



1.69690-10-GEM

COVER SHEET

2nd ZAGROS MEGAMETHANOL PROJECT



OWNER:

ZAGROS PETROCHEMICAL COMPANY (ZPC) PROJ. NO. : 232000

REQUISITION FOR:

CONTROL VALVES

PROJ.NO:

P-1182-REQ-IN-644 1
REQUISITION NO. REV

INQUIRY □ PURCHASE ORDER ■ SHEET 1 OF 9

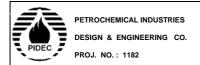
This Purchase Requisition is issued to obtain quotaion for design and supply of :

CONTROL VALVES

as per this Requisition and its attachments.

REQUISITION CONTENTS	NO. OF SHEETS
1. Scope of Work	1
2. Scope of Supply	1
3. Material Summary List	1
4. Requisition Notes	4
5. List of Attachments	1

1	2.12.04	FOR PURCHASING(SIGNED LETTER OF CONFORMITY AND CERTIFICATE OF ORIGIN)	S.E.H	S.Ehtemam	M.Masoudi
0	12.06.2004	FOR PURCHASING	Sh.Madani	S.Ehtemam	M.Masoudi
REV.	DATE	DESCRIPTION	PREPARED	APPROVED	PROJECT



REQUISITION FOR:



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CONTROL VALVES

2nd ZAGROS MEGAMETHANOL PROJECT

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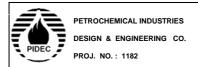
REV. **DESCRIPTION**

1. **SCOPE OF WORK**

Vendor's scope of work includes but not limited to the following items with requirements stated in the requisition and all its attachments.

GENERAL 1.1

MAIN QUOTATION	OPTIONS		
		1.1.1	Design & Engineering
		1.1.2	Fabrication /Manufacturing
		1.1.3	Assembly
		1.1.4	Shop test and inspection
		1.1.5	Painting
		1.1.6	Packing
		1.1.7	Marking
		1.1.8	Mechanical guarantee(as per terms and conditions)
		1.1.9	Performance guarantee(as per terms and conditions)





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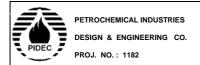
REV. DESCRIPTION

2. <u>SCOPE OF SUPPLY</u>

Vendor's scope of supply shall include but not limited to the followings with all accessories and as required according to this requisition, its attachments and references:

2.1 GENERAL

	_	_	
MAIN QUOTATION	OPTIONS		
		2.1.1	Items and quantities as stated in the material summary list .
■ 2.1.2 Spare parts for pre-commissioning and commissioning.		Spare parts for pre-commissioning and commissioning.	
		2.1.3	Spare parts for two years operation
		2.1.4	Special calibration tools (if any)
		2.1.5	Test equipment (during shop test)
		2.1.6	Name Plate (s)
		2.1.7	Documents as per the attached RFD (requirements for documents) form
		2.1.8	Quality Dossier





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2.2 **MATERIAL SUMMARY LIST**

SER	ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	
NO				(m/kg/set/)	
1		CONTROL VALVES AND ACCESSORIES	102	SET	
		(AS PER DATA SHEETS)			
2		COMMISSIONING SPARES	AS PER		
			ATTACH. NO. 6		
NOT			1	<u> </u>	
1101	NOTES:				

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OWNER:

ZAGROS PETROCHEMICAL
COMPANY (ZPC)

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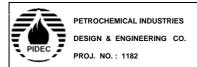
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DESCRIPTION

3. **REQUISITION NOTES**

- 3.1 The maximum consideration shall be given to minimize the types and models of the used CONTROL VALVE in order to reduce the total amount of spare parts and to ensure that wearing parts of all components are, as far as practicable, interchangeable.
- 3.2 The valves shall operate without excessive vibration and noise. They shall render possible stable control over the entire flow range.
- 3.3 CONTROL valves shall be provided and installed so that removal of the valve internal components is possible with the valve in situation.
- 3.4 All valves shall be capable of being repacked without disassembling the valve body.
- 3.5 Valves shall be of the quick renewable trim design wherever practicable.
- 3.6 Vendor shall furnish final sizing and calculation sheet for all control valves and state clearly the recovery factor and characteristic that used in his calculation.
- 3.7 Each control valves shall be sized by the vendor for the operating conditions stated in the valve data sheets. Vendor shall also take into account the effects of viscosity and pipe reducers on valve sizing.
- 3.8 Vendor shall evaluate each valve for flashing, cavitation and predicted noise level based upon ISA recommended formula and calculation methods. Vendor shall furnish the results of the evaluation and make recommendation to eliminate or reduce the effects of the undesirable operating conditions.
- 3.9 When used on "sour " fluid services control valve material heat treatments shall be in accordance with NACE MR-0175 (Wherever specified on data sheets)
- 3.10 Vendor shall furnish all relevant accessories that specified in the data sheet of CONTROL valves. Accessories shall be assembled together in such a way that detaching be possible with minimum fitting disconnection (e.g. bolting of solenoid valve /.. to actuator casing isn't permitted).
- 3.11 Vendor shall provide relevant documentation including dimension drawing, weights, installation manual, complete part list, size, type, serial number of relevant equipment, specification sheet.
- 3.12 Vendor shall evaluate each valve for any predicted noise level based upon ISA recommended formula and calculation methods. Vendor shall furnish the results of the evaluation.



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If the noise level, generated by an operating valve (measured 1 meter down stream of the valve within 1 meter radially from the pipe outside diameter), exceed 85 decibels (dBA), vendor shall inform the PIDEC and make recommendation to reduce the noise level. No external reducing devices are acceptable unless otherwise vendor specified on the Instrument data sheets.

- 3.13 Vendor to include full documentation for clears indication of noise reduction procedure.
- 3.14 Vendor shall submit final drawings for each CONTROL valve, which shall specially include the following:
 - a) Face to Face dimensions of the valve
 - b) Height of the completely assembled valve
 - c) Dimensions of clearance space required for maintenance work
 - d) Weight of the completely assembled valve
 - e) Location of external supports for vibration, in case, they are required.
- 3.15 All valves shall be designed to fail in a safe position as specified on the instrument data sheets upon loss of air supply to the actuator or Positioner.
- 3.16 CONTROL VALVE position shall be indicated on a scale mounted on the actuator.
- 3.17 Valve actuators shall be sized to fully stroke the valve based upon a 4.0 barg minimum instrument air supply.
- 3.18 Vendor shall test each valve to check that the valve actuator, and accessories are properly adjusted for that the valve operates and seats properly.
- 3.19 Seat leakage tests shall be in accordance with ANSI B 16.104/FCI 70-2
- 3.20 Vendor shall consider the following points:

Tube dimensions 1/4 "

Tube material and fitting Stainless steel

Tube connection Tapered compression fitting

Standard gas condition is pressure 1.013 bara and temperature 15 °C. Minimum instrument air pressure is 7.5 bara @ AMB temperature. Mechanical design of instrument air pressure is 11.5 bara @ 65 °C.

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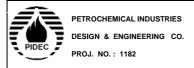
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	3.21	Vendor shall provide pneumatic loop for satisfying fail safe air lock (where applicable)	e by using volume tar	nk and
	3.22	Electrical classification for limit switches, proximity type, as as per intrinsically safe EEXia IIC T4 and weather proof to		hall be
	3.23	Electrical classification for smart positioners (HART / FF) safe EEXia IIC T4 or better certificate for intrinsically safe		
	3.24	Vendor has to check the specified "type of valve" in respect condition reason and where applicable to change the other types).		
	3.25	Vendor shall select the best trim material in respect of provalve condition (minimum material has been stated in rele		e and
	3.26	Vendor shall select the best packing in respect of process temperature condition.	condition service an	d
	3.27	When used on "sour " fluid services CONTROL VALVE make the in accordance with NACE MR-0175 (specify on data shape).		ts shall
	3.28	For insulation thickness of codes are: P: personal protection H: heat conservation N: not insulated		
	3.29	Flange face finishes that specified in the data sheets shall	be as follows:	
		Smooth: 125-250 µin AARH Max. Serrated: According TO MSS-SP-06		
	3.30	Vendor shall provide WITNESS HYDROSTATIC test for and larger.	all valves with clas	s 300#
	2 24	Vandar aball provide WITNESS HVSTEDESIS test for all	alaha yalyoo	

3.31 Vendor shall provide WITNESS HYSTERESIS test for all globe valves.

3.32 In all oxygen services all materials must be approved for the given operating conditions and all gaskets and other non-metallic materials in contact with oxygen must be certified by an official organization. Vendor to show his experience and qualification with reference from existing plants. Also a special cleaning procedure shall be existed at manufacturer workshop. The integrity shall be respected during transport.



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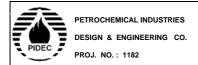
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	3.33	All solenoids shall be 24 VDC ,intrinsically safe to EExia I IP-65.	IC T4 and weather p	roof to		
	3.34	Vendor shall provide two (2) separate entries for each proto to the need of sending valve position to both of ESD & FC				
	3.35	For all oxygen services the required closing time (<2 sec be included in the construction detail.	conds) shall			
	3.36	Spring return piston actuator as specified in the data she select double actuating piston because of high torque etc arrangements including all accessories shall be quoted.	e etc. complete pneumatic loop			
	3.37	All FF positioners shall meet the requirements of FISCO p	ower supplies.			
-	3.38	The minimum rating shall be 300 # for valves up to 6 service requirements, material, pressure, maximum tem demand up-grading of the valve rating. For sizes over 6 piping material specification of the relevant pipe class.	nperature or piping	design		
	3.39	Painting procedure shall be based on point 5 of material MSS-IN-605/REV.1".	l standard specificati	on "P-		
		Vendor shall state the correct spary nozzles position lives:	for following			
		V-150725,FV-150610,FV-150630,FV-150636,FV-101432,F FV-101435	V-101433,			





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4. LIST OF ATTACHMENTS

SER NO.	DESCRIPTION	DOCUMENT NO.	REV.	No. OF SHEETS
1	Instruction for technical bids	-	1	2
2	Letter Of Conformity	-	1	1
3	"Certificate of Origin" Form	-	1	1
4	Requirement For Documents (RFD)	-	1	3
5	Scope Of Inspection	-	1	1
6	Spare Part list forms	-	1	2
7	Spare part list and interchangeability record (SPIR)	-	1	2
8	Requirements For Electrical Certifications	-	1	1
9	Ambient and Site Condition and Utility Data	P-ESS-PR-101	1	16
10	Units of measurement	P-ESS-PR-102	0	4
11	Data sheets for CONTROL VALVES	P-1182-DSH-IN-644	1	103
12	Specifications	P-MSS-IN 605	1	19