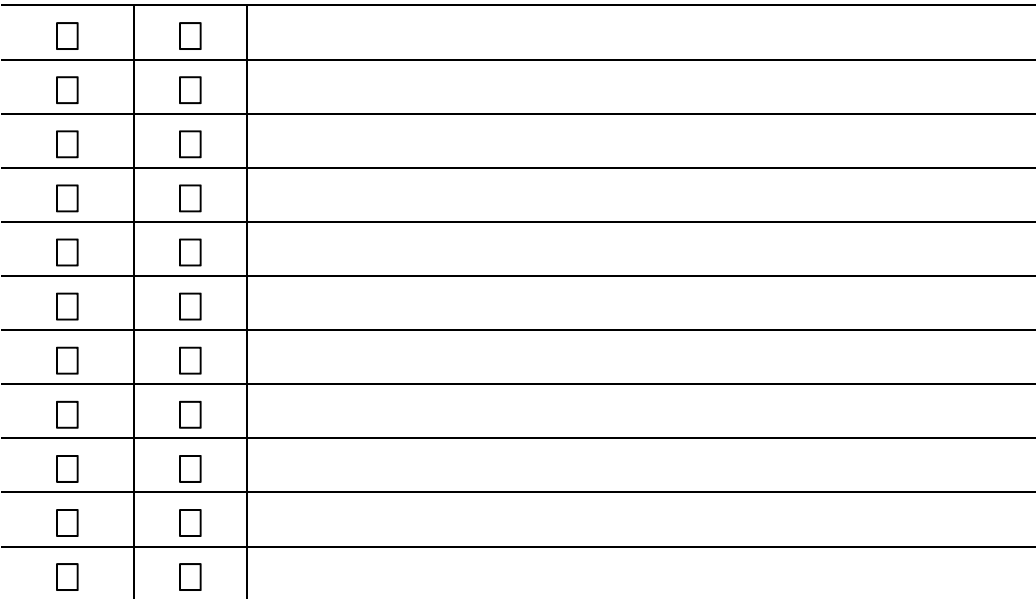


 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PROJECT		OWNER : DENA PETROCHEMICAL INDUSTRIES CO.	
	COVER SHEET		PROJ. NO. : 89/1205	
REQUISITION FOR : HVAC EQUIPMENT			ALWAYS REFER TO THIS NUMBER	
			1205-00-HV-REQ-790	00
			REQUISITION. NO.	REV.
INQUIRY ☒ PURCHASE ORDER ☐			SHEET 1 OF 16	
This Requisition is issued to obtain quotation for supply and delivery of : <u>HVAC Equipment</u> as per this Requisition and its attachments. <u>REQUISITION CONTENTS</u> - Scope of Work - Scope of Supply - Requisition Notes - List of Attachments				
ED	EXT	INQ	A	
Eng. Phase	Purpose Of Distribution (POD)	Purpose Of Issue (POI)	Owner's Action	
00	07.01.2024	Issued For Inquiry		
Rev.	Date	Purpose Of Issue	Prepared by	Checked by
			Approved by	Project





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REQUISITION FOR : HVAC EQUIPMENT				ALWAYS REFER TO THIS NUMBER 1205-00-HV-REQ-790 00	
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				REV.	
REV.	DESCRIPTION			SHEET 4 OF 16	
2.3 MATERIAL SUMMARY LIST					
SER NO.	ITEM NO.	ITEM DESCRIPTION		QTY	UNIT
1	PAHU-0010 A/B	Package Air Handling Unit for Control Building (Zone 1)		2	Set
2	PAHU-0020	Package Air Handling Unit for Control Building (Zone 2)		1	Set
3	PAHU-0030 A/B	Package Air Handling Unit for Substation		2	Set
4	PAHU-0040	Package Air Handling Unit for Yard Office		1	Set
5	RPAHU-0050 A/B	Roof Top Package Air Handling Unit for Analyzer		2	Set
6	PAHU-0060	Package Air Handling Unit For Laboratory		1	Set
7	AC-0010 A/B	Air Condenser for Control Building (Zone 1)		2	Set
8	AC-0020	Air Condenser for Control Building (Zone 2)		1	Set
9	AC-0030 A/B	Air Condenser for Substation		2	Set
10	AC-0040	Air Condenser for Yard Office		1	Set
11	AC-0060	Air Condenser For Laboratory		1	Set
12	FTU-0011 A/B	Fresh Air Fan & Filter Unit for Control Building (Zone 1)		2	Set
13	FTU-0021	Fresh Air Fan & Filter Unit For Control Building (Zone 2)		1	Set
14	FTU-0031 A/B	Fresh Air Fan & Filter Unit for Substation		2	Set
15	FTU-0041	Fresh Air Fan & Filter Unit for in Yard Office		1	Set
16	FTU-0051 A/B	Fresh Air Fan & Filter Unit for Analyzer		2	Set
17	FTU-0061	Fresh Air Fan & Filter Unit For Laboratory		1	Set
18	EX-0012 A/B	Centrifugal Exhaust Fan for Battery Room in Control Building		2	Set
19	EX-0022	Centrifugal Exhaust Fan For Locker & Shower In Control Building		1	Set
20	EX-0023	Centrifugal Exhaust Fan for Tea & Mess Room in Control Building		1	Set
21	EX-0024	Centrifugal Exhaust Fan for M/W Toilet in Control Building		1	Set

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			SUBSEQUENT SHEET					
REQUISITION FOR : HVAC EQUIPMENT						ALWAYS REFER TO THIS NUMBER		
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REV.	DESCRIPTION					SHEET 5 OF 16		
	22	EX-0026	Centrifugal Exhaust Fan for HVAC Room in Control Building			1	Set	
	23	EX-0032 A/B	Centrifugal Exhaust Fan for Battery Room in Substation			2	Set	
	24	EX-0034	Centrifugal Exhaust Fan For Cable Cellar CO2 Removal In Substation			1	Set	
	25	EX-0035	Centrifugal Exhaust Fan for MV S/G Room CO2 Removal in Substation			1	Set	
	26	EX-0036	Centrifugal Exhaust Fan for LV S/G Room CO2 Removal in Substation			1	Set	
	27	EX-0037	Roof Type Exhaust Fan for Diesel Generator Room in Substation			1	Set	
	28	EX-0042	Centrifugal Exhaust Fan for M & W Toilet in Lab. & Yard Office			1	Set	
	29	EX-0043	Centrifugal Exhaust Fan for Tea Room in Lab. & Yard Office			1	Set	
	30	EX-0061	Centrifugal Exhaust Fan For Wash Basin & Toilet In Laboratory			1	Set	
	31	EX-0062	Centrifugal Exhaust Fan For Locker In Laboratory			1	Set	
	32	EX-0063	Centrifugal Exhaust Fan For Tea Room In Laboratory			1	Set	
	33	EX-0064	Centrifugal Exhaust Fan For Laboratory In Laboratory			1	Set	
	34	EX-0065	Centrifugal Exhaust Fan For Chemical Store In Laboratory			1	Set	
	35	EX-0066	Centrifugal Exhaust Fan For HVAC Room In Laboratory			1	Set	
	36	CR-LCP-0010	Local Control Panel for Control Building (Zone 1)			1	Set	
	37	CR-LCP-0020	Local Control Panel Unit for Control Building (Zone 2)			1	Set	
	38	SS-LCP-0030	Local Control Panel Unit for Substation			1	Set	
	39	YO-LCP-0040	Local Control Panel Unit for Yard Office			1	Set	
	40	AH-LCP-0050	Local Control Panel Unit for Analyzer			1	Set	
	41	LB-LCP-0060	Local Control Panel Unit for Laboratory			1	Set	
	42	CR-HDP-01	Local Distribution Panel for Control Building (Zone 1)			1	Set	
	43	CR-HDP-02	Local Distribution Panel Unit for Control Building (Zone 2)			1	Set	
	44	SS-HDP-01	Local Distribution Panel Unit for Substation			1	Set	
	45	YO-HDP-01	Local Distribution Panel Unit for Yard Office			1	Set	

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		SUBSEQUENT SHEET			
REQUISITION FOR :				ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT				1205-00-HV-REQ-790	
				00	
				REQUISITION NO.	
				REV.	
REV.	DESCRIPTION			SHEET 6 OF 16	
	46	AH-HDP-01	Local Distribution Panel Unit for Analyzer	1	Set
	47	LB-HDP-01	Local Distribution Panel Unit for Laboratory	1	Set
	48	-	Spare Parts	(Note 2)	-
	49	-	Hand Over Parts for All Packages & Related Air Condensers	As Req	-
	50	-	Refrigerant Piping, Valves & Fittings Between Split Packages and Air Condensers	As Req	-
	51	-	Initial Filling Refrigerant for All Packages	As Req	-
	52	-	Vibration Isolator For all Equipment	As Req	-
NOTES: 1. *For more information refer to Attachment No. 9 (Data Sheets) 2. As per Attachment No. 5, 6, 7					

 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.		DENA METHANOL PROJECT		OWNER : DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
		SUBSEQUENT SHEET		
REQUISITION FOR : HVAC EQUIPMENT			ALWAYS REFER TO THIS NUMBER	
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REV.	DESCRIPTION		SHEET 7 OF 16	
	3. REQUISITION NOTES 3.1 Vendor should provide foundation loading of equipment, 4 weeks after order placement. 3.2 Vendor shall supply documentation and data as follows: 3.2.1 Operation and maintenance manual. Note: Issued manuals shall contain at least the followings: - System and equipment normal start-up - System and equipment normal operation - System and equipment normal shut-down - System and equipment emergency shut-down - Maintenance guide for equipment - Personnel and equipment safety considerations 3.2.2 Catalogue for all equipment. 3.2.3 Wiring diagrams for local panels. 3.2.4 Power & Control diagram for each equipment. 3.2.5 The drawings which show grounding LUGS of equipment. 3.2.6 All other documents mentioned on Attachment No. 3 of this purchase requisition. 3.3 The performance in accordance with the data sheets shall be guaranteed unconditionally. The guarantee and warrantee clauses in the general terms and conditions of the inquiry/purchase order documents apply for the performance, mechanical design, materials, fabrication and workman ship. 3.4 Site conditions should be as mentioned in "Ambient and Site Condition & utility Data", 1205-00-PR-ESS-101. 3.5 Vendor should supply spare parts for pre-commissioning, commissioning and start-up. (See attachments no. 5, 6, and 7) 3.6 Vendor to include in the quotation a separate price for recommended two years spare parts. (See attachments no. 5, 6, and 7) 3.7 Vendor shall make recommendation for the appropriate lubrication of all supplied equipment.			

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	3.8 Vendor shall define any/all deviations to the requirements of this requisition in the “Letter of Conformity” from attached herein (attachment 2), and include in the quotation. 3.9 After the equipment is pressure tested and cleaned, each one shall be performance tested in the presence of the employer's representative. 3.10 All heating ventilation and air conditioning design and load calculations are done by carrier E20-II software and capacity should be increased 10% By vendor 3.11 Vendor shall specify quantity, size and location of anchor bolts or other anchor devices such that the structural drawings can be prepared. 3.12 The charge of refrigerant gas (R-134a) for roof top package shall be provided by vendor. 3.13 Vendor shall supply required refrigerant gas (R-134a) and related facilities for package air handling units' air condensers. 3.14 Vendor shall provide rubber shock absorbers. 3.15 Vendor shall provide control instruments such as thermostat and humidifier as per related P&ID. 3.16 All compressors shall be equipped with un-loader. 3.17 In all cases, those HVAC systems (packages and regarded condensers) that are indicated by A/B at their tag. no's, are stand-by units. For these cases the following items should be considered. 3.17.1 The duty units PAHU-A and AC-A shall be run continuously. PAHU-B and AC-B shall be stand-by units. 3.17.2 Upon loss of air flow in the duty PAHU-A detected by air flow switch, the duty system PAHU-A and AC-A shall shut down and start stand-by system PAHU-B and AC-B, automatically. 3.17.3 Airflow switch shall be interlocked with the respective PAHU fan-running signal to avoid alarm when fan is off. Delay timer shall also be provided Air flow alarm shall be raised when the following conditions occur simultaneously. - No airflow at PAHU fan. - PAHU is running for more than 15 second. 3.18 Vendor shall supply refrigerant piping (including all pipes, fittings, valves, and instruments) and also cabling between packages and regarded air condensers.				

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	3.19 The fresh air filter unit shall be equipped with inertial sand filters including two-bleed blower able to blow out the sand accumulated and filtered by means of specified filter in data sheets. 3.20 Insulation for refrigerant piping should be considered (discharge and suction lines). The insulation shall be closed shell type. 3.21 Design and dimension of equipment should be such that can be installed in the specified area. 3.22 The interlock between fan running system and electrical heater would be considered. 3.23 Vendor shall specify the equipment packing. 3.24 The media of bag filters should be from polyester. 3.25 Sub vendor list shall be confirmed by DENA Eng.Department before purchasing. 3.26 All the centrifugal fans shall be equipped with airflow switch. 3.27 All the filters shall be equipped with differential pressure gauge. 3.28 All fan casings should be equipped with a drain plug with suitable size. 3.29 The casing of all packages should be double skin with insulation, except for compressor section. 3.30 All fans for packages and condensers should be equipped with guard. 3.31 Electrical 3.31.1 Each building will be equipped with one or two HVAC electrical panel(s) which will be supplied by vendor. These panel(s) will furnish project need for power distribution to HVAC equipment, and provide their requirements for interlocking, and control system. Purchaser will provide only one (redundant, or non-redundant) feeder (3Ph+N, 400V, 50Hz) for each building, except for control building, that one normal and one emergency feeders will be provided for industrial zone (zone 1), and one normal feeder for non-industrial zone (zone 2). Separate earth cable will be furnished for each building. (two separate ones for both zones of control building) All other electrical apparatus, such as power and instrument cables, instruments, and distribution & control panels are in bidder's scope of supply. (See the schematic diagram). A short specification list of assigned feeders is mentioned in attachment 18 of this requisition.					

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REV.	DESCRIPTION			SHEET 11 OF 16									
	3.31.2 Brief lists of required motor control features and their tag no's are mentioned in attachment no. 17. 3.32 Instrument General Requirements 3.32.1 All required instruments for HVAC packages are in the vendor's scope of supply. 3.32.2 HVAC will be fed from mains 3-phase 400 VAC power supply and all other required voltages for control system shall be provided by vendor through this feeder. Power supply units for control system shall be redundant. 3.32.3 Supply and work for all wiring of instruments up to HVAC control panel (supplied by vendor) will be in scope of vendor. 3.32.4 For PLC control system of package, the CPU of PLC shall be redundant. 3.32.5 Spare parts for instruments and control system components shall be considered by vendor. 3.32.6 Interfacing signals between HVAC package control system and plant control/ safety systems (FCS/ESD) shall be based on attachments 12.5, 12.10, 12.15, and 12.20. 3.32.7 Interfacing signals shall be 24 VDC free potential contacts for digital signals and 4~20 mA for analog signals. 3.33 Technical Requirements for Duct Electrical Heaters 3.33.1 Electric duct heaters shall be of slip-in or flange connection type, completed with factory wired internal controls and assembled. The power of electric duct heaters shall be supplied by 4-wire system (3 phases with neutral). 3.33.2 Heating elements shall be of fin-sheathed type. 3.33.3 Heaters shall be controlled by in the following steps ON-OFF action responding the room thermostats. <table><tr><td>Heating Capacity (kw)</td><td>Number of Control Steps</td></tr><tr><td>Up to 5</td><td>1</td></tr><tr><td>6 to 10</td><td>2</td></tr><tr><td>Over 11</td><td>3</td></tr></table>					Heating Capacity (kw)	Number of Control Steps	Up to 5	1	6 to 10	2	Over 11	3
Heating Capacity (kw)	Number of Control Steps												
Up to 5	1												
6 to 10	2												
Over 11	3												

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REV.	DESCRIPTION		SHEET 12 OF 16	
	3.33.4 The controls shall include the following safety devices, at least; - High temperature cutouts - Air flow switches 3.33.5 All safety devices shall be serviceable through terminal box without removing the heaters from ducts. 3.33.6 The terminal boxes shall include disconnect switches, fuses, safety contactors, transformers for control voltages, pilot lights to indicate power on, terminal blocks for power supply and remote thermostats, and grounding lugs. 3.33.7 The quantity and capacity of each electrical heater is given on attachment no. 11			

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4. LIST OF ATTACHMENTS					
SER NO.	DESCRIPTION		DOCUMENT NO.	REV.	No. OF SHEETS
1	Bid technical Check List		-	-	1
2	Letter Of Conformity (Technical)		-	-	1
3	Requirement For Documents (RFD)		-	-	5
4	Scope Of Inspection		1205-00-QC-SOI-790	00	3
5	Specific List of Spare Parts		-	-	1
6	"Spare Part List " Forms – 1/3 , 2/3 , 3/3		-	-	3
7	Spare Parts List and Interchangeability Record (SPIR) – 1/2 , 2/2		-	-	1
8	Inspection Procedure				
9	Data Sheets		-		
9.1	Data Sheet for Package Air Handling Unit for Control Building (Zone 1)		1205-00-HV-DSH-001	03	4
9.2	Data Sheet for Air Condenser for Control Building (Zone 1)		1205-00-HV-DSH-002	03	3
9.3	Data Sheet for Fresh Air Fan & Filter Unit for Control Building (Zone 1)		1205-00-HV-DSH-003	02	3
9.4	Data Sheet for Package Air Handling Unit for Control Building (Zone 2)		1205-00-HV-DSH-004	03	3
9.5	Data Sheet for Centrifugal Exhaust Fan for Battery Room in Control Building		1205-00-HV-DSH-005	03	3
9.6	Data Sheet for Air Condenser for Control Building (Zone 2)		1205-00-HV-DSH-006	03	3
9.7	Data Sheet for Fresh Air Fan & Filter Unit For Control Building (Zone 2)		1205-00-HV-DSH-007	02	3
9.8	Data Sheet for Centrifugal Exhaust Fan For Locker & Shower In Control Building		1205-00-HV-DSH-050	04	3
9.9	Data Sheet for Centrifugal Exhaust Fan for Tea & Mess Room in Control Building		1205-00-HV-DSH-051	04	3
9.10	Data Sheet for Centrifugal Exhaust Fan for M/W Toilet in Control Building		1205-00-HV-DSH-052	04	3
9.11	Data Sheet for Centrifugal Exhaust Fan for HVAC Room in Control Building		1205-00-HV-DSH-053	04	3
9.12	Data Sheet for Package Air Handling Unit for Substation		1205-00-HV-DSH-020	03	4
9.13	Data Sheet for Air Condenser for Substation		1205-00-HV-DSH-021	03	3
9.14	Data Sheet for Centrifugal Exhaust Fan for Battery Room in Substation		1205-00-HV-DSH-022	03	3
9.15	Data Sheet for Fresh Air Fan & Filter Unit for Substation		1205-00-HV-DSH-023	03	3
9.16	Data Sheet for Centrifugal Exhaust Fan For Cable Cellar CO2 Removal In Substation		1205-00-HV-DSH-024	04	3
9.17	Data Sheet for Centrifugal Exhaust Fan for MV S/G Room CO2 Removal in Substation		1205-00-HV-DSH-025	04	3

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	9.18	Data Sheet for Centrifugal Exhaust Fan for LV S/G Room CO2 Removal in Substation	1205-00-HV-DSH-026	04	3
	9.19	Data Sheet for Wall Type Exhaust Fan for Diesel Generator Room in Substation	1205-00-HV-DSH-027	04	3
	9.20	Data Sheet for Roof Top Package Air Handling Unit for Analyzer	1205-00-HV-DSH-030	02	4
	9.21	Data Sheet for Fresh Air Fan & Filter Unit for Analyzer	1205-00-HV-DSH-032	02	3
	9.22	Data Sheet for Package Air Handling Unit for Yard Office	1205-00-HV-DSH-040	03	4
	9.23	Data Sheet for Air Condenser for Yard Office	1205-00-HV-DSH-041	03	3
	9.24	Data Sheet for Fresh Air Fan & Filter Unit for in Yard Office	1205-00-HV-DSH-042	02	3
	9.25	Data Sheet for Centrifugal Exhaust Fan for M & W Toilet in Lab. & Yard Office	1205-00-HV-DSH-043	04	3
	9.26	Data Sheet for Centrifugal Exhaust Fan for Tea Room in Lab. & Yard Office	1205-00-HV-DSH-044	04	3
	9.27	Data Sheet for Package Air Handling Unit for Laboratory	1205-00-HV-DSH-060	00	4
	9.28	Data Sheet for Air Condenser for Laboratory	1205-00-HV-DSH-061	00	3
	9.29	Data Sheet for Centrifugal Exhaust Fan For Wash Basin & Toilet In Laboratory	1205-00-HV-DSH-062	00	3
	9.30	Data Sheet for Centrifugal Exhaust Fan For Locker In Laboratory	1205-00-HV-DSH-063	00	3
	9.31	Data Sheet for Centrifugal Exhaust Fan For Tea Room In Laboratory	1205-00-HV-DSH-064	00	3
	9.32	Data Sheet for Centrifugal Exhaust Fan For Laboratory In Laboratory	1205-00-HV-DSH-065	00	3
	9.33	Data Sheet for Centrifugal Exhaust Fan For Chemical Store In Laboratory	1205-00-HV-DSH-066	00	3
	9.34	Data Sheet for Centrifugal Exhaust Fan For HVAC Room In Laboratory	1205-00-HV-DSH-067	00	3
	9.35	Data Sheet for Centrifugal Exhaust Fan For Wash Basin & Toilet In Laboratory	1205-00-HV-DSH-068	00	3
	10	Specifications	-		
	10.1	Engineering Standard Specification for Paints	1203-00-PI-ESS-406	03	14
	10.2	Ambient and Site Condition & Utility Data	1203-00-PR-ESS-101	02	15
	10.3	Material Standard Specification for HVAC Equipment	1203-00-HV-MSS-781	01	16
	10.4	Engineering Standard Specification for HVAC Control System	1203-00-HV-ESS-783	01	10
	10.5	Material Standard Specification for Low Voltage Induction Electric Motors	1203-00-EL-MSS-521	01	15
	10.6	Material Standard Specification for Electrical Equipment as Part of Package	1203-00-EL-MSS-524	01	26
	10.7	Engineering Standard Specification For General Packages	1203-00-IN-ESS-003	02	99
	11	Duct Electrical Heaters List	-	-	1
12	Drawings	-	-	-	

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	12.1	HVAC General Notes & Symbols	1203-00-HV-SDG-785	02	5
	12.2	Control Building - Ducting Layout	1205-00-HV-DWG-001	04	1
	12.3	Control Building - Section of Ducting	1205-00-HV-DWG-002	04	1
	12.4	Control Building - Duct Supporting and Opening Location	1205-00-HV-DWG-003	04	1
	12.5	Control Building - Mechanical Room General Diagram	1205-00-HV-DWG-004	04	1
	12.6	Control Building - Mechanical Room Equipment Arrangement and Refrigerant Piping Plan	1205-00-HV-DWG-005	04	1
	12.7	Substation - Ducting Layout	1205-00-HV-DWG-021	02	1
	12.8	Substation - Section of Ducting	1205-00-HV-DWG-022	02	1
	12.9	Substation - Duct Supporting and Opening Location	1205-00-HV-DWG-023	02	1
	12.10	Substation - Mechanical Room General Diagram	1205-00-HV-DWG-024	03	1
	12.11	Substation - Mechanical Room Equipment Arrangement and Refrigerant Piping Plan	1205-00-HV-DWG-025	02	1
	12.12	Analyzer Room 1 - Ducting Layout	1205-00-HV-DWG-031	02	1
	12.13	Analyzer Room 1 - Section of Ducting	1205-00-HV-DWG-032	02	1
	12.14	Analyzer Room 1 - Duct Supporting and Opening Location	1205-00-HV-DWG-033	02	1
	12.15	Analyzer Room 1 - Mechanical Room General Diagram	1205-00-HV-DWG-034	02	1
	12.16	Analyzer Room 1 - Mechanical Room Equipment Arrangement and Refrigerant Piping Plan	1205-00-HV-DWG-035	02	1
	12.17	Yard Office - Ducting Layout	1205-00-HV-DWG-041	02	1
	12.18	Yard Office - Section of Ducting	1205-00-HV-DWG-042	02	1
	12.19	Yard Office - Duct Supporting and Opening Location	1205-00-HV-DWG-043	02	1
	12.20	Yard Office - Mechanical Room General Diagram	1205-00-HV-DWG-044	03	1
	12.21	Yard Office - Mechanical Room Equipment Arrangement and Refrigerant Piping Plan	1205-00-HV-DWG-045	02	1
	12.22	Laboratory - Ducting Layout	1205-00-HV-DWG-061	00	1
	12.23	Laboratory - Section of Ducting	1205-00-HV-DWG-062	00	1
	12.24	Laboratory - Duct Supporting and Opening Location	1205-00-HV-DWG-063	00	1
	12.25	Laboratory - Mechanical Room General Diagram	1205-00-HV-DWG-064	00	1
	12.26	Laboratory - Mechanical Room Equipment Arrangement and Refrigerant Piping Plan	1205-00-HV-DWG-065	00	1
	13	Requirements For Electrical Certifications	-	-	-
	14	Requirements For Noise Limitations	-	-	-

 شرکت صنایع پتروشیمی دنا <i>Dena Petrochemical Industries Co.</i>		DENA METHANOL PROJECT		OWNER : DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205		
		SUBSEQUENT SHEET				
REQUISITION FOR : HVAC EQUIPMENT				ALWAYS REFER TO THIS NUMBER		
				1205-00-HV-REQ-790		00
				REQUISITION NO.		REV.
REV.	DESCRIPTION			SHEET 16 OF 16		
	15	Lubrication list/Schedule		-	-	
	16	Vendor expediting and reporting		-	-	
	17	Required Motor Control Features List For Buildings		-	11	
	18	Specification List For Feeders		-	1	

		Attachment no.: 01		
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PROJECT	OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/ 1205		
	REQUISITION			
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER		
HVAC EQUIPMENT		1205-00-HV-REQ-790	00	
BID TECHNICAL CHECK LIST		REQUISITION NO.	REV.	
		SHEET 1	OF 1	
Attention : THIS SHEET HAS TO BE RETURNED WITH THE QUOTATION.				
		YES	NO	NOT APPLICABLE
1	HAVE YOU INCLUDED IN YOUR QUOTATION :			
1.1	LETTER OF CONFORMITY (TECHNICAL)	☐	☐	☐
1.2	LIST OF INCONSISTENCIES	☐	☐	☐
1.3	SPARE PART LIST	☐	☐	☐
1.4	SPECIAL TOOLS	☐	☐	☐
1.5	MANUFACTURING AND DELIVERY SCHEDULE	☐	☐	☐
1.6	SUB-VENDOR LIST	☐	☐	☐
1.7	QUALITY ASSURANCE MANUAL (OR CERTIFICATE)	☐	☐	☐
1.8	REFERENCE LIST	☐	☐	☐
2	HAVE YOU STUDIED ,TAKEN INTO ACCOUNT AND WILL YOU FOLLOW INSTRUCTIONS STATED IN THE REQUISITION NOTES REGARDING:			
2.1	ENGLISH LANGUAGE	☐	☐	☐
2.2	UNITS OF MEASUREMENT	☐	☐	☐
2.3	NAME PLATE	☐	☐	☐
2.4	AMBIENT AND SITE CONDITION	☐	☐	☐
2.5	PROGRESS REPORTING	☐	☐	☐
2.6	INSPECTION REQUIREMENTS	☐	☐	☐
2.7	PARTIAL DELIVERY CONDITIONS	☐	☐	☐
2.8	DOCUMENT REQUIREMENTS	☐	☐	☐
2.9	PURCHASER'S DOCUMENT NUMBERING PROCEDURE	☐	☐	☐
2.10	QUALITY DOSSIER	☐	☐	☐
2.11	FINAL VENDOR DATA BOOK PREPARATION	☐	☐	☐
2.12	FINAL DOCUMENT DELIVERY	☐	☐	☐
2.13	FILLING THE SPLIR FORM	☐	☐	☐
2.14	MASTER AND DETAILED PACKING LIST	☐	☐	☐
2.15	AVAILABILITY PERIOD AFTER SALES SERVICES	☐	☐	☐
2.16	OVERALL RESPONSIBILITY	☐	☐	☐
2.17	FABRICATION START	☐	☐	☐
<u>Vendor Name ,Date, Signature</u> (VENDOR)				

 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.		Attachment no.: 02	
		OWNER : DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205	
DENA METHANOL PROJECT		ALWAYS REFER TO THIS NUMBER 1205-00-HV-REQ-790 00 REQUISITION NO. REV. SHEET 1 OF 1	
LETTER OF CONFORMITY			
REQUISITION FOR : HVAC EQUIPMENT			
TO : DENA PETROCHEMICAL INDUSTRIES COMPANY (DPIC) FROM : (VENDOR) Herewith we confirm that our quotationin response to (QUOTATION) your inquiry...1205-00-HV-REQ-790..... datedis fully in (PURCHASER INQUIRY) (DATE) accordance with the conditions as stated therein and we confirm that all Technical requirements as stipulated in the above mentioned inquiry documents , have been adhered to, except deviations listed below . <u>Date, Signature</u> (VENDOR) NOTE: 1) Deviations shall be listed separately with brief explanations. 2) If no deviation exists, vendor shall specify by writing “No Deviation”.			

 شرکت صنایع پتروشیمی دنا <i>Dena Petrochemical Industries Co.</i>		Attachment no.: 03	
		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205	
DENA METHANOL PROJECT		ALWAYS REFER TO THIS NUMBER 1205-00-HV-REQ-790 00 REQUISITION NO. REV. SHEET 1 OF 5	
REQUIREMENT FOR DOCUMENTS			
REQUISITION FOR :			
HVAC EQUIPMENT			
Requirement for Documents (RFD) of HVAC Equipment			

 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.		DENA METHANOL PROJECT			OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/S-G/102					
REQUISITION FOR : HVAC EQUIPMENT					ALWAYS REFER TO THIS NUMBER 1205-00-HV-REQ-790 00 REQUISITION NO. REV. SHEET 2 OF 5					
Code	Document Title	Purpose of Issue	With Bid		After Order Award			Upon order Completed prior to shipment		Note
			Copy	CD	Copy	CD	No.of Week	Copy	CD	
SCHEDULING DOCUMENTS										
PN01	Manufacturing & production schedule	R			4		2			2
PN02	Drawing/ Document schedule	R			4	1	2			1,2
PN03	Sub-order schedule	R			4		2			2
PN04	Periodical status report	R			4		2			3
General Note: 1- The scope & extend of vendor reporting & scheduling document shall be set forth & agreed with planning engineer & procurement coordinator of the respective Project for each & every individual purchase order depending on complexity time sensitively & critically of the order. 2- Updated schedule shall be attached to periodical reports 3- Periodical reports shall be furnished as out lined in project specific procedure for vendor reporting & expediting										
QUALITY DOCUMENTS										
QC01	Letter of conformity	R	3							
QC02	Bid technical checklist	R	3							
QC03	Quality management system manual	I	3							
QC04	Inspection & test plan	A			4	1	4	6	3	
QC05	Inspection & shop test procedure	A			4	1	4	6	3	
QC06	Vendor quality control records	A						6	3	2,4
QC07	Certificate of materials	A						6	3	2,4
QC08	Welding procedures (WPS,PQR if applicable)	A			4	1	4	6	3	
QC09	Welder qualification records (if applicable)	A						6	3	2,4
QC10	Final certificate of inspection & release	A						6	3	2,4
QC11	NDT records (if any)	A						6	3	2,4
QC12	PWHT records / procedure (if any)	A			4	1	4	6	3	2,4
QC13	Alloy verification / PMI records (if any)	A						6	3	2,4
Note: 1-Above mentioned documents also to be included in sub-supplier or sub contractor if applicable. 2-To be issued in process & before shipment 3-Need not to be approved by purchaser. 4-Approval shall be enclosed by inspector in shop.										
EXPORT DOCUMENTS										
PQ01	List of Sub-supplier	A	3					6	3	2
PQ02	Certificate Of Origin (3 Original + 6 Copy)	A						3+6	3	2
PQ03	Master Packing List (3 Original + 6 Copy)	A						3+6	3	2
PQ04	Detailed Packing List (3 Original + 6 Copy)	A						3+6	3	2
PQ05	Drawing for Oversize/Overweight Packages (If applicable)	R			3	1	8	6	3	2
PQ06	Material H&ling Procedure (If applicable)	R			3	1	8	6	3	2
PQ07	Material Storage Procedure (If applicable)	R			3	1	8	6	3	2
PQ08	Bill of Lading (3 Original + 6 Copy)	R						3+6	3	2
PQ09	Commercial Invoice (3 Original + 6 Copy)	A						3+6	3	2

 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.		DENA METHANOL PROJECT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205	
REQUISITION FOR : HVAC EQUIPMENT				ALWAYS REFER TO THIS NUMBER 1205-00-HV-REQ-790 00 REQUISITION NO. REV. SHEET 3 OF 5	

Code	Document Title	Purpose of Issue	With Bid		After Order Award			Upon order Completed prior to shipment		Note
			Copy	CD	Copy	CD	No. of Week	Copy	CD	
PQ10	Transportation Drawing(If applicable)	I			3	1	8	6	3	2
PQ11	H&ling & Transport Protective Measures at Site (If applicable)	I			3	1	8	6	3	2,3

Note:
 1-To be issued periodically.
 2-To be issued before shipment.
 3-Need not to be approved by Purchaser.

SAFETY DOCUMENTS										
SA01	Material Safety Data Sheet (MSDS)									
SA02	HSE Instructions									
SA03	HSE Plans	I	3							

Note:
 1- MSDS shall be provided for all potentially dangerous materials such as: Chemicals, Catalysts, Lubrication Oil, Foam, Portable extinguishers (all types),Gases (CO₂, Clean Agent, Aragonite, ...), Paint, Solvent, Insulation material (PU, mineral wool, ...), Perlite, Electrode, Resin, Coating material, Lining material (rubber, epoxy, ...), Ionization heat detectors (including radioactive source), Nuclear Level elements (including radioactive source), All radioactive sources, All Laser sources.
 2- HSE instructions shall be provided for all items of equipment of instrument that may be harmful to human health or safety in case of malfunction, including; electrical item, Rotating item, Instrument Items.
 3- HSE Plan shall be provided for those manufacturers that our personnel may perform audit or inspection in their workshops, to ensure safety of our colleagues in such plants.

TECHNICAL DOCUMENTS (HVAC EQUIPMENT)										
TE11	General Index	R	3		4		4	6	3	
TE12	Catalogue, Specification &/ Or Technical Data	A	3		4		4	6	3	
TE13	Completed Mechanical Data Sheet Which Are Partly Filled-Out By PIDECE	R	3		4		4	6	3	
TE14	Outline Installation Drawing Showing Overall Assembly & Dimensions, Parts No's, & Names.	A	3		4		4	6	3	
TE15	Wiring, Power & Control Diagram	A	3		4		4	6	3	
TE16	Foundation Drawing & Anchor Bolt Locations.	R	3		4		4	6	3	
TE17	Refrigeration Piping Diagram	R	3		4		4	6	3	
TE18	Clearances For Maintenance & Operation	R	3		4		4	6	3	
TE19	Shelter Drawing Detail	R	3		4		4	6	3	
TE20	Motors Data Sheets	R	3		4			6	3	
TE21	Torque/Speed Curves With Internals & Accelerating Times At 80 & 100% Voltage For Motors	R	3		4		4	6	3	
TE22	Refrigeration Piping Layout (Isometric)	R	3		4		4	6	3	
TE23	Fan Performance Curve	R	3		4		4	6	3	
TE24	Instruments Datasheets/Catalogues	R	3		4		4	6	3	

 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.		DENA METHANOL PROJECT				OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205				
		REQUIREMENT FOR DOCUMENTS								
REQUISITION FOR : HVAC EQUIPMENT						ALWAYS REFER TO THIS NUMBER 1205-00-HV-REQ-790				00
						REQUISITION NO.			REV.	
						SHEET 4 OF 5				
TE25	Instruments Loop/Wiring Diagrams	R	3		4		4	6	3	
TE26	Control & Safety System Philosophy		3		4		4	6	3	
TE27	Interconnecting Cable Schedule With Cable List	R	3		4		4	6	3	
TE28	Motor List / Electrical Load List	R	3		4		4	6	3	
TE29	Electrical Wiring Diagram Such As One-Line Diagram, Interlock System, Etc	R	3		4		4	6	3	
TE30	All Power & Control Panel Dimensions, General Arrangements Drawings, List Of Materials, Wiring Diagrams)	R	3		4		4	6	3	
TE31	Electrical Sub Vendor List	R	3		4		4	6	3	
TE32	Internal Cabinet Arrangement Including Wiring / Termination / Boards	R	3		4		4	6	3	
TE33	Interlock Description	R	3		4		4	6	3	
TE34	Statement Of Manufacturer's Testing Capabilities	R	3		4		4	6	3	
TE35	Final Book For Each Bldg	R	3		4		4	6	3	
TE36	Parts List & Their Technical Data/Specifications	A	3		4		2	6	3	
	Procedures :									
TE28	Site Acceptance Test Procedure	R			4		4	6	3	
TE29	Performance Test Procedures	R			4		4	6	3	
TE30	Run Test Procedures	R			4		4	6	3	
TE31	Erection & Preservation Procedure	R			4		4	6	3	
TE32	Repair Procedure (If Applicable)	R			4		4	6	3	
TE33	Preservation, Packing & Shipping Procedure	R			4		4	6	3	
	CALCULATIONS									
TE34	Coil Calculation	R	3		4		4	6	3	
TE35	Refrigerant pipe size Calculation	R	3		4		4	6	3	
TE36	Compressor Selection	R	3		4		4	6	3	
TECHNICAL DOCUMENTS / (ELECTRICAL PANEL)										
TE37	Technical Data & Specifications	R	3		4		4	6	3	
TE38	Bearing Type/ Lubrication/ Oil Pressure/ Flow Rate / Lubrication Intervals	R			4		4	6	3	
TE39	List Of Deviations To The Purchase Specifications	A	3		4		4	6	3	
TE40	Reference List	R	3		4		4	6	3	
TE41	Data Sheet Completed By Vendor With Actual Equipment Data	R			4		4	6	3	
TE42	General Arrangement Drawing Showing Dimensions And Weight	R			4		4	6	3	
TE43	Main Terminal Box Drawing Showing Main Connections, Size And No. Of Entries, Etc.	R			4		4	6	3	

 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.		DENA METHANOL PROJECT				OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205					
		REQUIREMENT FOR DOCUMENTS									
REQUISITION FOR :										ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT										1205-00-HV-REQ-790	
										REV. 00	
										REQUISITION NO.	
										SHEET 5 OF 5	
TE44	Static & Dynamic Foundation Loadings & Anchor Bolt Locations	R			4		4	6	3		
TE45	Torque/Speed Curves With Internals & Accelerating Times At 80 & 100% Voltage	R			4		4	6	3		
TE46	Thermal Capability Curve For MV Motors	R			4		4	6	3		
TE47	Current/Speed Curves	R			4		4	6	3		
TE48	Rotor Drawing And Data For Torsional Analysis	R			4		4	6	3		
TE49	Connection Diagrams For RTD's Heaters & Other Auxiliaries	R			4		4	6	3		
TE50	Ex. Certificate For All Certified Equipment	R			4		4	6	3		
TECHNICAL DOCUMENTS / GENERAL											
MANUAL											
TE01	Catalogue & Brochure	I	3	1				6	3		
TE02	Installation & Construction Manual (including. alignment data / drawing)	R			4			6	3		
TE03	Operation Manual	R			4			6	3		
TE04	Maintenance Manual	R			4			6	3		
SPARE PARTS LISTS (IF/ANY)											
TE05	Spare Parts List For Erection & Pre-Commissioning	R	3		4		4	6	3		
TE06	Spare Parts list for commissioning and start-up	R	3		4		4	6	3		
TE07	Spare Parts list for 2 years of operation	R	3		4		4	6	3		
TE08	List of special tools and devices (if/any)	R	3		4		4	6	3		
Note: 1- To be issued before shipment. 2- Need not to be approved by purchaser. 3- Drawings should be approved by purchaser.											



شركة صنایع پتروشیمی دنا
Dena Petrochemical Industries Co.

DENA METHANOL PROJECT

COVER SHEET

OWNER :

DENA PETROCHEMICAL
INDUSTRIES CO.

PROJ. NO. : 89/1205

SCOPE OF INSPECTION
FOR

HVAC EQUIPMENT

DOCUMENT NO : **1205-00-QC-SOI-790**
TOTAL PAGES : **2** (Excluding Cover Sheet)

ED		EXT	INQ		R	
Eng. Phase		Purpose Of Distribution (POD)	Purpose Of Issue (POI)		Owner's Action	
00	08.01.2024	Issued For Inquiry				
Rev.	Date	Description	Prepared by	Checked by	Approved by	Project

		ATTACHMENT NO.04
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PROJECT	OWNER : DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	SCOPE OF INSPECTION	
	DOC.NO. : 1205-00-QC-SOI-790	
REQUISITION NO.	REQUISITION TITLE	ITEM
1205-00-HV-REQ-790	HVAC EQUIPMENT	HVAC EQUIPMENT

1. PROCEDURE:

Please refer to project general shop inspection procedure (**1205-00-QC-PCJ-001**) which is attached to the requisition in order to find more information about inspection policy.

2. DEFINITIONS:

- INSPECTOR

Inspector Means Project inspector and/or OWNER /his THIRD PARTY inspectors as will be introduced after order placement.

- HOLD POINT (HP)

The designated feature is to be witnessed by INSPECTOR.

Vendor/manufacture is to notify Project quality coordinator two weeks prior to performing the designated feature. Activities may not proceed until the continuation of work is permitted by Project Quality coordinator or waived in writing by him ("inspection waiver").

- WITNESS POINT (WP)

The designated feature is to be witnessed by INSPECTOR.

Vendor/manufacture is to notify Project quality coordinator two weeks, prior to performing the designated feature. If the INSPECTOR fails to be present, activities may proceed without witnessing or waiving of the inspection as will be decided by Project quality coordinator.

- RANDOM INSPECTION (RI)

The inspection of the designated feature will take place during inspection visits as a standard performance.

Vendor/manufacture does not have to notify Project quality coordinator prior to performing the designated feature. Activities may proceed without witnessing or waiving by Project quality coordinator

- REVIEW DOCUMENTATION (RD)

Documentation will be reviewed/approved by Project Engineering team or INSPECTOR depend the nature of documents (refer to RFD form in order to find that documents which shall be reviewed & approved by Project engineering team and/or inspector).

- WAIVED INSPECTION

For the designated feature, shop inspection is not carried out, as will be decided by Project quality coordinator.

 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.		DENA METHANOL PROJECT		ATTACHMENT NO.04	
		SCOPE OF INSPECTION		OWNER : DENA PETROCHEMICAL INDUSTRIES CO.	
		DOC.NO. : 1205-00-QC-SOI-790		PROJ. NO. : 89/1205	
REQUISITION NO.		REQUISITION TITLE		ITEM	
1205-00-HV-REQ-790		HVAC EQUIPMENT		HVAC EQUIPMENT	

Inspection Extent: ☐ PRE - INSPECTION MEETING ☐ IN - PROCESS INSPECTION ☒ FINAL INSPECTION					
REV.	DESCRIPTION OF INSPECTION POINTS	HP	WP	RI	RD
	1- MATERIALS (DIMENSIONS, MARKING AND TEST CERTIFICATE)			✓	✓
	2- STORAGE OF MATERIALS AND WELDING CONSUMABLES				✓
	3- WELDERS QUALIFICATIONS				✓
	4- ADHERENCE TO AGREED INSPECTION PLAN			✓	
	5- ADHERENCE TO APPROVED PROCEDURE (WELDING, HEAT TREATMENT, ETC.)			✓	
	6- WORKMANSHIP, CLEANLINESS			✓	
	7- NONDESTRUCTIVE TESTING PERSONNEL QUALIFICATIONS			✓	
	8- NONDESTRUCTIVE TESTING REPORTS (REVIEW OF ALL RADIOGRAPH)				✓
	9- WELD PREPARATION AND FIT-UP				✓
	10- EXECUTION OF (MAJOR) REPAIRS			✓	
	11- LEAK TESTING		✓		
	12- FAN PERFORMANCE TEST (IF REQUIRED)		✓		
	13- BALANCING OF ROTOR, IMPELLER, FAN			✓	✓
	14- LUBE AND SEAL OIL SYSTEM CHECKING(DIMENSIONAL, PERFORMANCE, HYDRO TEST)		✓		✓
	15- INSTALLATION OF WIRING AND CONDUIT (EX. PROOF EXECUTION IF RED'D)				✓
	16- FUNCTIONAL SETTING AND CALIBRATION OF INSTRUMENTS & CONTROLS				✓
	17- MECHANICAL RUNNING TEST	✓			✓
	18- ANCILLARY AND BULK ITEMS (INSTRUMENTAL, MOTORS, GLANDS, CABLE, THERMOMETERS, ETC.)		✓		✓
	19- INSTALLATION OF WIRING AND CONDUIT (EX. PROOF EXECUTION IF RED'D)				✓
	20- PAINTING, COATING, PRESERVATION, LINING, PICKLING & PASSIVATING			✓	✓
	21- NOISE LEVEL & VIBRATIONS (WITH MECH. RUNNING TEST)		✓		
	22- FINAL VISUAL AND DIMENSIONAL INSPECTION	✓			
	23- DOCUMENTATION REVIEW PRIOR TO RELEASE FOR SKID MOUNTING				✓
	24-				
	25-				
	26-				
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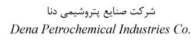
Remarks:

Where random inspection is specified, Approx of the material will be inspected. This percentage will be increased in case deficiencies are found, or doubts about quality arise.

		ATTACHMENT NO.05		
 شرکت صنایع پتروشیمی دنا <i>Dena Petrochemical Industries Co.</i>		DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
		REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER		
HVAC EQUIPMENT		1205-00-HV-REQ-790		00
SPECIFIC LIST OF SPARE PART		REQUISITION NO.		REV.
		SHEET 1 OF 1		
EQUIPMENT TAG NO. / DESCRIPTION:				
SR. NO.	PART DESCRIPTION	ERECTION, PRE, COMMISSIONING & START UP SPARES	TWO YEARS SPARES	CAPITAL SPARES
REMARKS :				

[illegible]

[illegible]



DENA PETROCHEMICAL INDUSTRIES CO.

تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات		تجهیزات	
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				ATTACHMENT NO.11		
 شركة صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PROJECT			OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205		
	REQUISITION					
REQUISTION FOR : HVAC EQUIPMENT				ALWAYS REFER TO THIS NUMBER		
				1205-00-HV-REQ-790		00
DUCT ELECTRICAL HEATER LIST				REQUISITION NO.		REV.
				SHEET 1 OF 1		
SUMMARY LIST FOR DUCT ELECTRICAL HEATERS						
Item No.	Tag No.	Capacity (kw)	Duct Size (mm)	Air Flow (cfm)	Qty.	Bldg. Name
1	EH-0010	11.5	460x400	1650	1	Control Room
2	EH-0011	30	1400x790	16610	1	Control Room
3	EH-0020	3.5	280x220	504	1	Control Room
4	EH-0021	3.5	300x200	504	1	Control Room
5	EH-0022	3.5	260x220	477	1	Control Room
6	EH-0040	0.65	200x160	230	1	Yard Office
7	EH-0041	1.20	250x220	440	1	Yard Office
8	EH-0042	1.00	130x400	340	1	Yard Office
9	EH-0043	0.40	180x120	150	1	Yard Office
10	EH-0044	0.85	200x180	300	1	Yard Office
11	EH-0045	0.90	200x180	320	1	Yard Office
12	EH-0046	0.85	240x220	300	1	Yard Office
13	EH-0047	1.00	240x260	380	1	Yard Office
14	EH-0048	0.55	200x180	200	1	Yard Office
15	EH-0049	1.10	280x220	400	1	Yard Office

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 1 OF 11	
REQUIRED CONTROL FEATURES LIST FOR BUILDINGS			
Sr. No.	Tag No.	DESCRIPTION	BUILDING
1-1	XL-109	EH-0010 On Indicating Light	Control Building
1-2	XL-110	EH-0010 Off Indicating Light	Control Building
1-3	XL-119	EH-0011 On Indicating Light	Control Building
1-4	XL-120	EH-0011 Off Indicating Light	Control Building
1-5	XL-209	EH-0020 On Indicating Light	Control Building
1-6	XL-210	EH-0020 Off Indicating Light	Control Building
1-7	XL-219	EH-0021 On Indicating Light	Control Building
1-8	XL-220	EH-0021 Off Indicating Light	Control Building
1-9	XL-229	EH-0022 On Indicating Light	Control Building
1-10	XL-230	EH-0022 Off Indicating Light	Control Building
1-11	HS-124 A	EX-0012 A Start/Stop Selector Switch	Control Building
1-12	HS-125 A	EX-0012 A Auto/Manual Selector Switch	Control Building
1-13	XL-121 A	EX-0012 A On Indicating Light	Control Building
1-14	XL-122 A	EX-0012 A Off Indicating Light	Control Building
1-15	XL-123 A	EX-0012 A Trip Indicating Light	Control Building
1-16	HS-124 B	EX-0012 B Start/Stop Selector Switch	Control Building
1-17	HS-125 B	EX-0012 B Auto/Manual Selector Switch	Control Building
1-18	XL-121 B	EX-0012 B On Indicating Light	Control Building
1-19	XL-122 B	EX-0012 B Off Indicating Light	Control Building
1-20	XL-123 B	EX-0012 B Trip Indicating Light	Control Building
1-21	HS-264	EX-0026 Start/Stop Selector Switch	Control Building
1-22	XL-261	EX-0026 On Indicating Light	Control Building
1-23	XL-262	EX-0026 Off Indicating Light	Control Building
1-24	XL-263	EX-0026 Trip Indicating Light	Control Building
1-25	HS-114 A	FTU-0011 A Start/Stop Selector Switch	Control Building
1-26	HS-115 A	FTU-0011 A Auto/Manual Selector Switch	Control Building
1-27	XL-111 A	FTU-0011 A On Indicating Light	Control Building

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 2 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
1-28	XL-112 A	FTU-0011 A Off Indicating Light	Control Building
1-29	XL-113 A	FTU-0011 A Trip Indicating Light	Control Building
1-30	HS-114 B	FTU-0011 B Start/Stop Selector Switch	Control Building
1-31	HS-115 B	FTU-0011 B Auto/Manual Selector Switch	Control Building
1-32	XL-111 B	FTU-0011 B On Indicating Light	Control Building
1-33	XL-112 B	FTU-0011 B Off Indicating Light	Control Building
1-34	XL-113 B	FTU-0011 B Trip Indicating Light	Control Building
1-35	HS-214	FTU-0021 Start/Stop Selector Switch	Control Building
1-36	HS-215	FTU-0021 Auto/Manual Selector Switch	Control Building
1-37	XL-211	FTU-0021 On Indicating Light	Control Building
1-38	XL-212	FTU-0021 Off Indicating Light	Control Building
1-39	XL-213	FTU-0021 Trip Indicating Light	Control Building
1-40	HS-106	MBD-0010 Start/Stop Selector Switch	Control Building
1-41	XL-105	MBD-0010 Open Position Indicating Light	Control Building
1-42	XL-106	MBD-0010 Close Position Indicating Light	Control Building
1-43	ZS-105	MBD-0010 Local Position Indication Switch	Control Building
1-44	HS-116	MBD-0011 Start/Stop Selector Switch	Control Building
1-45	XL-115	MBD-0011 Open Position Indicating Light	Control Building
1-46	XL-116	MBD-0011 Close Position Indicating Light	Control Building
1-47	ZS-115	MBD-0011 Local Position Indication Switch	Control Building
1-48	HS-120 A	MBD-0012 A Auto/Manual Selector Switch	Control Building
1-49	HS-126 A	MBD-0012 A Start/Stop Selector Switch	Control Building
1-50	XL-125 A	MBD-0012 A Open Position Indicating Light	Control Building
1-51	XL-126 A	MBD-0012 A Close Position Indicating Light	Control Building
1-52	ZS-125 A	MBD-0012 A Local Position Indication Switch	Control Building
1-53	HS-120 B	MBD-0012 B Auto/Manual Selector Switch	Control Building
1-54	HS-126 B	MBD-0012 B Start/Stop Selector Switch	Control Building
1-55	XL-125 B	MBD-0012 B Open Position Indicating Light	Control Building
1-56	XL-126 B	MBD-0012 B Close Position Indicating Light	Control Building

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 3 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
1-57	ZS-125 B	MBD-0012 B Local Position Indication Switch	Control Building
1-58	HS-206	MBD-0020 Start/Stop Selector Switch	Control Building
1-59	XL-205	MBD-0020 Open Position Indicating Light	Control Building
1-60	XL-206	MBD-0020 Close Position Indicating Light	Control Building
1-61	ZS-205	MBD-0020 Local Position Indication Switch	Control Building
1-62	HS-216	MBD-0021 Start/Stop Selector Switch	Control Building
1-63	XL-215	MBD-0021 Open Position Indicating Light	Control Building
1-64	XL-216	MBD-0021 Close Position Indicating Light	Control Building
1-65	ZS-215	MBD-0021 Local Position Indication Switch	Control Building
1-66	HS-220	MBD-0022 Auto/Manual Selector Switch	Control Building
1-67	HS-226	MBD-0022 Start/Stop Selector Switch	Control Building
1-68	XL-225	MBD-0022 Open Position Indicating Light	Control Building
1-69	XL-226	MBD-0022 Close Position Indicating Light	Control Building
1-70	ZS-225	MBD-0022 Local Position Indication Switch	Control Building
1-71	XL-107	MFD-0010 Open Position Indicating Light	Control Building
1-72	XL-108	MFD-0010 Close Position Indicating Light	Control Building
1-73	ZS-107	MFD-0010 Local Position Indication Switch	Control Building
1-74	XL-117	MFD-0011 Open Position Indicating Light	Control Building
1-75	XL-118	MFD-0011 Close Position Indicating Light	Control Building
1-76	ZS-117	MFD-0011 Local Position Indication Switch	Control Building
1-77	XL-127	MFD-0012 Open Position Indicating Light	Control Building
1-78	XL-128	MFD-0012 Close Position Indicating Light	Control Building
1-79	ZS-127	MFD-0012 Local Position Indication Switch	Control Building
1-80	XL-137	MFD-0013 Open Position Indicating Light	Control Building
1-81	XL-138	MFD-0013 Close Position Indicating Light	Control Building
1-82	ZS-137	MFD-0013 Local Position Indication Switch	Control Building
1-83	XL-147	MFD-0014 Open Position Indicating Light	Control Building
1-84	XL-148	MFD-0014 Close Position Indicating Light	Control Building
1-85	ZS-147	MFD-0014 Local Position Indication Switch	Control Building

			ATTACHMENT NO.17
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	SABALAN METHANOL PLANT	OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205	
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 4 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
1-86	XL-157	MFD-0015 Open Position Indicating Light	Control Building
1-87	XL-158	MFD-0015 Close Position Indicating Light	Control Building
1-88	ZS-157	MFD-0015 Local Position Indication Switch	Control Building
1-89	XL-167	MFD-0016 Open Position Indicating Light	Control Building
1-90	XL-168	MFD-0016 Close Position Indicating Light	Control Building
1-91	ZS-167	MFD-0016 Local Position Indication Switch	Control Building
1-92	XL-177	MFD-0017 Open Position Indicating Light	Control Building
1-93	XL-178	MFD-0017 Close Position Indicating Light	Control Building
1-94	ZS-177	MFD-0017 Local Position Indication Switch	Control Building
1-95	XL-187	MFD-0018 Open Position Indicating Light	Control Building
1-96	XL-188	MFD-0018 Close Position Indicating Light	Control Building
1-97	ZS-187	MFD-0018 Local Position Indication Switch	Control Building
1-98	XL-197	MFD-0019 Open Position Indicating Light	Control Building
1-99	XL-198	MFD-0019 Close Position Indicating Light	Control Building
1-100	ZS-197	MFD-0019 Local Position Indication Switch	Control Building
1-101	HS-104 A	PAHU-0010 A Start/Stop Selector Switch	Control Building
1-102	XL-101 A	PAHU-0010 A On Indicating Light	Control Building
1-103	XL-102 A	PAHU-0010 A Off Indicating Light	Control Building
1-104	XL-103 A	PAHU-0010 A Trip Indicating Light	Control Building
1-105	HS-104 B	PAHU-0010 B Start/Stop Selector Switch	Control Building
1-106	XL-101 B	PAHU-0010 B On Indicating Light	Control Building
1-107	XL-102 B	PAHU-0010 B Off Indicating Light	Control Building
1-108	XL-103 B	PAHU-0010 B Trip Indicating Light	Control Building
1-109	HS-204	PAHU-0020 Start/Stop Selector Switch	Control Building
1-110	XL-201	PAHU-0020 On Indicating Light	Control Building
1-111	XL-202	PAHU-0020 Off Indicating Light	Control Building
1-112	XL-203	PAHU-0020 Trip Indicating Light	Control Building
2-1	HS-325 A	EX-0032 A Auto/Manual Selector Switch	Substation
2-2	XL-322 A	EX-0032 A Off Indicating Light	Substation

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/S1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 5 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
2-3	XL-321 A	EX-0032 A On Indicating Light	Substation
2-4	HS-324 A	EX-0032 A Start/Stop Selector Switch	Substation
2-5	XL-323 A	EX-0032 A Trip Indicating Light	Substation
2-6	HS-325 B	EX-0032 B Auto/Manual Selector Switch	Substation
2-7	XL-322 B	EX-0032 B Off Indicating Light	Substation
2-8	XL-321 B	EX-0032 B On Indicating Light	Substation
2-9	HS-324 B	EX-0032 B Start/Stop Selector Switch	Substation
2-10	XL-323 B	EX-0032 B Trip Indicating Light	Substation
2-11	HS-345	EX-0034 Auto/Manual Selector Switch	Substation
2-12	XL-342	EX-0034 Off Indicating Light	Substation
2-13	XL-341	EX-0034 On Indicating Light	Substation
2-14	HS-344	EX-0034 Start/Stop Selector Switch	Substation
2-15	XL-343	EX-0034 Trip Indicating Light	Substation
2-16	HS-355	EX-0035 Auto/Manual Selector Switch	Substation
2-17	XL-352	EX-0035 Off Indicating Light	Substation
2-18	XL-351	EX-0035 On Indicating Light	Substation
2-19	HS-354	EX-0035 Start/Stop Selector Switch	Substation
2-20	XL-353	EX-0035 Trip Indicating Light	Substation
2-21	HS-365	EX-0036 Auto/Manual Selector Switch	Substation
2-22	XL-362	EX-0036 Off Indicating Light	Substation
2-23	XL-361	EX-0036 On Indicating Light	Substation
2-24	HS-364	EX-0036 Start/Stop Selector Switch	Substation
2-25	XL-363	EX-0036 Trip Indicating Light	Substation
2-26	HS-315 A	FTU-0031 A Auto/Manual Selector Switch	Substation
2-27	XL-312 A	FTU-0031 A Off Indicating Light	Substation
2-28	XL-311 A	FTU-0031 A On Indicating Light	Substation
2-29	HS-314 A	FTU-0031 A Start/Stop Selector Switch	Substation
2-30	XL-313 A	FTU-0031 A Trip Indicating Light	Substation
2-31	HS-315 B	FTU-0031 B Auto/Manual Selector Switch	Substation

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 6 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
2-32	XL-312 B	FTU-0031 B Off Indicating Light	Substation
2-33	XL-311 B	FTU-0031 B On Indicating Light	Substation
2-34	HS-314 B	FTU-0031 B Start/Stop Selector Switch	Substation
2-35	XL-313 B	FTU-0031 B Trip Indicating Light	Substation
2-36	XL-306	MBD-0030 Close Position Indicating Light	Substation
2-37	ZS-305	MBD-0030 Local Position Indication Switch	Substation
2-38	XL-305	MBD-0030 Open Position Indicating Light	Substation
2-39	HS-306	MBD-0030 Start/Stop Selector Switch	Substation
2-40	XL-316	MBD-0031 Close Position Indicating Light	Substation
2-41	ZS-315	MBD-0031 Local Position Indication Switch	Substation
2-42	XL-315	MBD-0031 Open Position Indicating Light	Substation
2-43	HS-316	MBD-0031 Start/Stop Selector Switch	Substation
2-44	HS-320	MBD-0032 Auto/Manual Selector Switch	Substation
2-45	XL-326	MBD-0032 Close Position Indicating Light	Substation
2-46	ZS-325	MBD-0032 Local Position Indication Switch	Substation
2-47	XL-325	MBD-0032 Open Position Indicating Light	Substation
2-48	HS-326	MBD-0032 Start/Stop Selector Switch	Substation
2-49	XL-336	MBD-0033 Close Position Indicating Light	Substation
2-50	ZS-335	MBD-0033 Local Position Indication Switch	Substation
2-51	XL-335	MBD-0033 Open Position Indicating Light	Substation
2-52	XL-346	MBD-0034 Close Position Indicating Light	Substation
2-53	ZS-345	MBD-0034 Local Position Indication Switch	Substation
2-54	XL-345	MBD-0034 Open Position Indicating Light	Substation
2-55	XL-356	MBD-0035 Close Position Indicating Light	Substation
2-56	ZS-355	MBD-0035 Local Position Indication Switch	Substation
2-57	XL-355	MBD-0035 Open Position Indicating Light	Substation
2-58	XL-366	MBD-0036 Close Position Indicating Light	Substation
2-59	ZS-365	MBD-0036 Local Position Indication Switch	Substation
2-60	XL-365	MBD-0036 Open Position Indicating Light	Substation

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/S1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 7 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
2-61	XL-308	MFD-0030 Close Position Indicating Light	Substation
2-62	ZS-307	MFD-0030 Local Position Indication Switch	Substation
2-63	XL-307	MFD-0030 Open Position Indicating Light	Substation
2-64	XL-318	MFD-0031 Close Position Indicating Light	Substation
2-65	ZS-317	MFD-0031 Local Position Indication Switch	Substation
2-66	XL-317	MFD-0031 Open Position Indicating Light	Substation
2-67	XL-328	MFD-0032 Close Position Indicating Light	Substation
2-68	ZS-327	MFD-0032 Local Position Indication Switch	Substation
2-69	XL-327	MFD-0032 Open Position Indicating Light	Substation
2-70	XL-338	MFD-0033 Close Position Indicating Light	Substation
2-71	ZS-337	MFD-0033 Local Position Indication Switch	Substation
2-72	XL-337	MFD-0033 Open Position Indicating Light	Substation
2-73	XL-348	MFD-0034 Close Position Indicating Light	Substation
2-74	ZS-347	MFD-0034 Local Position Indication Switch	Substation
2-75	XL-347	MFD-0034 Open Position Indicating Light	Substation
2-76	XL-358	MFD-0035 Close Position Indicating Light	Substation
2-77	ZS-357	MFD-0035 Local Position Indication Switch	Substation
2-78	XL-357	MFD-0035 Open Position Indicating Light	Substation
2-79	XL-368	MFD-0036 Close Position Indicating Light	Substation
2-80	ZS-367	MFD-0036 Local Position Indication Switch	Substation
2-81	XL-367	MFD-0036 Open Position Indicating Light	Substation
2-82	XL-378	MFD-0037 Close Position Indicating Light	Substation
2-83	ZS-377	MFD-0037 Local Position Indication Switch	Substation
2-84	XL-377	MFD-0037 Open Position Indicating Light	Substation
2-85	XL-388	MFD-0038 Close Position Indicating Light	Substation
2-86	ZS-387	MFD-0038 Local Position Indication Switch	Substation
2-87	XL-387	MFD-0038 Open Position Indicating Light	Substation
2-88	XL-302 A	PAHU-0030 A Off Indicating Light	Substation
2-89	XL-301 A	PAHU-0030 A On Indicating Light	Substation

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 8 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
2-90	HS-304 A	PAHU-0030 A Start/Stop Selector Switch	Substation
2-91	XL-303 A	PAHU-0030 A Trip Indicating Light	Substation
2-92	XL-302 B	PAHU-0030 B Off Indicating Light	Substation
2-93	XL-301 B	PAHU-0030 B On Indicating Light	Substation
2-94	HS-304 B	PAHU-0030 B Start/Stop Selector Switch	Substation
2-95	XL-303 B	PAHU-0030 B Trip Indicating Light	Substation
2-96	HS-375	REX-0037 Auto/Manual Selector Switch	Substation
2-97	XL-372	REX-0037 Off Indicating Light	Substation
2-98	XL-371	REX-0037 On Indicating Light	Substation
2-99	HS-374	REX-0037 Start/Stop Selector Switch	Substation
2-100	XL-373	REX-0037 Trip Indicating Light	Substation
3-1	XL-410	EH-0040 Off Indicating Light	Yard Office
3-2	XL-409	EH-0040 On Indicating Light	Yard Office
3-3	XL-420	EH-0041 Off Indicating Light	Yard Office
3-4	XL-419	EH-0041 On Indicating Light	Yard Office
3-5	XL-430	EH-0042 Off Indicating Light	Yard Office
3-6	XL-429	EH-0042 On Indicating Light	Yard Office
3-7	XL-440	EH-0043 Off Indicating Light	Yard Office
3-8	XL-439	EH-0043 On Indicating Light	Yard Office
3-9	XL-450	EH-0044 Off Indicating Light	Yard Office
3-10	XL-449	EH-0044 On Indicating Light	Yard Office
3-11	XL-460	EH-0045 Off Indicating Light	Yard Office
3-12	XL-459	EH-0045 On Indicating Light	Yard Office
3-13	XL-470	EH-0046 Off Indicating Light	Yard Office
3-14	XL-469	EH-0046 On Indicating Light	Yard Office
3-15	XL-480	EH-0047 Off Indicating Light	Yard Office
3-16	XL-479	EH-0047 On Indicating Light	Yard Office
3-17	XL-490	EH-0048 Off Indicating Light	Yard Office
3-18	XL-489	EH-0048 On Indicating Light	Yard Office

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 9 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
3-19	XL-400	EH-0049 Off Indicating Light	Yard Office
3-20	XL-499	EH-0049 On Indicating Light	Yard Office
3-21	HS-415	FTU-0041 Auto/Manual Selector Switch	Yard Office
3-22	XL-412	FTU-0041 Off Indicating Light	Yard Office
3-23	XL-411	FTU-0041 On Indicating Light	Yard Office
3-24	HS-414	FTU-0041 Start/Stop Selector Switch	Yard Office
3-25	XL-413	FTU-0041 Trip Indicating Light	Yard Office
3-26	XL-406	MBD-0040 Close Position Indicating Light	Yard Office
3-27	ZS-405	MBD-0040 Local Position Indication Switch	Yard Office
3-28	XL-405	MBD-0040 Open Position Indicating Light	Yard Office
3-29	HS-406	MBD-0040 Start/Stop Selector Switch	Yard Office
3-30	XL-416	MBD-0041 Close Position Indicating Light	Yard Office
3-31	ZS-415	MBD-0041 Local Position Indication Switch	Yard Office
3-32	XL-415	MBD-0041 Open Position Indicating Light	Yard Office
3-33	HS-416	MBD-0041 Start/Stop Selector Switch	Yard Office
3-34	HS-420	MBD-0042 Auto/Manual Selector Switch	Yard Office
3-35	XL-426	MBD-0042 Close Position Indicating Light	Yard Office
3-36	ZS-425	MBD-0042 Local Position Indication Switch	Yard Office
3-37	XL-425	MBD-0042 Open Position Indicating Light	Yard Office
3-38	HS-426	MBD-0042 Start/Stop Selector Switch	Yard Office
3-39	XL-408	MFD-0040 Close Position Indicating Light	Yard Office
3-40	ZS-407	MFD-0040 Local Position Indication Switch	Yard Office
3-41	XL-407	MFD-0040 Open Position Indicating Light	Yard Office
3-42	XL-418	MFD-0041 Close Position Indicating Light	Yard Office
3-43	ZS-417	MFD-0041 Local Position Indication Switch	Yard Office
3-44	XL-417	MFD-0041 Open Position Indicating Light	Yard Office
3-45	XL-402	PAHU-0040 Off Indicating Light	Yard Office
3-46	XL-401	PAHU-0040 On Indicating Light	Yard Office
3-47	HS-404	PAHU-0040 Start/Stop Selector Switch	Yard Office

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 10 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
3-48	XL-403	PAHU-0040 Trip Indicating Light	Yard Office
4-1	HS-514A	FTU-0051 A Start/Stop Selector Switch	Analyzer Room
4-2	HS-515A	FTU-0051 A Auto/Manual Selector Switch	Analyzer Room
4-3	XL-511A	FTU-0051 A On Indicating Light	Analyzer Room
4-4	XL-512A	FTU-0051 A Off Indicating Light	Analyzer Room
4-5	XL-513A	FTU-0051 A Trip Indicating Light	Analyzer Room
4-6	HS-514B	FTU-0051 B Start/Stop Selector Switch	Analyzer Room
4-7	HS-515B	FTU-0051 B Auto/Manual Selector Switch	Analyzer Room
4-8	XL-511B	FTU-0051 B On Indicating Light	Analyzer Room
4-9	XL-512B	FTU-0051 B Off Indicating Light	Analyzer Room
4-10	XL-513B	FTU-0051 B Trip Indicating Light	Analyzer Room
4-11	HS-506	MBD-0050 Start/Stop Selector Switch	Analyzer Room
4-12	XL-505	MBD-0050 Open Position Indicating Light	Analyzer Room
4-13	XL-506	MBD-0050 Close Position Indicating Light	Analyzer Room
4-14	ZS-505	MBD-0050 Local Position Indication Switch	Analyzer Room
4-15	HS-516	MBD-0051 Start/Stop Selector Switch	Analyzer Room
4-16	XL-515	MBD-0051 Open Position Indicating Light	Analyzer Room
4-17	XL-516	MBD-0051 Close Position Indicating Light	Analyzer Room
4-18	ZS-515	MBD-0051 Local Position Indication Switch	Analyzer Room
4-19	HS-520A	MBD-0052 A Auto/Manual Selector Switch	Analyzer Room
4-20	HS-526A	MBD-0052 A Start/Stop Selector Switch	Analyzer Room
4-21	XL-525A	MBD-0052 A Open Position Indicating Light	Analyzer Room
4-22	XL-526A	MBD-0052 A Close Position Indicating Light	Analyzer Room
4-23	ZS-525A	MBD-0052 A Local Position Indication Switch	Analyzer Room
4-24	HS-520B	MBD-0052 B Auto/Manual Selector Switch	Analyzer Room
4-25	HS-526B	MBD-0052 B Start/Stop Selector Switch	Analyzer Room
4-26	XL-525B	MBD-0052 B Open Position Indicating Light	Analyzer Room
4-27	XL-526B	MBD-0052 B Close Position Indicating Light	Analyzer Room
4-28	ZS-525B	MBD-0052 B Local Position Indication Switch	Analyzer Room

		ATTACHMENT NO.17	
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205
	REQUISITION		
REQUISITION FOR :		ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT		1205-00-HV-REQ-790	00
REQUIRED CONTROL FEATURES LIST		REQUISITION NO.	REV.
FOR BUILDINGS		SHEET 11 OF 11	
Sr. No.	Tag No.	DESCRIPTION	BUILDING
4-29	XL-507	MFD-0050 Open Position Indicating Light	Analyzer Room
4-30	XL-508	MFD-0050 Close Position Indicating Light	Analyzer Room
4-31	ZS-507	MFD-0050 Local Position Indication Switch	Analyzer Room
4-32	XL-517	MFD-0051 Open Position Indicating Light	Analyzer Room
4-33	XL-518	MFD-0051 Close Position Indicating Light	Analyzer Room
4-34	ZS-517	MFD-0051 Local Position Indication Switch	Analyzer Room
4-35	HS-504A	RPAHU-0050 A Start/Stop Selector Switch	Analyzer Room
4-36	HS-505A	RPAHU-0050 A Auto/Manual Selector Switch	Analyzer Room
4-37	XL-501A	RPAHU-0050 A On Indicating Light	Analyzer Room
4-38	XL-502A	RPAHU-0050 A Off Indicating Light	Analyzer Room
4-39	XL-503A	RPAHU-0050 A Trip Indicating Light	Analyzer Room
4-40	HS-504B	RPAHU-0050 B Start/Stop Selector Switch	Analyzer Room
4-41	HS-505B	RPAHU-0050 B Auto/Manual Selector Switch	Analyzer Room
4-42	XL-501B	RPAHU-0050 B On Indicating Light	Analyzer Room
4-43	XL-502B	RPAHU-0050 B Off Indicating Light	Analyzer Room
4-44	XL-503B	RPAHU-0050 B Trip Indicating Light	Analyzer Room

		ATTACHMENT NO.18		
 شرکت صنایع پتروشیمی دنا Dena Petrochemical Industries Co.	DENA METHANOL PLANT		OWNER: DENA PETROCHEMICAL INDUSTRIES CO. PROJ. NO. : 89/1205	
	REQUISITION			
REQUISITION FOR :			ALWAYS REFER TO THIS NUMBER	
HVAC EQUIPMENT			1205-00-HV-REQ-790	00
SPECIFICATION LIST FOR FEEDERS			REQUISITION NO.	REV.
			SHEET 1 OF 1	
SPECIFICATION LIST FOR FEEDERS				
TAG NO.	DESCRIPTION	CONSUMPTION (KW)	Normal / Emergency	System Voltage
SS-HDP-01A	Substation HVAC Distribution Panel (Feeder 1)	100	N	3Ph&N, 400V, 50 HZ
SS-HDP-01B	Substation HVAC Distribution Panel (Feeder 2)	100	N	3Ph&N, 400V, 50 HZ
CR-HDP-01A	Control Building HVAC Distribution Panel (Feeder 1)	135	E	3Ph&N, 400V, 50 HZ
CR-HDP-01B	Control Building HVAC Distribution Panel (Feeder 2)	135	E	3Ph&N, 400V, 50 HZ
CR-HDP-02	Control Building HVAC Distribution Panel	55	N	3Ph&N, 400V, 50 HZ
LAB-HDP-01A	Laboratory HVAC Distribution Panel (Feeder 1)	150	N	3Ph&N, 400V, 50 HZ
LAB-HDP-01B	Laboratory HVAC Distribution Panel (Feeder2)	150	N	3Ph&N, 400V, 50 HZ
YO-HDP-01A	Yard Office HVAC Distribution Panel (Feeder 1)	150	N	3Ph&N, 400V, 50 HZ
YO-HDP-01B	Yard Office HVAC Distribution Panel (Feeder2)	150	N	3Ph&N, 400V, 50 HZ
AH-HDP-01A	Analyzer House HVAC Distribution Panel (Feeder 1)	80	N	3Ph&N, 400V, 50 HZ
AH-HDP-01B	Analyzer House HVAC Distribution Panel (Feeder 2)	80	N	3Ph&N, 400V, 50 HZ