Sacrificial Anodes:	N/A	Nozzle Flanges Gasket:	Spiral Wound Flexible Graphite Gaskets With SS316L Winding,SS316L Inner&Centering Ring, 4.5mm THK.

5 Fabrication and Testing Requirements

1	Non-destructive Testing					Fabrication Code:	ASME Sec. VIII Div. 1
2	Joint Category		Test Means	Test Ratio	Grade	NDE Code:	ASME Sec. V
3	A	SHELL	RT	FULL	UW-51	Welding Code:	ASME Sec. IX
4						Impact Test:	N/A
5		HEAD	RT	FULL	UW-51	Stress Relief (PWHT):	As per Code
6						Positive Material Identification:	☐Yes ☑No
7	B		RT	FULL	UW-51	HIC Testing:	☐Yes ☑No
8						Hydraulic Test Pressure:	MPa(g) As per Code
9	C	NOZZLE NPS＞10 or THK.＞29mm	RT	FULL	UW-51	Hardness Test:	As per Code
10		OTHER	MT/PT	FULL		Third Party Inspection:	☑Yes ☐No
11	D		MT/PT	FULL		Code Stamp Required:	☐Yes ☑No

Notes

VTC: Vendor to confirm; VTA: Vendor to advise.

1. Vendor shall complete this data sheet and confirm materials listed above.
2. Insulation shall be provided as per CMIT-240048-728-PIP-15.03-3003.
3. Nozzles orientation and size will be difined by vendor.
4. Pressure bearing parts shall be certified in accordance with EN 10204 Type 3.1.Non-pressure bearing parts shall be certified in accordance with EN 10204 Type 2.2.
5.Materials which are directly attached/welded to shell/heads shall be of same material grade as shell/head.
6.All nozzles shall be set-in type only unless otherwise specified.
7.Bolt Holes shall straddle to vessel centerline.
8.Nozzle flanges shall be as per ASME B16.5 for sizes up to and indluding 24"NPS.
9.Nozzles shall be designed for MAWP of equipment.The MAWP shall be limited by the lesser of the shell,head or flange rating.
10.Vendor shall be responsible for carrying out WRC537/297 local load analysis for nozzles to shell junction for other extemal attachments.
11.FEA analysis shall be performed if the shell to nozzle/attachment junction isoutside the scope of WRC537/297.
12.The nominal thickness of the head shal not be less than the minimum required thickness of the connecting cylindrical shell.
13.Referenced P&ID:CMIT-240048-728-PCS-15.11-1003、1004.

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APPLICABLE TO: ○ PROPOSAL ● PURCHASE ○ AS-BUILT	JOB	FQN NEW DEGASSING STATION UPGRADING PROJECT	CLIENT	CNOOC IRAQ LIMITED
	LOCATION	IRAQ	QUANTITY	1
	UNIT	728	MANUFACTURER	

1 SITE CONDITIONS AND GENERAL DATA

AMBIENT TEMPERATURE (°C)	Max.: 55	Min.: -5
RELATIVE HUMIDITY (%)	Max.: 80	Min.: 25
ATMOSPHERIC PRESSURE (kPa)	Max.:102	Min.:98
AREA CLASSIFICATION	SAFE AREA	
NOISE LIMITATION	≤85 [dB(A)]	
ALTITUDE	4~24 m ASL	
INSTALLATION	OUTDOOR	UNDER SHED
COATING SYSTEM	AS MANUFACTURER'S STANDARD	

2 WEIGHTS AND SPACE REQUIREMENTS

EMPTY WEIGHT (Kg)	VTA	SHIPPING WEIGHTS (Kg)	VTA
OPERATING WEIGHT (Kg)	VTA	APPROXIMATE SPACE (L x W x H)	VTA

TAG NO	V-285422A/B	SERVICE	NITROGEN BUFFER VESSEL	QUANTITY	2

1 Process Data

1	SERVICE:		NITROGEN (Purity：99.9%)
2	OPERATING PRESSURE	MPag	0.8
3	OPERATING TEMPERATURE	°C	40
4	GAS FLOWRATE	Nm³/h	100
5	SET PRESSURE OF SAFETY VALVES	MPag	1.2

2 Design Criteria

1	Design Code:	ASME Sec. VIII Div. 1 -2023 ED		Design Life:		Years	25
2	Design Temperature:	℃	85	Ambient Temperature:		℃	Min. -5 Max. 55
3	Design Pressure:	MPag	1.2	Min. Design Metal Temperature:		℃	-5
4	External Design Pressure:	MPag	N/A	Max Allowable External Working Pressure:		MPag	N/A
5	Shell Inside Diameter:	mm	VTA	Medium:	☑Sweet ☐Sour ☐Lethal ☐Wet H_2S		
6	Shell Length:	mm	VTA	Location:	☐Indoor ☑ Ourdoor ☐Underground(Buried)		
7	Skirt Inside Diameter:	mm	N/A	Under Shed:			Yes
8	Skirt/Leg Height:	mm	VTA	Vessel Type:			Horizontal ☐ Vertical ☑
9	Capacity:	m^3	VTA	Head Type:			2:1 Semi-Ellipse
10	Corrosion Allowance:	mm	Shell:2, Head:2, Nozzles:2	Liquid Level:		mm	VTA
11	Max. Design Wind Speed:	m/s	**42**	Thickness (Shell/Head):		mm	VTA
12	Seismic Zone:	--	Zone 2B	Thickness (Skirt):		mm	VTA
13	Joint Efficiency:	--	Shell: 1 Head:1	NET WEIGHT		kg	VTA
14	Max. Allowable Working Pressure:	Mpag	VTA	Full of Water WEIGHT		kg	VTA
15	MAP (New & Cold):	MPag	VTA	Operating WEIGHT		kg	VTA
16	Insulation Thickness:	mm		Internal Lining / Coating:			N/A
17	Hazardous Area Classification:		Non Hazardous	External Paint System:			CMIT-230084-1-796-PIP-15.03-00-2009
18	General specification	CMIT-230084-1-796-EQP-15.03-00-0001		Official language			ENGLISH

Notes

3 Internal & External Attachments

1	Type of Support:	VTA	Demister:	☐Yes ☑No
2	Manway with Davit/Hinge:	☑Yes ☐No	Trays (sieve):	☐Yes ☑No
3	Vortex Breaker:	☐Yes ☑No	Skid Mounting:	☑Yes ☐No
4	Insulation Supports/Clips:	☑Yes ☐No	Ladders & Platforms:	☐Yes ☑No
5	Heating Coil:	☐Yes ☑No	Inner Ladder Rung:	☐Yes ☑No
6	Lifting Lugs:	☑Yes ☐No	Sacrificial Anodes:	☐Yes ☑No
7	Tailing Lugs:	☐Yes ☑No	Spill Over Weir:	☐Yes ☑No
8	Internal Pipes:	☐Yes ☑No	Inlet Distribution:	☐Yes ☑No
9	Earthing Boss:	☑Yes ☐No		

4 Materials

1	Material Code:	ASME BPVC SEC. Ⅱ 2023 ED	Nozzles (Pipe/Forged):	SA-106Gr.B / SA-105N
2	Shell:	SA516Gr.70	Nozzle Flanges:	SA-105N
3	Head:	SA516Gr.70	Backing Plate Welded to Shell:	SA 516Gr.70
4	Skirt/saddle/leg:	SA 36/SA 516 Gr.70	Basing Ring / Anchor Chair:	SA-36(VTC)
5	Tray:	N/A	Insulation Supports/Clips:	N/A
6	Bolts:(External)	SA 193 Gr.B7	Internals Fixed/Removable:	VTA
7	Nuts:(External)	SA 194 Gr.2H	Name Plate & Earthing Boss:	SS304
8	Sacrificial Anodes:	N/A	Nozzle Flanges Gasket:	Spiral Wound Flexible Graphite Gaskets With SS316L Winding,SS316L Inner&Centering Ring, 4.5mm THK.

5 Fabrication and Testing Requirements

1	Non-destructive Testing					Fabrication Code:	ASME Sec. VIII Div. 1
2	Joint Category		Test Means	Test Ratio	Grade	NDE Code:	ASME Sec. V
3	A	SHELL	RT	FULL	UW-51	Welding Code:	ASME Sec. IX
4						Impact Test:	N/A
5		HEAD	RT	FULL	UW-51	Stress Relief (PWHT):	As per Code
6						Positive Material Identification:	☐Yes ☑No
7	B		RT	FULL	UW-51	HIC Testing:	☐Yes ☑No
8						Hydraulic Test Pressure:	MPa(g) / As per Code
9	C	NOZZLE NPS＞10 or THK.＞29mm	RT	FULL	UW-51	Hardness Test:	As per Code
10		OTHER	MT/PT	FULL		Third Party Inspection:	☑Yes ☐No
11	D		MT/PT	FULL		Code Stamp Required:	☐Yes ☑No

Notes

VTC: Vendor to confirm; VTA: Vendor to advise.

1. Vendor shall complete this data sheet and confirm materials listed above.
2. Insulation shall be provided as per CMIT-240048-728-PIP-15.03-3003.
3. Nozzles orientation and size will be difined by vendor.
4. Pressure bearing parts shall be certified in accordance with EN 10204 Type 3.1.Non-pressure bearing parts shall be certified in accordance with EN 10204 Type 2.2.
5.Materials which are directly attached/welded to shell/heads shall be of same material grade as shell/head.
6.All nozzles shall be set-in type only unless otherwise specified.
7.Bolt Holes shall straddle to vessel centerline.
8.Nozzle flanges shall be as per ASME B16.5 for sizes up to and indluding 24"NPS.
9.Nozzles shall be designed for MAWP of equipment.The MAWP shall be limited by the lesser of the shell,head or flange rating.
10.Vendor shall be responsible for carrying out WRC537/297 local load analysis for nozzles to shell junction for other extemal attachments.
11.FEA analysis shall be performed if the shell to nozzle/attachment junction isoutside the scope of WRC537/297.
12.The nominal thickness of the head shal not be less than the minimum required thickness of the connecting cylindrical shell.
13.Referenced P&ID:CMIT-240048-728-PCS-15.11-1003、1004.