

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	TBE for Instrument/Plant Air & Nitrogen Packages								
شماره پیمان:	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	شماره صفحه: ۱ از ۷
۰۵۳ - ۰۷۳ - ۹۱۸۴	D02	0006	TB	ME	120	PEDCO	GCS	BK	

طرح نگهداشت و افزایش تولید ۲۷ مخزن

TBE for Instrument/Plant Air & Nitrogen Packages

نگهداشت و افزایش تولید میدان نفتی بینک

D02	FEB.2024	IFI	H.Ghadyani	M.Fakharian	S.Faramarzpour	
D01	OCT.2023	IFI	H.Ghadyani	M.Fakharian	S.Faramarzpour	
D00	MAR.2023	IFI	H. Adineh	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 3

CLIENT Doc. Number: F0Z-709228

status: IDC: Inter-Discipline Check

IFC: Issued For Comment

IFA: Issued For Approval

AFD: Approved For Design

AFC: Approved For Construction

AFP: Approved For Purchase

AFQ: Approved For Quotation

IFI: Issued For Information

AB-R: As-Built for CLIENT Review

AB-A: As-Built –Approved

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	TBE for Instrument/Plant Air & Nitrogen Packages								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک TB	سریال 0006	نسخه D02	شماره صفحه: ۷ از ۷

REVISION RECORD SHEET

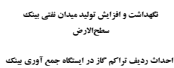
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4	X	X	X			68					
5	X	X	X			69					
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		نگهداشت و افزایش تولید میدان نفتی بینک سلطان افراس احداث روپک تراکم گاز در ایستگاه جمع آوری بینک									
TBE for Instrument/Plant Air & Nitrogen Packages											
شماره پیمان: ۰۳ - ۱۸۴ - ۱۳۰۲		روش: BK	روش کاری: GCS	روش اندازه گیری: PEDCO	روش: 120	روش: ME	روش: TB	روش: 0008	روش: D02		
شماره سند: 7 از 7											
REQ. NO: BE-GCS-PEDCO-120-ME-MR-0006		BIDDER NAME: HAVAYAR				HAVASAN		PARS COMPRESSOR		ARAZ SANAT ASIA	
QUOTATION NO.: 01		01/02/1386				HAY-BK-HIRGN-001		01890		ASA-LR-02-263	
QUOTATION DATE: 24/3/2024		24/3/2024				8/30/2023		9/3/2023		22/1/2024	
No.		DESCRIPTION		UNITS	REQ'D BY PURCHASER	MEETS REQUISITION REQUIREMENTS					
						Builder's Proposal	Status	Builder's Proposal	Status	Builder's Proposal	Status
Instrument & Plant Air Production Package											
1 GENERAL											
1.1		Guarantee & Warranty as per project requirement.		-	12 month after successful start up or 18 month after delivery at site	A	YES	A	YES	A	YES
1.2		Delivery Time		Month	As per project requirement	9	YES	8	YES	12 months Because of UCP (P.L.C. 57' 400 TPA delivery time)	As per project requirement
1.3		Delivery Location		-	-	Ex - work Havayer Factory	YES	TABRIZ-HAVASAN	YES	DDP @ site	As per project requirement
2 DOCUMENTS CHECK LIST											
2.1		Quality System Certificates		-	Required	A	YES	A	YES	A	YES
2.2		Catalogues		-	Required	A	YES	A	YES	A	YES
2.3		Sub-Vendor List		-	Required	A	YES	A	YES	A	YES
2.4		Scope of Supply & Work (Attachment of MR)		-	Required	A	YES	A	YES	A	YES
2.5		Deviation List		-	Required	A	YES	A	YES	A	YES
2.6		Reference and Installation List		-	Required	A	YES	A	NO	A	YES
2.7		Recommended Spare Part List for erection & Commissioning		-	Required	A	YES	A	YES	A	YES
2.8		Recommended Spare Part List for 2 Years of Operation		-	Required	A	YES	NS	NO	A	YES
2.9		Special Tools List (If Required)		-	Required	NA	NO	NA	NO	A	YES
2.10		P&ID		-	Required	A	YES	A	YES	A	YES
2.11		Process Flow diagram		-	Required	A	YES	NS	NO	A	YES
2.12		Control Philosophy		-	Required	After PO	YES	N	NO	After P.O.	YES
2.13		ESD Philosophy		-	Required	NA	NO	N	NO	After P.O.	YES
2.14		Main Equipment list		-	Required	A	YES	After P.O.	YES	A	YES
2.15		Calculation Note For PSV Sizing		-	Required	A (PSV Sizing on skid is as per manufacturer design and standard)	YES	NA	NO	After P.O.	YES
2.16		Operating Manual		-	Required	After PO	YES	After P.O.	YES	A	YES
2.17		Outline/General Lay-out Drawings		-	Required	A	YES	After P.O.	YES	A	YES
2.18		Data Sheets for All Equipment Inside the Package		-	Required	A	YES	After P.O.	YES	A	YES
2.19		Performance Curve		-	Required	A	YES	After P.O.	YES	A	YES
2.20		Utility Consumption List		-	Required	A	YES	NS	NO	A	YES
2.21		Load List		-	Required	A	YES	A	YES	A	YES
2.22		Control System Architectural Drawing		-	Required	A	YES	After P.O.	YES	A	YES
3 SCOPE OF SUPPLY											
3.1		Oil Free Screw Compressors		-	2 (±4)	A	YES	A	YES	A	YES
3.2		Coupling with Non-sparking Guard		-	Required	A	YES	N	NO	A	YES
3.3		Pressurized Lubrication System		-	Required	A	YES	A	YES	A	YES
3.4		Drivers (Electro motor) and Accessories, Spare Heater		-	Required	A	YES	A	YES	A	YES
3.5		Guarding		-	Required	A	YES	A	YES	NA	YES
3.6		Inlet Air Filter and Silencer		-	Required	A (Blow down discharge silencer has been considered)	YES	A	YES	A	YES
3.7		Accessories for Inlet Filter Cleaning		-	Required	NA	NO	NA	NO	PDY	YES
3.8		Interstage air cooler and water separator and water trap		-	Required	A	YES	A	YES	A	YES
3.9		After cooler, Outlet water separator(at down stream of after (with water trap cooler		-	Required	A	YES	N (WATER TRAP)	NO	A	YES
3.10		Capacity Control system		-	Required	Blow down valve has been considered (Compressor is load/unload)	YES	A	YES	A	YES
3.11		Air Dryer Package		-	2 (±4 column)	A	YES	A	YES	A	YES
3.12		Instrumentations (Minimum as per PID & duty spec)		-	Required	N (AS Per HAVAYAR P&ID)	NO	NA	NO	A	YES
3.13		Unit Control panel and local board dedicated to each Air Compressor and Dryer As per Project requirements (Air Package)		-	Required	A	YES	N	NO	A	YES
3.14		Acoustic Enclosure (if any)		-	Required	A	YES	NA	YES	A	YES
3.15		Mating Flanges with Bolts, Nuts and Gasket (If Required)		-	Required	NA	YES	A	YES	A	YES
3.16		Grounding Bosses & Wiring		-	Required	A (ON SKID)	YES	N (for air receiver)	NO	A (Earthing lug + wiring inside the package B/L)	YES
3.17		Ladders, Stairs, Platforms and Hand Railings,etc., Within the Package		-	Required	NA	YES	N (for air receiver)	NO	A	YES
3.18		All Interconnecting Piping, Valves and Fittings		-	Required	A (ON SKID)	YES	NS	NO	A	YES
3.19		All Electrical and Instrumentation Cabling		-	Required	A (ON SKID)	YES	NS	NO	A	YES
3.20		All Electrical and Instrumentation Junction Boxes		-	Required	A (ON SKID)	YES	NS	NO	A	YES
3.21		All Required Cable Trays, Tray Support and Cable Trusses		-	Required	A (ON SKID)	YES	NS	NO	A	YES
3.22		Foundation Bolts and Nuts		-	Required	A	YES	A	YES	A	YES
3.23		Name Plates for All Equipment		-	Required	A	YES	A	YES	A	YES
3.24		Lifting Frames or Beams Including Slings and Shackles		-	Required	A (LIFTING LUG HAS BEEN CONSIDER)	YES	N (for air receiver) (lifting lug)	YES	NA	YES
3.25		All Insulation and Heat Tracing		-	Required	NA	YES	NA	YES	A	YES
3.26		Final Filling		-	Required	A	YES	A	YES	A	YES
3.27		Personnel Safety Devices		-	Required	NA	YES	NA	YES	A	YES
4 SCOPE OF WORK											
4.1		Engineering & Documentation		-	Required	A	YES	N	NO	A	YES
4.2		Manufacturing & Assembly		-	Required	A	YES	N	NO	A	YES
4.3		PDM (pre-inspection meeting)		-	Required	A	YES	N	NO	A	YES
4.4		Procurement		-	Required	A	YES	N	NO	A	YES
4.5		Inspection & Testing at shop		-	Required	A	YES	N	NO	A	YES
4.6		Performance Guarantee		-	Required	A	YES	N	NO	A	YES
4.7		Mechanical Guarantee		-	Required	A	YES	N	NO	A	YES
4.8		Review of Purchaser's Drawings		-	Required	A	YES	N	NO	A	YES
4.9		Painting		-	Required	A	YES	N	NO	A	YES
4.10		Shipping and Transportation		-	Required	A	YES	N	NO	A	YES
4.11		Packing & Preservation		-	Required	A	YES	N	NO	A	YES
4.12		Certification		-	Required	A	YES	N	NO	A	YES
4.13		Coordination with Sub-vendors		-	Required	A	YES	N	NO	A	YES
4.14		Export Customs Clearance		-	Required	NA	YES	N	NO	A	YES
4.15		Obtain Any Export License or Other Official Authorization		-	Required	A	YES	N	NO	NA	YES
4.16		Supervision for Installation		-	Required (As Option)	A	YES	A	NO	A	YES
4.17		Supervision for Pre-commissioning, commissioning & Start up		-	Required (As Option)	A	YES	A	NO	A	YES
4.18		Vendor Shop Training for Owner's Personnel		-	Required (As Option)	A	YES	A	NO	A	YES
4.19		Insulation Work (If any)		-	Required	NA	YES	NA	YES	NA	YES
5 SITE CONDITION											
5.1		Ambient temperature (Max./Min.)		°C	(±5)	A	YES	A	YES	A	YES
5.2		Relative Humidity (Max./Min.)		%	0-100%	A	YES	A	YES	A	YES
5.3		Barometric Pressure		bars	0.914-0.991	A	YES	A	YES	A	YES
6 OIL FREE SCREW COMPRESSORS											
6.1		Quantity		-	2 (±4)	A	YES	A	YES	A	YES
6.2		Manufacturer		-	VTS	HAVAYAR	YES	HAVASAN- Airfind GHIRAND	YES	GHH Rand	YES
6.3		Compressor Allowable Operating Temperature (Max. / Min.)		-	5/50	A	YES	A	YES	A	YES
6.4		Delivered Flow		Nm³/hr	VTS	178.8	A	438 @ 500	YES	235	YES
6.5		Design Capacity (Dry Basis)		Nm³/hr	100	A	YES	487 @ 20 °C, 95%, 1 atm	YES	235	YES
6.6		Design Pressure		barg	12.5	A	YES	A	YES	A	YES
6.6		Package Outlet Air Pressure		barg	9.5	A	YES	A	YES	A	YES

ABBREVIATIONS: A: ACCEPTED By Vendor N: NOT ACCEPTED By Vendor NA:Not Applicable NS:Not Specified C:Clarification Required VTS: Vendor to Specify

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 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک منطقه آذرش احداث ترابری تراکم گاز در ایستگاه جمع آوری بینک					 شرکت گاز هرجان 		شماره مناقصه: 7				
TBE for Instrument/Plant Air & Nitrogen Packages													
شماره پیمان:	وزنه:	مهره کاری:	مهره:	مهره:	مهره:	مهره:	مهره:	مهره:	مهره:				
BK	BK	GCS	D02	PEDCO	120	ME	TB	0006	D02				
REQ. NO: BK-GCS-PEDCO-120-ME-MR-0006													
BIDDER NAME:				HAYAYAR			HAVASAN		PARS COMPRESSOR		ARAZ SANAT ASIA		
QUOTATION NO.:				HY/02/1/106			HAY-BK-HRGN-001		10910		ASA-LR-02-363		
QUOTATION DATE:				24/1/2024			8/30/2025		9/1/2025		22/1/2024		
No.		DESCRIPTION		UNITS	REQ'D BY PURCHASER	MEETS REQUIREMENT REQUIREMENTS							
						Bidder's Proposal	Status	Bidder's Proposal	Status	Bidder's Proposal	Status	Bidder's Proposal	Status
6.11		Cooling Type	-	-	Air Cooled	A	YES	A	YES	A	YES	A	YES
6.12		Intake Filter	-	-	Required	A	YES	A	YES	A	YES	A	YES
6.13		Air-end Manufacturer / Model	-	-	YTS	GHH Rand/CDMD	YES	AirEnd GHHRAND - CD RD	YES	GHH Rand/CDMD	YES	GHH	YES
6.14		Power Transmission Method	-	-	Direct Coupled or Gear Type	Gear Type	YES	Gear Type	YES	Direct Coupled	YES	Direct Coupled	YES
6.15		Weight	kg	VTS		1017	YES	1900	YES	NS	NO	according catalogue data for compressor and driver	YES
6.16		Dimension (L x W x H)	mm	VTS		2240 x 1370 x 1985	YES	1999 x 1200 x 1650	YES	2400x1000x1950	YES	according catalogue data for compressor and driver	YES
6.17		Enclosure Fan Motor Power / Qty	kW	VTS		5.5/1	YES	4	YES	75	YES	1KW/1	YES
6.18		Controller of Compressor Slad	-	-	PLC	A	YES	BY N2 PACKAGE UCP	YES	TYPE C, QTY=1	YES	PLC	YES
6.19		Control Panel Power	KW	VTS		64.5kW (as per hardware load list)	YES	NS	NO	NS	YES	10VAC/230VAC	YES
6.20		Out Put Serial Link	-	-	VTS	Via hardware	NO	NS	NO	NS	NO	MODBUS	YES
7 MAIN MOTOR													
7.1		Manufacturer	-	-	VTS	JEMCO	YES	WEG	YES	JEMCO/OME	YES	ABB/SIEMENS/WEG	YES
7.2		Motor Power	kW	VTS		55	YES	55	YES	75	YES	45	YES
7.3		Power Supply	V / 1/2 / PH		400/30/3	A	YES	A	YES	A	YES	400/30/3	YES
7.4		IP Degree / Temperature Class	-	-	VTS	55/FB	YES	IP 55	YES	55/ F1	YES	55/ F1	YES
7.5		Speed, Motor / Compressor	rpm	VTS		3000	YES	3000	YES	2100	YES	3000	YES
8 PROCESS DESIGN													
8.1		Dry Air Demand for Nitrogen Production (at inlet to N2 Generator)	Nm3/hr	VTS		165	YES	266.5	YES	188	YES	101	YES
8.2		N2 Outlet Operating Pressure	bang		8.5	A	NO	6.5	YES	A	YES	8.5	YES
8.3		N2 Package Pressure Drop	bang		max. 1 bar	A	YES	A	YES	A	YES	A	YES
8.4		Design Pressure	bang		12.5	A	YES	A	YES	A	YES	A	YES
8.5		Dew Point	°C		-70 @ 1.013 bara	A	YES	A	YES	A	YES	A	YES
8.6		Max Oil Content- Inlet	-	-	≤ 1 ppm wt	NA	YES	NA	YES	A	YES	A	YES
8.7		Max Oil Content- Outlet	-	-	Oil Free	A	YES	A	YES	A	YES	A	YES
8.8		Max Allowable Dust	Micros		Less than 3	A	YES	A	YES	A	YES	A	YES
8.9		Nitrogen Purity	% vol		99.9	A	YES	A	YES	A	YES	A	YES
8.10		Oxygen Content	% vol		0.1 (max)	A	YES	A	YES	A	YES	0.5(MAX)	NO
9 AIR DRYER													
9.1		Manufacturer	-	-	VTS	HAYAYAR	YES	Omega Air	NO	PARS COMPRESSOR	YES	ASA CO	YES
9.2		Type / Design Code	-	-	Heatflow Desiccant/ASME SEC. VIII DIV.1 & 2	Heatflow Desiccant/ASME SEC. VIII DIV.1	YES	Heatflow Regeneration Adsorb Driers/ASME SEC. VIII DIV.1-API code vessels	YES	A	YES	A	YES
9.3		Dryer Life Time	-	-	not less than 3 years	3-5	YES	NS	NO	A	YES	A	YES
9.4		Quantity	-	-	1	A	YES	A	YES	A	YES	A	YES
9.5		Desiccant Material	-	-	Molecular sieve / Activated Alumina	A	YES	A	YES	A	YES	Molecular sieve	YES
9.6		Cycle time	min	VTS		7-15	YES	NS	NO	20	YES	5/3/2002	YES
9.7		Dryer Design Capacity	Nm³/hr		34	A	YES	1204 Nm³/hr	YES	420	YES	34	YES
9.8		Inlet Flow Rate	Nm³/hr	VTS		194	YES	430	YES	225	YES	110	YES
9.9		Outlet Flow Rate	Nm³/hr		124	165	YES	1208 Nm³/hr	YES	188	YES	124	YES
9.10		Inlet Temperature	°C		60	30	NO	55	NO	A	YES	60	YES
9.11		Hydrotest Pressure	bang	VTS (1.5*MAWP)	1.3 * Design pressure	A	YES	A	YES	A	YES	A	YES
9.12		Regeneration Flow Ratio	%	VTS		15	YES	NS	NO	15.2	YES	15	YES
9.13		Dew Point	°C		-40 @ 8 bang	A	YES	NS	NO	A	YES	A	YES
9.14		Operating Pressure	bang		9	A	YES	NS	NO	A	YES	A	YES
9.15		Design Pressure	bang		12.5	A	YES	A	YES	A	YES	A	YES
9.16		Tower Design Code	-	-	ASME SEC. VIII DIV.1	A	YES	A	YES	A	YES	A	YES
9.17		Material for Shell / Head	-	-	VTS	SA106 Gr B/SA 234 WPB	YES	SA106 Gr 70/ A106	YES	C5	YES	AS16 Gr. 70	YES
9.18		Corrosion Allowance	mm		3.2	A	YES	A	YES	A	YES	A	YES
9.19		Safety Valve	-	-	Required	A	YES	A	YES	A	YES	A	YES
9.20		Pre Filter / Qty.	-	-	Required / 2	A	YES	NS	NO	A	YES	A/2	YES
9.21		After Filter/ Qty.	-	-	Required / 2	A	YES	NS	NO	A	YES	A/2	YES
9.22		Filter Manufacturer	-	-	VTS	HAYAYAR	YES	NS	NO	MIKROPOR	NO	Dumonic burner	YES
9.23		Dryer LCP	-	-	Yes , IP65	Yes , IP65 (LCP include only stop, start and status without control function)	YES	A	YES	A	YES	Yes , IP64	YES
9.24		Dryer instrumentation/IP/IEEX	-	-	As per Specification	IP65, Safe (Non-Ex)	YES	NS	NO	A	YES	According PID/54/safe location	YES
9.25		Cabling to LCP	-	-	Required as per specification	A (ON SKID UP TO JB/LCP IS BY HAYAYAR)	YES	N	NO	A (Within BL)	YES	A	YES
9.26		Dryer Controller Type	-	-	Microprocessor	By N2 package UCP	YES	A	YES	A	YES	PLC	YES
10 NITROGEN GENERATOR													
10.1		Type of Nitrogen Generator	-	-	PSA	A	YES	A	YES	A	YES	A	YES
10.2		Quantity	-	-	1	A	YES	A	YES	A	YES	A	YES
10.3		Manufacturer	-	-	VTS	HAYAYAR	YES	OMEGA AIR	NO	PARS COMPRESSOR	YES	ASA CO	YES
10.4		Design Code	-	-	ASME Sec. VIII, Div. 1 & 2	A	YES	N	NO	A	YES	A	YES
10.5		Adsorption Material	-	-	VTS	Carbon Molecularsieve	YES	Carbon molecular sieve (CMS)	YES	CMS	YES	Carbon Molecular sieve	YES
10.6		Adsorption Life Time	-	-	Not less than 3 Years	A	YES	A	YES	A	YES	1YEARS	NO
10.7		Adsorber Vessel Material	-	-	VTS	SA106 Gr B/SA 234 WPB	YES	Carbon steel	YES	NS	YES	AS16 Gr. 70	YES
10.8		Maximum Allowable Inlet Temperature	°C	VTS		30	YES	55	YES	35	YES	55	YES
10.9		Volume of One Adsorber	m3	VTS		After P.O.	YES	305 lu	YES	After P.O.	YES	After P.O	YES
10.10		Design Flow / Regeneration Flow	Nm3/hr		34 / YTS	34	YES	35.15	YES	After P.O.	YES	34/60	YES
10.11		Regeneration Sequence Duration	Sec	VTS		After P.O.	YES	A (Pressure Swing Adsorption (PSA))	YES	After P.O.	YES	5/3/2	YES
10.12		Room Mounted Control Panel	-	-	PLC Type C	PLC 57-1200	NO	NS	N	PLC Type C	YES	PLC TYPE C	YES
10.13		SIL Rated loops for safety functions	-	-	Required	NA	NO	NS	N	To be Guided by SIL meeting	YES	A	YES
10.14		Control Panel Power (UPS/Non UPS)	KW		10VAC/230VAC	2kW/1.5kW (included in N2 package UCP)	YES	NS	N	A	YES	A	YES
10.15		Instrumentation/Analyzer	-	-	As per Specification	A (deviation check)	YES	A (oxygen analyzer)	Y	A (O2/N2 Analyzer)	YES	A	YES
10.16		Local Control Panel	-	-	Required per compressor	LCP include only stop, start and status without control function. Control is by N2 package LCP	YES	A	YES	A	YES	A	YES
10.17		Cabling to LCP	-	-	Required	A	YES	N	YES	A: Within BL	YES	A	YES
10.18		Serial Link connection	-	-	Modbus RTU	A (N2 package UCP)	YES	NS	NO	A	YES	A	YES
10.19		Exhaust Silencer SPL @ 1 m distance	dB (A)		< 85	A	YES	A	YES	A	YES	A	YES
10.20		Corrosion Allowance	mm		3.2	A	YES	Manufacturer STD	NO	A	YES	A	YES
10.21		Oxygen analyzer and moisture analyzer	-	-	Required	A	YES	A	YES	A (O2 analyzer at n2 outlet and dew point transmitter at Air dryer outlet)	YES	A	YES
10.22		Relief valves	-	-	Required	A	YES	A	YES	A	YES	A	YES
10.23		PSA Unit Slad Weight	kg	VTS		820	YES	2210	YES	NS	NO	ACCORDING TO CATALOGUE OF NITROGEN GENERATOR	YES
10.24		Dimension (L X W X H)	mm	VTS		1100x600x2154	YES	1749 x 840 x 2361	YES	NS	NO	ACCORDING TO CATALOGUE OF NITROGEN GENERATOR	YES
11 Chillers / Heat Exchangers or Refrigerant Dryer													
11.1		Manufacturer / Model	-	-	VTS	As per Hayayir sub vendor list/after P.O.	YES	OMEGA AIR-RDP 1300	YES	After P.O.	YES		YES
11.2		Cooling Medium	-	-	VTS	AIR	YES	Air cooled	YES	Refrigerant R410a/Water	YES		YES
11.3		Inlet Temperature (Operating)	°C	VTS		60	YES	55	YES	NS	NO		YES
11.4		Outlet Temperature (Operating)	°C	VTS		30	YES	45	YES	NS	NO	NA	YES
11.5		Design Temperature	°C	VTS		85	YES	85	YES	NS	NO		YES



ABBREVIATIONS: A: ACCEPTED By Vendor N: NOT ACCEPTED By Vendor NA:Not Applicable NS:Not Specified C:Clarification Required VTS: Vendor to Specify