شماره صفحه ۱ از ۱۱

# مدارک اضافه شده به اسناد مناقصه دو مرحلهایخرید یک دستگاه کروماتوگرافی گازی آنلاین



## 1- Purchase Order

### 1 Special On-line GC Instruments for HDPP Pilot as Below:

Configured so that be able to separate and analyze below components in percent range: Hydrogen, Ethylene, Propylene and 1-Butene every 180 seconds and report mole percentage of each compound and their ratio to the Hydrogen.

#### **Common Requirements for all instruments:**

- \*Voltage: 220 volt (universal)
- \*PC system with latest version of original MS operating system with color laser printer
- \*latest version of Original Software in Order to control GC and analyze results
- \* Five years spare parts
- \* 2 year guaranty & 10 years warranty
- \* Training course for 2 people

#### **Technical Data Sheet**

Item No	TECHNICAL FEATURES	DESCRIPTION
1	Component to be Analyzed:	H <sub>2</sub> , C <sub>2</sub> H <sub>4</sub> , C <sub>3</sub> H <sub>6</sub> , 1-Butene, 1-Hexene, 1- Octene, C <sub>2</sub> H <sub>6</sub>
2	Concentration Level:	Percentage
3	Water	No ■ Yes □
4	No. of Sample Points:	5 (Reactor: 3, Feed: 2)
5	Analyzer	3 Channels (analyzing 3 separate points simultaneously)
6	Temperature:	Inlet: Ambient, Outlet: 65 °C
7	Pressure:	Inlet: 9bar, Outlet: 8.5bar
8	Line Diameter:	Tube 1/8"
9	The distance of Sample Point to the Analyzer:	30 m
10	The Elevation of Sample Point:	Second floor, 6 m
11	Sample Point Zone:	Ex. Zone 1
12	Analyzer Room Zone:	Zone 2
13	Ability to Transfer Data to the PLC:	No □ Yes ■
14	Electrical data	220 V, 50 Hz

Additional Accessories: Cabling and run the Cable Tray

شماره صفحه ۲ از ۱۱

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# **Sample Requirement Specification**

A) Sample information

Sample type:					
Sample Type	Real			(Calibration, Validation, Real sample)	
Sample Description	Ethylene Polymerization Reactor Analysis			(for example Naphtha)	
Sample state	Gas		(Gas or Lie	 quid)	
Sample Temperature at site	80-85	°C	<del>_</del>		
Sample Pressure at site	6-9	Bar	_		
Max Runtime	On-line		_		
Max cycle Time	3	Min	_		

## Fill in details in case of specific component analysis

#	Component Or Group	Critical Comp.	Concentration		LOD	Unit of Measurement (wt%, vol%, ppm, ppb,	Quantitation (yes or no)
			Min.	Max.		etc.)	(yes of no)
01	Hydrogen		0	60		mol %	Yes
02	Ethylene		0	100		mol %	Yes
03	Ethan		trace	trace		mol %	Yes
04	Propylene		0	100		mol %	Yes
05	1-Butene		0	30		mol %	Yes
06	1-Hexene		0	30		mol %	Yes
07	1-Octene		0	30		mol %	Yes

## **Additional Information:**

Does this sample contain:		No	Yes	Describe
	Corrosives	*		
	Moisture/Water	*		
	Particulates	*		
	Oils/Heavies	*		
	Precipitates	*		
	Oligomers, Polymers	*		

شماره صفحه ۳ از ۱۱

# مدارک اضافه شده به اسناد مناقصه دو مرحلهایخرید یک دستگاه کروماتوگرافی گازی آنلاین



# 2- Additional Technical Information

Item No	TECHNICAL FEATURES	DESCRIPTION				
1	Minimum Range	0-500 ppm				
2	Danastahility	±1 % of full scale from 0.05-2 %				
	Repeatability	±0.5 % of full scale from 2-100 %				
3	Linearity	±2 % of full scale				
4	Oven Temp. Range	5-330 °C				
5	Temp. Control	±0.05 °F (±0.02 °C)				
6	Electronic Pressure Resolution	0.001 psig				
7	Cycle Time	180 sec				
8	Serial output	RS232, RS435				
9		Standard				
	Ethernet	Four 10/100 Base T Ethernet connection with Rj45				
		connectors autosense and auto-negotiato				
10	Standard I/O	2 analog outputs, 4 digital outputs, 4 digital inputs				
11	Board Slots for Optional I/O	Up to 2				
12	Controlling Sysrem	Capability to control with PLC (dara transferring)				
13	Sample Flow	50-200 cc/min				
14	Sample Filtration	0.1 μm				
15	Minimum Sample Pressure	5 psig				
16	Maximum Sample Pressure	75 psig				
17	Maximum Sample Temp.	121 °C				
18	Material In Contact with Sample	Stainless steel, teflon and polyimide				
19	Configuration	Single unit with multiple enclosures				
20	Data Analysis & Report	Percentage of each component and their ratio to each				
20	Data Analysis & Report	other				
21	Pressure & Flow Controlers	Internal Auto-Calibrated				
22	No. of Detectors	At least 3 Detectors for 3 Channels				
23	Detector Range	Auto-Scale				
24	Sampling	Online (5 points)				