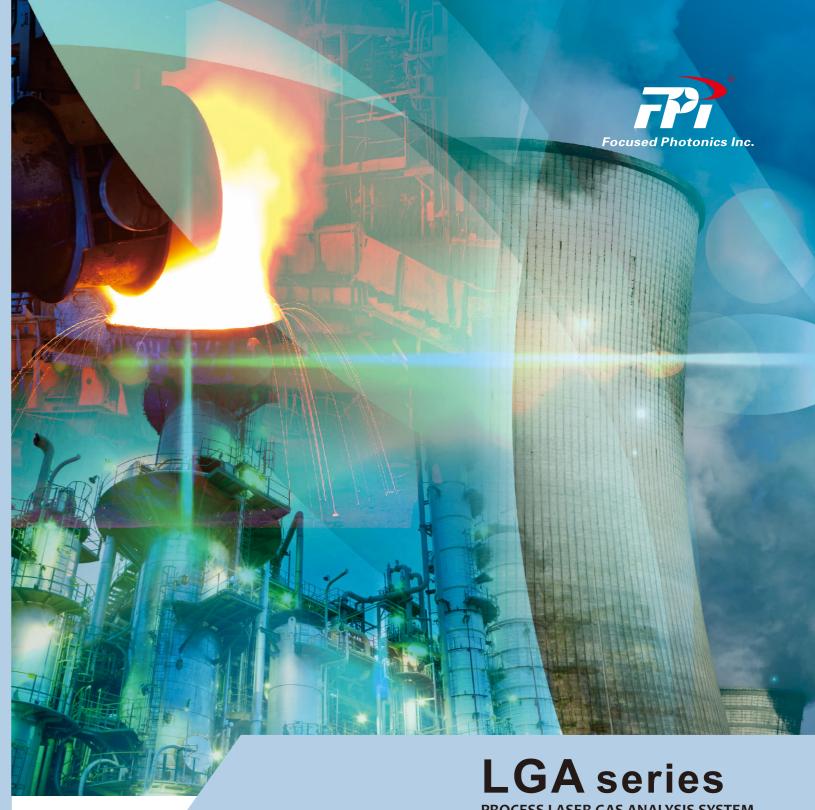
Focused Photonics (HangZhou) Inc.

760 Bin'an Road, Binjiang District Hangzhou 310052 China Tel: +86 571 8501 2188 Fax: +86 571 8679 1505

www. fpi-inc. com

Copyright reserved. Specifications and desig FPISB-LGA1401100 V2.0HZ s are subject to change without prior notic





PROCESS LASER GAS ANALYSIS SYSTEM

Focused Photonics Inc.



LGA series PROCESS LASER GAS ANALYSIS SYSTEM

Utilizing proprietary technologies of Tunable Diode Laser Absorption Spectroscopy (TDLAS), FPI delivers the LGA system to satisfy in-situ measurements with high accuracy, fast response, strong reliability and virtually maintenance free.

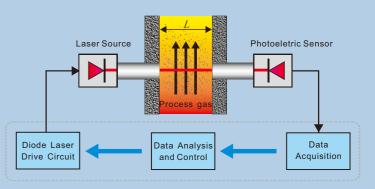
The LGA system is applicable to almost all industrial process, especially well proven in harsh conditions in combination of high temperature, pressure, dust, corrosives and contaminants.

Leveraging an installed base of over 8,000 units, the LGA system has been extensively used for combustion and safety control, process optimization, energy recovery, scientific research as well as environment monitoring. To date, these units have been employed in metallurgy, refinery, petrochemical, natural gas, power plant, waste incineration, cement and other situations where gas measurement is needed.

Gas	Detection Limit	Measurement Range
O ₂	0.01%Vol	0-1%Vol, 0-100%Vol.
СО	0.6 ppm	(0-60)ppm, (0-100)%Vol.
CO_2	1.5 ppm	(0-150)ppm,(0-100)%Vol.
H_2O	0.3 ppm	(0-30)ppm, (0-100)%Vol.
H_2S	2 ppm	(0-200) ppm, (0-30)%Vol.
HF	0.02 ppm	(0-2)ppm, (0-10,000) ppmVol.
HCI	0.01 ppm	(0-7) ppm,(0-8000)ppmVol.
HCN	0.3 ppm	(0-30)ppm, (0-10,000)ppmVol.
$\rm NH_3$	0.4 ppm	(0-40) ppm, (0-100)%Vol.
CH_4	10 ppm	(0-200)ppm, (0-100)%Vol.
C_2H_2	0.1 ppm	(0-10) ppm, (0-100)%Vol.
C_2H_4	0.6 ppm	(0-60)ppm, (0-100)%Vol.

Notes: Listed are detection limits specified for 1m optical path at 20°C, 1 bar abs. Dual Gas CO+CO2, HCL+H2O are available for particular applications. Other gases and detailed measurement ranges may be available or customizable on request.









CONFIGURATION

The transmitter portion of the LGA system consists mainly of diode laser, laser driver and HMI modules, realizing diode laser driving, spectrum data processing and human-machine interface. The receiver unit of the analyzer is composed of a photoelectric sensor, signal processing and purge control modules, is capable of signal processing and anti-explosion control.

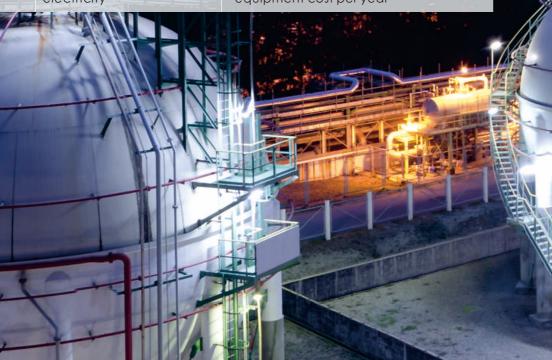
MEASURING PRINCIPLE

The laser beam from the transmitter unit passes across the stack or duct work and is absorbed by the measured gas. The attenuated light is then detected by the photoelectric sensor in the receiver unit, and the resulting signal is sent back to the transmitter unit and analyzed to yield gas concentration.

Measuring Principle Diagram

TECHNOLOGY COMPARISON

ITEM	LGA LASER SYSTEM	CONVENTIONAL ONLINE ANALYSIS	
Adaptability	Applicable to high temperature, pressure, moisture, dust density and corrosion	Applicable to constant temperature, pressure and dust free	
Measurement	In-situ, continuous/real-time measurement; sample gas evacuation free	With sample conditioning system, discontinuous measurement	
Response Time	Fast, only limited by electronics response, less than 1 sec	Slow, limited by gas sampling, transport, and instrument electronics response 20+sec	
Accuracy	Average concentration along the optical path; no cross interference from other gas species, dust, and gas parameter fluctuations	Gas concentration at the tip of the sampling probe only, affected by gas influence and absorption, and leaked during gas sampling and transport; cross interference from other gas species, dust, and gas parameter fluctuations; gas information lost due to dissolution, absorption, and leakage	
Reliability	No moving parts, highly reliable	Many moving parts, low reliability	
Calibration& Maintenance	Calibration:<2times/year Maintenance:<2times/year	Calibration:2-3times/month Maintenance: frequent	
Operation Costs	No spare parts, only cost of electricity	Lots of spare parts, around20% of the equipment cost per year	



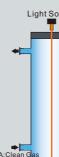
TECHNICAL PRINCIPLE

No Cross Interference

The laser spectrum features excellent monochromaticity with spectral width down to 0.001nm, which is much narrower than spectral width of other light sources. By utilizing the 'Singleline' spectroscopy, a well-targeted laser spectrum can be sorted out to cover only the measuring gas without overlapping spectrum of all background gases.

No Effects from Dust, Moisture and Window Contamination

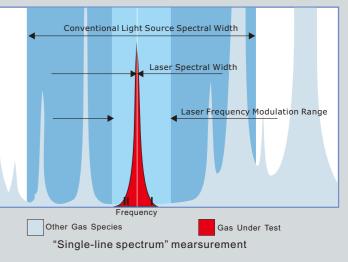
TDLAS gas analyzers use a laser spectral scanning technique. The unit periodically scans the gas under test with a modulation frequency range larger than the gas absorption spectral line-width such that, within one scan period, there are two distinctive areas. Area I is uneffected by the gas absorption and gives Td, whereas Area II is effected and gives Tgd.

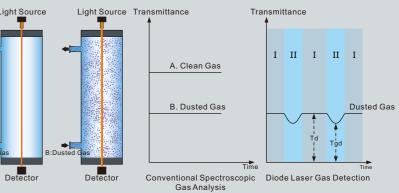


The transmittance of the gas under test is then calculated accurately by A:Clean Ga Tg=Tgd/Td. The interference from dust and optical window contamination is, therefore, automatically screened out.

Automatic Temperature & Pressure Compensation

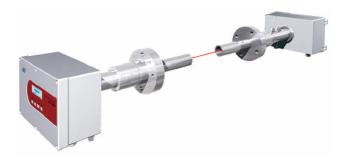
When gas temperature and pressure under measurement changes, the width and height of the absorption waveform change, which effects the accuracy of the measurement. By having 4-20mA process temperature and pressure input, the LGA system automatically compensates for them with a proprietary algorithm to ensure measurement accuracy.





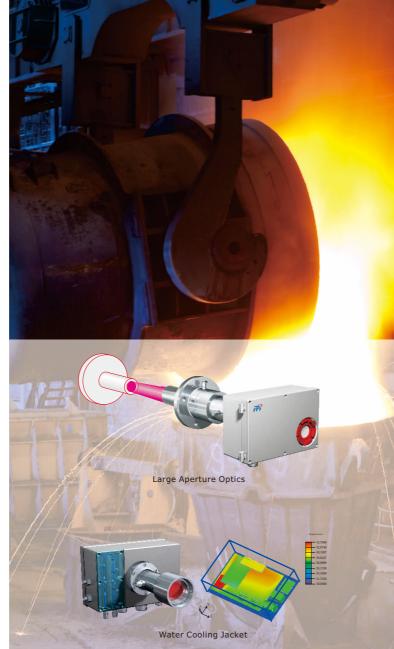


LGA-4100 In-situ

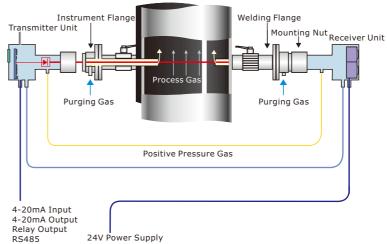


Features and Benefits

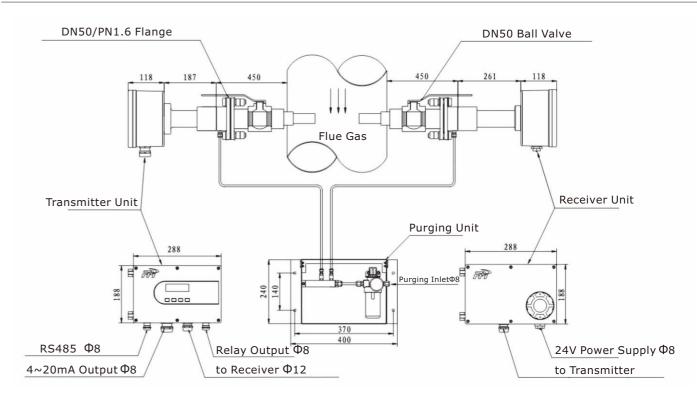
- In-situ, no gas sampling
- No cross interference
- Fast response less than one second
- Diverse optical length (0.5~20m)
- Reliable in all harsh conditions: high temperature & pressure, dust density, moisture and corrosion
- Online calibration, no zero drift
- Thousands of tailor-made solutions for various applications
- International ATEX certified



LGA Composition



LGA Dimension



Application Areas

Refinery & Petrochemical

- FCC Catalyst Regeneration
- SCR NH3 Injection
- Desulfurization Efficiency
- Explosive Process Gas
- Reactant Ratio Optimization
- Product Purity
- HCL, HF Emission
- Flue Gas Measurement Outlet of Process Heaters, Fractionators, Thermal Crackers, Utility Boilers and Incinerators
- Sulfur Recovery

Metallurgy

- Combustion Control for Reheating Furnace, Heat treatment Furnace, Forging Furnace
- Converter Gas Recycle
- Blast Furnace Gas
- Coke Oven Gas
- Flue Gas of Sintering, Pelletizing
- Coal Injection Safety Control
- Electric Tar Precipitator (ETP) Safety Control
- CDQ Circulating Gas
- Gas Tank Safety Control
- Calorific Value Analysis
- Sulfur Recovery

Thermal Power

- SCR NH3 Injection
- Desulfurization Efficiency
- Coal Injection Safety Control
- HCL, HF Emission

Technical Data

Specifications

Repeatability: $\leq \pm 1\%$ F.S. Linearity: $\leq \pm 1\%$ F.S. Span drift: $\leq \pm$ 1%F.S./6 months Response time: \leq 1s(T90) Warm-up time: ≤ 15min Optical path length: 0.5-20m Process gas temperature: max. 1500°C Process gas pressure: 0.8 to 4 bar abs.

Input & Outputs

Analog outputs: 2 outputs 4-20mA, max. load 750Ω, electrically isolated Relay outputs: 3 outputs 24V DC/1A Analog inputs: 2 inputs 4-20mA, for gas temperature & pressure compensation Communications: RS485(or Bluetooth, RS232 or GPRS)

Operating conditions

Power supply: 24V DC(21-36V DC), or 90-240V AC Power consumption: max. 20W Operating temperature: -30°C to +60°C Storage temperature: -40°C to +80°C Purge gas: 0.3 to 0.8MPa nitrogen gas or instrument air Protection class: IP65

Approvals

Laser class: class 1 conformant with IEC60825-1 CE certified: conformant with 2004/108/EC ATEX(IECEx) certified: Ex d op is pxIIC T5 Gb CSA C/US Pending



LGA-4500 Bypass





Corrosion resistant/high temperature proof gas cell

Features and Benefits

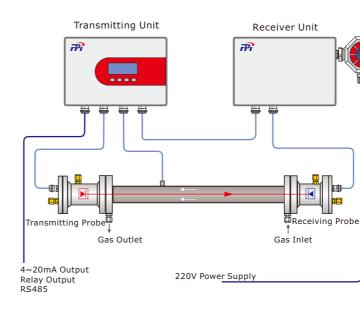
- Fast response
- High accuracy, ppm level resolution
- No cross interference
- Reliable in all harsh conditions: high temperature & pressure, dust density, moisture and corrosion
- Online calibration, no zero drift
- International ATEX certified

Application Areas

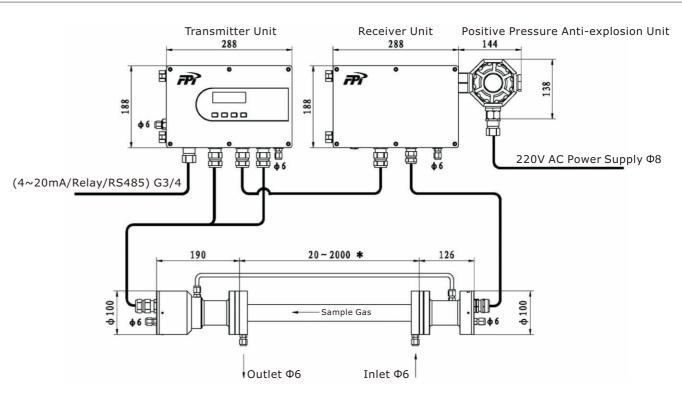
- Trace H₂O in VCM Production
- Coal Injection Safety Control
- SCR NH₃ Injection in Coal-fueled Plants
- All other applications where in-situ doesn't fit due to high pressure or dust density, limitation of stack diameter or position.



LGA Composition



LGA Dimension



Technical Data

Specifications

Repeatability: $\leq \pm 1\%$ F.S. Linearity: $\leq \pm 1\%$ F.S. Span drift: $\leq \pm 1\%$ F.S./6 months Instrument response time: $\leq 1s^*$ Warm-up time: ≤ 15 min Gas cell temperature: -30°C to +250°C Gas cell pressure: 0.5 to 3 bar abs. *Gas flow>11/min, system response time: 790 $\leq 20s$.

Input & Outputs

Analog outputs: 2 outputs 4-20mA, max. load 750Ω, electrically isolated

Relay outputs: 3 outputs 24V DC/1A Communications: RS485(or Bluetooth, RS232 or GPRS)

Operating Conditions

Power supply: 200-240V AC/48-63Hz Power consumption: ≤30W (no heat tracing) Operating temperature: -30°C to +60°C Storage temperature: -40°C to +80°C Purge gas: 0.3MPa nitrogen gas or instrument air Protection class: IP65

Approvals

Laser class: class 1 conformant with IEC60825-1 CE certified: conformant with 2004/108/EC ATEX(IECEx) certified: Ex d op is pxIIC T5 Gb CSA C/US Pending



LGA-4500IC Trace Level



Features and Benefits

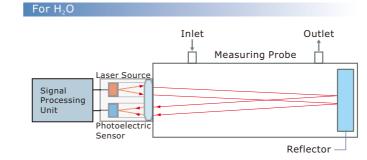
- Drift free, Maintenance free
- Accurate, real-time measurement
- No tape, No carrier gas, No light source or probe replacement
- No interference from glycol, methanol or amine
- Reliable in harsh conditions
- ATEX certified

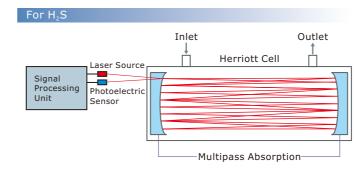
Application Areas

- \blacksquare H₂O, H₂S in natural gas
- Trace level H_2O , H_2S in chemicals

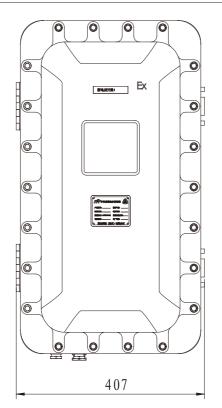
Gas	Detection Limit	Measurement Range
H_2O in natural gas	2ppm	0-100ppm
$\rm H_{2}S$ in natural gas	2ppm	0-50ppm,0-200ppm

LGA Composition





LGA Dimension



Technical Data

Specifications (H₂O)

Repeatability: $\leq \pm 1\%$ F.S. Linearity: $\leq \pm 1\%$ F.S. Span drift: $\leq \pm 1\%$ F.S./6 months Instrument response time: $\leq 1s^*$ Warm-up time: ≤ 15 min Suggested gas flow: 1-5L/min *Gas flow > 1L/min,system response time (short OPL 46cm): T90 $\leq 11s$, system response time (long OPL 112cm): T90 $\leq 21s$.

Specifications (H2S)

Input & Outputs

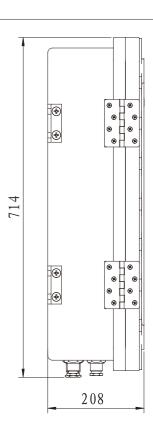
Analog outputs: 2 outputs 4-20mA, max. load 500Ω, electrically isolated Relay outputs: 3 outputs 24V DC/1A Communications: RS485(or RS232/Modbus)

Operating Conditions

Power supply:100-240V AC(H₂O), 200-240V AC(H₂S)/48-63Hz Power consumption: \leq 12W(H₂O); \leq 450W(H₂S) Operating temperature: -20°C to +50°C Protection class: Ip65

Approvals

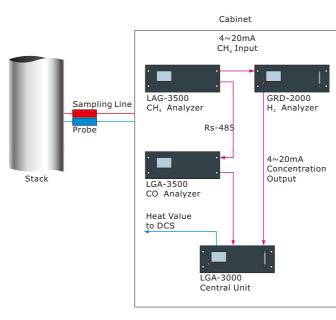
Laser class: class 1 conformant with IEC60825-1 CE certified: conformant with 2004/108/EC CSA C/US Pending



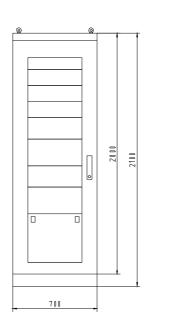
LGA-C300 Calorific Value

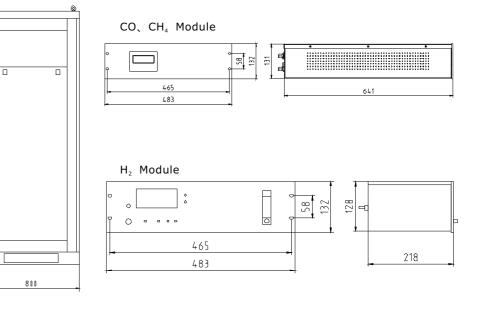


LGA Composition



LGA Dimension





Technical Data



Iron & Steel

Process Measuring Position Gas Gas Content Conten Content Content Conten Content Content Content Cont		FP	I Process (Gas measurement	in Iron & Steel				
Iron Making Ma	Process	Measuring Position		Typical Range	Measuring Purpose	Instruments			
Intering Plus Cos 0, 0 0-215 Combustion Collimiting, Energy Soving 10.4-100 Intering Plus Cos 0 0-155 Combustion Collimiting, Energy Soving 10.4-100 Process Collimiting Plus Cos 0 0-155 Combustion Collimiting, Energy Soving 10.4-100 Process Collimiting Plus Cos 0 0-155 Combustion Collimiting, Energy Soving 10.4-100 Making 0 0-155 Combustion Collimiting, Energy Soving 10.4-100 Mart of Coal Mill 0 0-155 Process Collimiting, Energy Soving 10.4-100 Mart of Coal Mill 0 0 0-235 Combustion Collimiting, Energy Soving 10.4-100 Outlet of Coal Mill 0 0 0-235 Coaling Units Antipy of Coaling 10.4-100 Outlet of Coal Mill 0 0 0-235 Coaling Units Antipy of Coaling 10.4-100 Outlet of Kang Filter 0 0 0-235 Computing Energy Soving 10.4-100 Outlet of Kang Filter 0 0 0-235 Computing Energy Soving 10.4-100 <t< td=""><td></td><td></td><td>measurea</td><td>Sintering Pelle</td><td>etizina</td><td></td></t<>			measurea	Sintering Pelle	etizina				
Iron CO 0-55 Softwice Control 10.4-100 Participation of Control CO 0-155 Control with the Hary Softwing 10.4-100 Participation of Control CO 0-155 Control with the Hary Softwing 10.4-100 Participation of Control CO 0-155 Control with the Hary Softwing 10.4-100 Participation of Control CO 0-155 Control with the Hary Softwing 10.4-100 Making Free Control CO 0-155 Control with the Hary Softwing 10.4-100 Making Co 0-155 Control 10.4-100 10.4-100 Co 0-155 Control 10.4-100 10.4-100 10.4-100 Co 0-155 Control 10.4-100 </td <td></td> <td></td> <td>0</td> <td>-</td> <td>-</td> <td>1.0.4.4100</td>			0	-	-	1.0.4.4100			
Sintering Flue Gas CO, O 0-155 Combustion for dopont Monitoring (CA-4100 How Flue Gas CO, O 0-155 Enclosing Young Yo			-						
Iron Vid C-135 Process Optimizing Terrup Soring Lick-kills Pale failing flue Gas C-155 Combustion Optimizing Terrup Soring ICA-4100 Pale failing flue Gas C-155 Combustion Optimizing Terrup Soring ICA-4100 Naking Cold Injection Select Control Cold Injection Select Control ICA-4100 Inter of Coal Mill Cold Cold Select Control ICA-4100 ICA-4100 Outlet of Rog Silter Cold Select Control ICA-4100 ICA-4100 Outlet of Rog Silter Cold Select Control ICA-4100 ICA-4100 Outlet of Rog Silter Cold Select Control ICA-4100 ICA-4100 Outlet of Rog Silter Cold Select Control ICA-4100 ICA-4100 Outlet of Rog Silter Cold Select Control ICA-4100 ICA-4100 Outlet of Rog Silter Cold Select Control ICA-4100 ICA-4100 Outlet of Rog Silter Cold Select Control ICA-4100 ICA-4100 Outlet of Select Control Cold Select Control ICA-4100 ICA-4100 Outlet Of Select Control Cold Select Co		Sinterina Flue Gas							
Fund Classific Value See Calcific Value Analysis Forbielow I.G.A.400 Prestaining Flue Cas 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0		<u> </u>	2						
Poletiting flue Gos 0, Co 0-155 (Co Condustion Optimizing, Energy Soving (Co L CoA-H100 (Co Iron Making Poletiting flue Gos Co 0-155 (Co Condustion Optimizing, Energy Soving (Co L CoA-H100 (Co Iron Making Poletiting flue Gos Cold Subtraction Safety Control L CoA-H100 (Co L CoA-H100 (Co L CoA-H100 (Co Unlet of Coal Mill Co 0-255 (Co Co Co L CoA-H100 (Co L Co			-			LGA-4100			
Principling Rue Cos Co 0-15% Safety Control LCA-4100 Iron HQ 0-15% Present Control in Exposit Naniforing LCA-4100 Making Outlie of Cool Mill 0-0 0-21% Present Control LCA-4100 Unite of Cool Mill 0-0 0-21% LCA-4100 LCA-4100 Outlie of Cool Mill 0-0 0-21% LCA-4100 LCA-4100 Cool Burk CO 0-3000pm LCA-4100 LCA-4100 Cool Burk CO 0-307% Control LCA-4100 LCA-4100 Flag Cool Digm Cool Digm LCA-4100 LCA-4100 LCA-4100 Flag Cool Digm Co 0-105% Conserver Park Soring LCA-4100 Flag Cool Digm Co 0-105% Conserver Park Soring LCA-4100									
Peletizing Flue Cas CO, Flue Califier Consultant Endpoint Analysis Fairing Stee Califier Value Analysis Fairing Califier Califier Califie			-		1 0, 0,				
Iron Field 0 0-158 Process Optimizing Energy Staving 1CA.4100 Iron Call Injection Safety Control Iron Safety Control		Pelletizing Flue Gas							
Fuel Control See Calcific Value Analysis Faith Below Iron Making Intel of Cast Mill 0, 0, 0, 23,5 0, 0, 0, 0, 23,5 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0									
Iron Making Coal Injection Safety Control Under of Coal Mill Co 0-21% LGA-4100 Outlet of Coal Mill Co 0-300000000000000000000000000000000000			-			LGA-4100			
Inter of Coat Mill Open Source Coal Mill Open Source Coal Mill Open Source Coal Mill Coal Mill Open Source Coal Mill Coal Mill Mill Mill Coal Mill			See 'Calorific Value Analysis' Forth Below						
Inc or UCat Mail Co 0-5000 ppm LGA-4100 Making Outle of Coal Mill Co 0-5000 ppm Safety Control LGA-4300 Outle of Eag Filer Co 0-5000 ppm Safety Control LGA-4300 Coal Bunk Co 0-5000 ppm Safety Control LGA-4300 Coal Bunk Co 0-5000 ppm ElGA-4300 LGA-4300 Hot Boat Store Flue Gas Combustion Efficiency Control, Hot Blast Store Flue Gas LGA-4300 LGA-4300 Hot Blast Store Flue Gas Co 0-535 Combustion Efficiency Control, Hot Blast Store Flue Gas LGA-4100 Hot Blast Store Flue Gas O 0-2135 Parace Evace Administion Energy Saving. LGA-4100 Hot Blast Store Flue Gas O 0-2105 Combustion Efficiency Control. LGA-4100 Hot Produced Induced Draft File Co 0-1055 Condenser Operation Monitoring LGA-4100 Hot Produced Induced Draft File Co 0-1055 Condenser Operation Monitoring LGA-4100 Hot Produced Traft File Co 0-1055 Condenser Operation Monitoring									
Iron Color Organization Control Control <t< td=""><td></td><td></td><td>O₂</td><td>0~21%</td><td></td><td>LGA-4100</td></t<>			O ₂	0~21%		LGA-4100			
Making Outlet of Caci Mill O, Col et of Bag Filter D, Col et of Bag Filter Con et of Bag Filter	Iron	Inier of Codi Mili	CO	0~5000ppm		LGA-4100			
Outlet of Bag Filter Oc. 0-33 % Stely Control LCA-4100 Cool Bunk Oc. 0-3000-2000 (ppm) ILCA-4300 ILCA-4300 Cool Bunk Oc. 0-3000-2000 (ppm) ILCA-4300 ILCA-4300 Flue Gos other Bag Filter Oc. 0-3000-2000 (ppm) ILCA-4400 ILCA-4400 Flue Gos other Bag Filter Oc. 0-3000-2000 (ppm) Funces Leakage Monitoring ILCA-4100 Flue Gos other Bag Filter Oc. 0-3000 (ppm) Funces Optimizing. Energy Saving. ILCA-4100 Flue Gos other Bag Filter Co. 0-3000 (ppm) Funces Optimizing. Energy Saving. ILCA-4100 Filter Coulded Fort Fran O. 0-3000 (ppm) Stely Control ILCA-4100 Filter Coulded Fort Fran O. 0-3000 (ppm) Stely Control ILCA-4100 Filter Coulded Fort Fran O. 0-3000 (ppm) Stely Control ILCA-4100 Filter Coulded Fort Fran O. 0-300 (ppm) Stely Control ILCA-4100 Filter Coulded Fort Fran O. 0-300 (ppm) Stely Control ILCA-4100 <td></td> <td></td> <td>O₂</td> <td>0~21%</td> <td></td> <td>LGA-4500</td>			O ₂	0~21%		LGA-4500			
Outlet of Bag Filler Op. 0-218 Stiply Control LGA-4100 Coal Bunk Co 0-3000 pm 1004 A4800 LGA-4800 Coal Bunk Co 0-3000 pm 1004 A4800 LGA-4800 File Gas after Bag Filler Co 0-3000 pm 1004 A4800 LGA-4100 File Gas after Bag Filler Co 0-3000 pm Combustion Efficiency Control LGA-4100 Co 0-3000 pm 0-3000 pm Forces Optimizing, Energy Soving. LGA-4100 File Gas after Bag Filler Co 0-3000 pm Safety Control LGA-4100 File for Dutie of Induced Draft Fan O, 0-3000 pm Safety Control LGA-4100 File for Outlet of Induced Draft Fan O, 0-3000 pm Safety Control LGA-4100 File for Outlet of Induced Draft Fan O, 0-3000 pm Condense Operation Monitoring GB-2000 File for Outlet of Coll Coll Afficience Draft Fan O, 0-355 Condense Operation Monitoring LGA-4100 File Could of Coll Coll Afficience Draft Fan O, 0-3000 pm Eact Afficiencon Coll Afficien	Making	Outlet of Coal Mill	CO	0~5000ppm		LGA-4500			
Collector Bank Col 0-5000pm LCA-4100 Cool Bunk Co (0-5000)pm LCA-4500 LCA-4500 Flue Gas after Bag Filter Co 0-5000 pm Combustion Efficiency Control. LCA-4100 Flue Gas after Bag Filter Co 0-5000 pm Combustion Efficiency Control. LCA-4100 Flue Gas after Bag Filter Co 0-5000 pm Combustion Efficiency Control. LCA-4100 Flue Gas after Bag Filter Co 0-5000 pm Combustion Efficiency Control. LCA-4100 Flue Collector Information Efficiency Control Flue Collector Information Energy Soving. LCA-4100 Flue Collector Information Energy Soving. Contenser Operation Monitoring LCA-4100 Flue Collector Information Energy Soving. Contenser Operation Monitoring CA-4100 Flue Collector Information Energy Soving. Contenser Operation Monitoring CA-4100 Flue Collector Information Energy Soving. Contenser Operation Monitoring CA-4100 Flue Collector Information Energy Soving. Contenser Operation Monitoring CA-4100 Flue Collector Information Energy Soving LCA-4100 Contenser Oper			O ₂	0~21%	Safety Control	LGA-4100			
Coal Bunk Op. 0-0-13 (S) LCA-4500 Here Gas after Bag Filter Op. 0-35 (S) Combustion Efficiency Control. LCA-4100 File Gas after Bag Filter Op. 0-35 (S) Combustion Efficiency Control. LCA-4100 File Gas after Bag Filter Op. 0-35 (S) Combustion Efficiency Control. LCA-4100 File Gas after Bag Filter Op. 0-218 (S) Process Optimizing. Energy Saving. LCA-4100 File Gas after Bag Filter Op. 0-218 (S) Process Optimizing. Energy Saving. LCA-4100 File of outlet of induced Draft Fan CO 0-105 (S) Gas Recycle Control LCA-4100 File of outlet of induced Draft Fan Op. 0-35 (S) Gas Recycle Control LCA-4100 File of outlet of find ouced Draft Fan Op. 0-35 (S) Gas Recycle Control LCA-4100 File of outlet of find ouced Draft Fan Op. 0-35 (S) Gas Recycle Control LCA-4100 File of Outlet of Gas Tank Safety Control LCA-4100 LCA-4100 LCA-4100 File of Outlet of Gas Tank Safety Control LCA-4100 LC		Outlet of Bag Filter							
Colination Colination LCA-4500 Biss Furnace Case LCA-4500 Pie Gos after Bag Filter O, Chi, H, O D-55, Combustion Efficiency Control, CO, D-215, Primace Lookage Monitoring LCA-4100 File O, O, O O-55, Combustion Efficiency Control, LCA-4100 LCA-4100 File O, O O-215, Primace Lookage Monitoring LCA-4100 File O, O O-215, Primace Lookage Monitoring LCA-4100 File O, O O-216, Primace Lookage Monitoring LCA-4100 File O, O O-216, Primace Control Combustion Efficiency Control LCA-4100 File O O O O Combustion Efficiency Control LCA-4100 File O O O O Combustion Efficiency Control LCA-4100 File O O O O Condenser Operation Monitoring Co Condenser Operation Monitoring									
Bisst Furnace Gas LGA-4100 File Gas after Bag Filter O, 0-5% CH, 0-5% CH		Coai BUNK							
File Gas after Bag Filer 0, 0, 0-33 CH, 0-55 CO Combustion Efficiency Control. Funce Leokage Monitoring ICA-4100 ICA-4					Gas	2			
File Gas after Bog Filler CH, CO, CO, O = 035% - 055 CO, O = 035% - 055 CO, O = 035% - 055 CO, D = 035% - 055 Hot Blast Stove Flue Gas Combustion Efficiency Control. LGA 4100 CO, O = 0105 Steel LGA 4100 CGA Hot Blast Stove Flue Gas 0, O = 0.15% Process Optimizing. Energy Soving. Steel LGA 4100 Making Intel or Outlet of Induced Draft Fan Intel or Outlet of Cas Trank CO O = 0.103 Fan Secold Control ICA-4100 ICA-4100 Making Intel A Outlet of Cas Trank CO 0 = 1005 Fan Secold Control ICA-4100 ICA-4100 ICA-4100 ICA-4100 Fue Gas Before Electrostatic Process Definition(SET) O, O 0 = 55% Fan Secold Control ICA-4100 ICA-4100 Fue Gas Before Electrostatic Process Definition(SET) O, O 0 = 55% Fan Secold Control ICA-4100 ICA-4100 Fue Gas Before Electrostatic Process Definitions, Energy Soving ICA-4100 ICA-4100 ICA-4100 ICA-4100 Fue Gas Before Electrostatic Process Optimizing, Safety Control ICA-4100 ICA-4100			0			IGA-4100			
Flue Gas offer Bag Filter Co.0 0-30%/0-50% Condustation Efficiency Control. LGA.4100 CO. 0-30%/0-50% Process Optimizing. LGA.4100 IGA.4100 Hot Blast Stove Flue Gas 0, 0-30%/0-50% Process Optimizing. Energy Saving. IGA.4100 Intel of Outlet of Induced Draft Fon intel or Outlet of Cas Innk CO 0-100% Gas Recycle Control IGA.4100 IDA.4100 0, 0-5% 0-5% Condensor Operation Nonitoring IGA.4100 IDA.4100 0, 0-5% Safety Control IGA.4100 IGA.4100 IDA.4100 0, 0-5% Condensor Operation Nonitoring IGA.4100 IDA.4100 0, 0-5% Condensor Operation Nonitoring IGA.4100 IDA.4100 0, 0-1									
Co. 0-30% (p-30%) Pumbe a bedrage Moliniting LGA-4100 Hot Blast Stove Flue Gas 0, 0-21% For each of the Gas CA-4100 Hot Blast Stove Flue Gas 0, 0-21% Process Optimizing, Energy Saving, Stately Control LGA-4100 Steel Intel or Outlet of Induced Draft Fon intel Or Outlet		Elue Gas after Bag Eilter							
Hot Blast Stove Flue Gas Co.200		noe Gasanei bagrinei			Furnace Leakage Monitoring				
Hot Blast Stove Flue Gas Colspan="2">Process Optimizing, Energy Soving. LGA-4100 Local Colspan="2">Process Optimizing, Energy Soving. LGA-4100 Local Colspan="2">Converter Gas Recycle Intel or Outlet of Induced Draft Fan O, 0-0105 Converter Gas Recycle Intel or Outlet of Induced Draft Fan O, 0-0105 Converter Gas Recycle Intel or Outlet of Induced Draft Fan O, 0-0105 Converter Gas Recycle Intel or Outlet of Induced Draft Fan O, 0-0105 Converter Gas Recycle Intel Soutlet of Gas Tank O, 0-0105 Colspan="2">Colspan="2" Colspan="2"			-						
Hot Blast Slove Flue Got On CO 0-21% CO Process Optimizing, Energy Saving, Safety Control ICA-4100 (LGA-400 Steel Intel or Outlet of Induced Dath Han the Or Outlet of Gas Tank Co 0-10% Outlet of Cost Tank ICA-4100 Het X Outlet of Gas Tank Co 0-100% Condenser Operation Monitoring GB-2000 Het X Outlet of Gas Tank Co 0-100% Safety Control ICA-4100 Flue Gas Bafore Electrostatic Procipitator (EEP) Co 0-100% Safety Control ICA-4100 Flue Gas Bafore Electrostatic Procipitator (EEP) Co 0-55% Combustion Optimizing, Energy Saving ICA-4100 Flue Gas Bafore Electrostatic Procipitator (EEP) Electrostatic Outlet of Desultrization H, S 0-2000 pm Desultrization Optimizing, Energy Saving ICA-4100 Coke Oven Gas Coke Oven Gas ICA-4100 ICA-4100 ICA-4100 Coke Oven Enargy Electrostatic Process Optimizing, Safety			112		Floor Cont	GRD-2000			
Hot bials slove Fue Gas Co (D=200/0-500)ppm (D=5%) Process Optimizing, Energy Saving, Saving Control LGA-4100 Steel Co 0-1005 Gas Recycle Control LGA-4100 Intel or Outlet of Induced Draft Fan 0, 0-55% Gas Recycle Control LGA-4100 Intel or Outlet of Induced Draft Fan 0, 0-55% Gas Recycle Control LGA-4100 Intel a Outlet of Gas Tank 0, 0-55% LGA-4100 LGA-4100 Intel & Outlet of Gas Tank 0, 0-5% LGA-4100 LGA-4100 Intel & Outlet of Gas Tank 0, 0-5% LGA-4100 LGA-4100 Precess Defect Belchostatic Co 0-100% Safety Control LGA-4100 Intel & Outlet of Gas Tank 0, 0-5% LGA-4100 LGA-4100 Precess Defect Settatic 0, 0-5% LGA-4100 LGA-4100 Intel & Outlet of Gas Tank 0, 0-5% LGA-4100 LGA-4100 Cock Coven Enhost Gas 0, 0-5% LGA-4100 LGA-4100 Cock Coven Enhost Gas 0, <td></td> <td></td> <td></td> <td></td> <td>Flue Gas</td> <td></td>					Flue Gas				
Co (0-2000/0-5000)pm (0-53% Safety Control LGA-4100 Intel or Outlet of Induced Draft Fan Intel or Outlet of Induced Draft Fan O, Co Gas Recycle Condenser Operation Monitoring CR2-2000 Steel Making Gas Tank Safety Control LGA-4100 LGA-4100 Making Intel & Outlet of Induced Draft Fan Intel & Outlet of Cas Tank O, 0-55% Condenser Operation Monitoring CR2-2000 Making Intel & Outlet of Gas Tank O, 0-55% LGA-4100 LGA-4100 File Gas Before Electricitary O, 0-55% LGA-4100 LGA-4100 File Gas Before Electricitary Precipitator (ETP) Safety Control LGA-4100 LGA-4100 LGA-4100 Outlet of Desulfurization H,5 0-2000pm Desulfurization Efficiency Control LGA-4100 Coke Oven Exhaust Gas Co 0, 0-50% Process Optimizing, Safety Control LGA-4100 Coke Oven Exhaust Gas Co 0, 0-2000pm Desulfurization Efficiency Control LGA-4100 Coke Oven Exhaust Gas		Hot Blast Stove Flue Gas	O ₂	0~21%	Process Optimizing Energy Saving	LGA-4100			
Converter Gas Recycle Converter Gas Recycle LGA-4100 Steel Making Intel or Outlet of Induced Draft Fan CO Gas Recycle Control LGA-4100 Making Intel a Outlet of Induced Draft Fan CO Gas Recycle Control LGA-4100 Making Intel a Outlet of Gas Tank CO On 0-100% Fue Gas Before Electrolatic CO On 0-5% LGA-4100 Electric Tar Precipitator (ETP) Safety Control LGA-4100 Fue Gas Before Electrolatic Co On 0-5% LGA-4100 Fue Gas Before Electrolatic Co On 0-5% LGA-4100 Fue Gas Before Electrolatic Colspan="2">Colspan= Gas Tar Precipitator (ETP) Safety Control LGA-4100 Colspan= Gas Tar Precipitator (ETP) Safety Control LGA-4100 Colspan= Gas Tar Precipitator (ETP) Safety Control LGA-4100 <			<u> </u>			LGA-4100			
Steel Intel or Outlet of Induced Draft Fon Intel ar Outlet of Induced Draft Fon Intel a Outlet of Induced Draft Fon Intel a Outlet of Induced Draft Fon Intel a Outlet of Gost Tonk CO 0-10% Condensero Operation Monitoring IGA-4100 IGA-4100 Intel a Outlet of Induced Draft Fon Intel a Outlet of Gost Tonk CO 0-10% Outlet of Gost Tonk IGA-4100 IGA-4100 Intel a Outlet of Gost Tonk CO 0-10% Outlet of Gost Fonk IGA-4100 IGA-4100 Fue Gost Before Electrostatic Precipitator(ESP) CO 0-10% Over SMO-1% Safety Control IGA-4100 Fue Gost Before Electrostatic Precipitator(ESP) O, 0-5% Conbustion Optimizing, Energy Saving IGA-4100 Idea of Desulfurization H,5 0-2000ppm Desulfurization Efficiency Control IGA-4100 Coke Oven Exhaust Gos O, 0-5% Conbustion Optimizing, Energy Saving IGA-4100 Outlet of Desulfurization H,5 0-2000ppm Desulfurization Efficiency Control IGA-4100 Coke Oven Exhaust Gos Co 0-2000ppm Desulfurization Efficiency Control IGA-4100 Coba Co			00	/0~5%		GRD-2000 LGA-4100 LGA-4100 LGA-4100 GRD-2000 LGA-4100 LGA-4100 LGA-4100 LGA-4100			
Steel Making Intel or Outlet of Induced Draft Fon Inde X Outlet of Cas Tank For Cas Tank Safety Control IGA + 100 Intel X Outlet of Cas Tank For Gas Tank Safety Control IGA + 100 IGA + 100 Intel X Outlet of Cas Tank For Gas Tank Safety Control IGA + 100 IGA + 100 Intel X Outlet of Cas Tank For Gas Tank Safety Control IGA + 100 IGA + 100 Intel X Outlet of Cas Tank For Gas Tank Safety Control IGA + 100 IGA + 100 Intel X Outlet of Cas Tank For Gas Tank Safety Control IGA + 100 IGA + 100 Intel X Outlet of Cas Tank For Gas Tank Safety Control IGA + 100 IGA + 100 Intel X Outlet of Cas Tank For Gas Tank Safety Control IGA + 100 IGA + 100 Intel X Outlet of Desulturization For Gas Unitration Outlet of Desulturization CDa O, 0 0-5% Condoc Co O-2005 CDA O, 0 0-5% COC O-2005 IGA + 100 IGA + 100 Intel X Outlet of Desulturization Proces Optimizing. Safety Control IGA + 100 IGA + 100 IGA + 100 Outlet of Desulturization Proces Optimizing. Safety Control IGA + 100 IGA + 100 IGA + 100 Outlet of Sufty Contenser Con O-2005 Proces Opti				Converter Gas F	Recycle				
Steel Inite or Outlie of Induced Drift Fon the or Outlie of Induced Drift Fon Gas Tank Safety Control Condenser Operation Monitoring Gas Tank Safety Control CGA-4100 Making Making Inite X Outlie of Gas Tank Free Cpilitoring SP Co. 0-10% Co. Condenser Operation Monitoring Gas Tank Safety Control LGA-4100 Free Gas Better Bettorstolic Free Cpilitoring SP Co. 0-10% Co. Co. LGA-4100 Free Gas Better Bettorstolic Free Cpilitoring SP Co. 0-5% LGA-4100 LGA-4100 Cocke Oven Electrostolic Free Cpilitoring SP Co. 0-5% Combustion Optimizing. Energy Saving LGA-4100 Cocke Oven Estaust Gas O, 0-5% Combustion Optimizing. Energy Saving LGA-4100 Cocke Oven Estaust Gas O, 0-5% Process Optimizing. Safety Control LGA-4100 Cocke Oven Cas Cocke Oven Cas Cocke Oven Cas LGA-4100 LGA-4100 Cocke Oven Cas Cocke Oven Cas Cocke Oven Cas LGA-4100 LGA-4100 Cold Gas O, 0-5% Process Optimizing. Safety Control LGA-4100 Cold Gas Cocke Oven Cas Co. Cockeove		Inlet or Outlet of Induced Draft Fan	CO	0~100%	Care Da aviala Carataal	LGA-4100			
Steel Inlet of Utilet of Induced Draft Fon H, 0-10% Condense Operation Monitoring GR2-2000 Making Intel & Outlet of Gas Tank Colded of Gas Tank Colded of Gas Tank LGA-4100 LGA-4100 Intel & Outlet of Gas Tank O, 0-5% LGA-4100 LGA-4100 Flue Gas Before Electrostatic Precipitator(ESP) CO 0-10% Safety Control LGA-4100 Flue Gas Before Electrostatic Precipitator(ESP) O, 0-5% Safety Control LGA-4100 Flue Gas Before Electrostatic Precipitator(ESP) O, 0-10%/0-5%/0-1% Safety Control LGA-4100 Coke Oven Exhaust Gas O, 0-10%/0-5%/0-1% Safety Control LGA-4100 Coke Oven Exhaust Gas O, 0-50% Condowing Case LGA-4100 Cold O, 0-50% Condowing Case LGA-4100 LGA-4100 Cold O, 0-55% Condowing Case LGA-4100 LGA-4100 Cold Cold O, 0-55% Process Optimizing, Safety Control LGA-4100 Cold Cold O, </td <td></td> <td>Inlet or Outlet of Induced Draft Fan</td> <td>O₂</td> <td>0~5%/0~21%</td> <td>Gas Recycle Control</td> <td>LGA-4100</td>		Inlet or Outlet of Induced Draft Fan	O ₂	0~5%/0~21%	Gas Recycle Control	LGA-4100			
Steel Gas Tank Safety Control Making Intel & Outlet of Gas Tank Co. O-100% LGA-4100 File & Soullet of Gas Tank O, O-5% LGA-4100 LGA-4100 File Gas Bone Biechostotic O, O-5% LGA-4100 LGA-4100 File Gas Bone Biechostotic O, O-5% LGA-4100 LGA-4100 File Gas Bone Biechostotic O, O-5% Safety Control LGA-4100 File Gas Bone Biechostotic O, O-5%/O-1% Safety Control LGA-4100 Coke Oven Exhaust Gas O, O-5%/O-1% Safety Control LGA-4100 Coke Oven Exhaust Gas O, O-5%/O-1% Desulfurization Efficiency Control LGA-4100 Coke Oven Exhaust Gas O, O-5% Process Optimizing, Safety Control LGA-4100 Coke Oven Exhaust Gas O, O-5% Process Optimizing, Safety Control LGA-4100 Coke Oven Exhaust Gas H2 O-10%/O-2% Process Optimizing, Safety Control LGA-4100 Coke Oven Gas H2 O-10%/O-2% Process Optimiz					Condenser Operation Monitoring				
Making Inlet & Outlet of GasTank CO 0-100% LGA-4100 Inlet & Outlet of GasTank O2 0-55% Safety Control LGA-4100 Precipitator(ESP) CO 0-100% Safety Control LGA-4100 Fue Gas Before Electrostatic Precipitator(ESP) O3 0-5% Combustion Optimizing, Energy Saving LGA-4100 Coke Oven Exhaust Gas O, 0-55%/0-1% Safety Control LGA-4100 Inlet of Desulfurization H,5 0-2000pm Combustion Optimizing, Energy Saving LGA-4100 Outlet of Desulfurization H,5 0-2000pm Desulfurization Efficiency Control LGA-4100 Outlet of Desulfurization H,5 0-2000pm Desulfurization Efficiency Control LGA-4100 COQ Co 0-20% Process Optimizing, Safety Control LGA-4100 CDQ Co 0-20% Process Optimizing, Safety Control LGA-4100 CDQ Co 0-20% Process Optimizing, Safety Control LGA-4100 CDQ Co 0-20% Process Optimizing, Safety Control LGA-4100	Steel			Gas Tank Safety	Control				
Making Hiefs Quite of Gas Tank Precipitator (ESP) O, Color 0-5% Quite of Description (ESP) LGA-4100 File Gas Benes Electrostatic Precipitator (ESP) O, 0-5% Quite of Description Coke Oven Electrostatic O, 0-5% Quite of Description Coke Oven Electrostatic LGA-4100 FIP Outlet Coke Oven Exhaust Gas O, 0-5% Quite of Description Coke Oven Gas LGA-4100 LGA-4100 Inlet of Description CDQ O, 0-10%/0-5% Quite of Description Coke Oven Gas LGA-4100 LGA-4100 Coke Oven Exhaust Gas O, 0-10%/0-5% Quite of Description Coke Oven Gas LGA-4100 LGA-4100 CDQ O, 0-2000ppm Description COC Coce Oven Cas LGA-4100 CDQ O, 0-2000ppm Description COC LGA-4100 LGA-4100 CDQ CO 0-20% Process Optimizing. Safety Control LGA-4100 CDQ CO/CO 0-20%/0-30% Process Optimizing. Safety Control LGA-4100 CDQ CO/CO 0-20%/0-30% Process Optimizing. Reaction Optimizing OM-4100 CDQ CO/CO 0-20%/0-36% Process Optimizing. Reaction Optimizin		Inlet & Outlet of Gas Tank	00			LGA-4100			
Flue Gas Before Electrostatic Precipitator(ESP) CO 0-100% Safety Control LGA-4100 Flue Gas Before Electrostatic Precipitator(ESP) O, 0-5% LGA-4100 LGA-4100 Flue Gas Before Electrostatic Coke Oven Exhaust Gas O, 0-5%/0-1% Safety Control LGA-4100 Inlet of Desulturization H,5 0-50%/0-1% Combustion Optimizing, Energy Saving LGA-4100 Outlet of Desulturization H,5 0-500mg/Nm ² Desulturization Efficiency Control LGA-4100 CDQ CO 0-2005 pm Desulturization Efficiency Control LGA-4100 CDQ CO 0-2006 pm Desulturization Efficiency Control LGA-4100 CDQ CO 0-2007 pm Process Optimizing, Safety Control LGA-4100 CDQ CO 0-2006 pm Process Optimizing, Safety Control LGA-4100 CDQ CO 0-2007 pm Process Optimizing, Safety Control LGA-4100 CDQ CO 0-2007 pm Process Optimizing, Safety Control LGA-4100 CDQ CO 0-30% Process Optimizing, Energy Sav	Making								
Precipitator(ESP) CO 0*10% Subtry Collina LCA-4100 Flue Gas Belore Electrostatic Precipitator(ESP) 0, 0-5% LGA-4100 LGA-4100 EFP Outlet Coke Oven Eshaust Gas 0, 0-5%/0-1% Safety Control LGA-4100 Coke Oven Eshaust Gas 0, 0-10%/0-5%/0-1% Computing Computing Energy Saving LGA-4100 Coke Oven Eshaust Gas 0, 0-2000ppm Desulfurization Optimizing, Energy Saving LGA-4100 Outlet of Desulfurization H,5 0-2000ppm Desulfurization Efficiency Control LGA-4100 CDQ CO 0-95% Process Optimizing, Safety Control LGA-4100 CDQ CO 0-20% Process Optimizing, Safety Control LGA-4100 CDQ CO/CO, 0-20% Process Optimizing, Safety Control LGA-4100 CDQ CO/CO, 0-20% Process Optimizing, Safety Control LGA-4100 CDQ CO/CO, 0-20%/0-20% Process Optimizing, Control LGA-4100 CDQ CO/CO, 0-1% Outle of Sulfur Condenser H,6 O-5			O_2	0 378		20/14100			
File Cas Before Electostatic Precipitator(ESP) O, 0-5% LGA-4100 Electric Tar Precipitator (ETP) Safety Control Safety Control LGA-4100 ETP Outlet O, 0-5%(0-1%) Safety Control LGA-4100 Coke Oven Exhaust Gas O, 0-10%(0-5%(0-1%) Combustion Optimizing, Energy Saving LGA-4100 Icoke Oven Exhaust Gas O, 0-10%(0-5%(0-1%) Combustion Optimizing, Energy Saving LGA-4100 Coke Oven Exhaust Gas O, 0-10%(0-5%(0-1%) Desulfurization Efficiency Control LGA-4100 Outlet of Desulfurization H,5 0-2000pDm Desulfurizing, Safety Control LGA-4100 CDQ Co, 0-20% Process Optimizing, Safety Control LGA-4100 CDQ Co, 0-20%(0-3%) Process Optimizing, Safety Control LGA-4100 CDQ Co, 0-20%(0-3%) Process Optimizing, Safety Control LGA-4100 CDQ Co, 0-10%(0-2%) GRD-2000 GRD-2000 CDQ Cold Gas H,5 0-11%(0-2%) GRD-2000 Outlet of Catalylic Reactor <t< td=""><td></td><td></td><td>CO</td><td>0~100%</td><td>Safety Control</td><td>LGA-4100</td></t<>			CO	0~100%	Safety Control	LGA-4100			
Precipitator(ESP) O.5 U-3% LCA-4100 Electric Tar Precipitator (ETP) Safety Control LGA-4100 Coke Oven Exhaust Gas O, 0-5%/0-1% Safety Control LGA-4100 Coke Oven Exhaust Gas O, 0-10%/0-5%/0-1% Combustion Optimizing, Energy Saving LGA-4100 Inlet of Desulfurization H,5 0-2000ppm Desulfurization Efficiency Control LGA-4100 CDQ Colspan="2">Cole Oven Gas CDQ CO 0-5000 Desulfurization Efficiency Control LGA-4100 CDQ CO 0-20% Process Optimizing, Safety Control LGA-4100 CDQ CO/CO 0-20% Cold Control Cold Control Cold Control Cold Control									
Coking Electric Tar Precipitator (ETP) Safety Control ETP Outlet O, 0-5%/0-1% Control LGA-4100 Coke Oven Exhaust Gas O, 0-10%/0-5%/0-1% Control LGA-4100 Outlet of Desulfurization H,S 0-2000pm Desulfurization Efficiency Control LGA-4100 Outlet of Desulfurization H,S 0-2000pm Desulfurization Efficiency Control LGA-4100 CDQ CO 0-5% Clouding Gas LGA-4100 LGA-4100 CDQ CO 0-20% Process Optimizing. Safety Control LGA-4100 CDQ CO 0-10%/0-2% Process Optimizing. Energy Saving LGA-4100 CDQ H,S 0-10%/0-2% Desultorization Opt			O ₂	0~5%		LGA-4100			
EFP Outlet O, Coke Oven Exhaust Gas O, O, 0-15%/0-1% O-10%/0-5%/0-1% Sofety Control Combustion Optimizing. Energy Saving LGA-4100 Intel of Desulfurization H,S 0-2000ppm Desulfurization Efficiency Control LGA-4100 Outlet of Desulfurization H,S 0-500m g/Nm ¹ Desulfurization Efficiency Control LGA-4100 CDQ CDQ 0, 0-5% Desulfurization Efficiency Control LGA-4100 CDQ CO 0-20% Process Optimizing. Safety Control LGA-4100 CDQ CO/CO 0-20% Process Optimizing. Energy Saving LGA-4100 CDQ CO/CO 0-100% H2S/Air Proportioning. Reaction Optimizing CA-4100 CDQ Cotalaytic Reactor H,S 0-100% H2S/Air Proportioning. Reaction Optimizing LGA-4100 Outlet of SaturG			Fle	ctric Tar Precipitator (F	TP) Safety Control				
Coke Oven Exhaust Gas O ₂ 0-10%/0-5%/0-1% Combustion Optimizing, Energy Saving LGA-4100 Inlet of Desulfurization H,S 0-2000ppm Desulfurization Efficiency Control LGA-4100 Outlet of Desulfurization H,S 0-2000ppm Desulfurization Efficiency Control LGA-4100 CDQ O, 0-5% CDQ CDQ LGA-4100 CDQ CO 0-20% Process Optimizing, Safety Control LGA-4100 CDQ CO 0-20% Process Optimizing, Reaction Optimizing CA-4100 CDQ Cold Gas H,S 0-10%/0-20% H2S:N2 Proportioning, Reaction Optimizing CA-4100 Cold Gas H,S 0-11%/0-2% H2S:N2 Proportioning, Reaction Optimizing CA-4100 Outlet of Sulfur Condenser H,S 0-11%/0-2% Crubustind Nonitoring <td></td> <td>ETP Outlot</td> <td></td> <td>•</td> <td></td> <td>1 CA 4100</td>		ETP Outlot		•		1 CA 4100			
Coke Oven Gas Coke Oven Gas Inlet of Desulfurization H,S 0-2000ppm Desulfurization Efficiency Control LGA-4100 CDQ CDQ Circulating Gas CDQ Circulating Gas GA-4100 LGA-4100 CDQ CO 0-53% Process Optimizing, Safety Control LGA-4100 CDQ CO 0-20% Process Optimizing, Safety Control LGA-4100 CDQ CO 0-20% Process Optimizing, Safety Control LGA-4100 CDQ CO/CO 0-10%/0-20% H25/AF Proportioning, Reaction Optimizing D/A-4100 Coll of Catalytic Reactor H,S 0-10% H25/AF Proportioning, Reaction Optimizing D/A-4100 Outlet of Suffur Condenser H, 0-5% Oxidization Control GRD-2000 Outlet of Incinerator O, 0-20% <									
Inlet of Desulfurization H,S 0-2000ppm Desulfurization Efficiency Control LGA-4100 LGA-45001C CDQ Outlet of Desulfurization H,S 0-500mg/Nm ³ Desulfurization Efficiency Control LGA-4100 CDQ O, 0-5% Frequencies LGA-4100 LGA-4100 CDQ CO 0-20% Frequencies LGA-4100 LGA-4100 CDQ CO 0-20% Process Optimizing. Safety Control LGA-4100 LGA-4100 CDQ CO/CO 0-20%/0-30% Process Optimizing. Safety Control LGA-4100 CDQ CO/CO 0-20%/0-20% GRD-2000 GRD-2000 CDQ CO/CO 0-10% H25:Air Proportioning. Reaction Optimizing OMA-2000 Outlet of Sulfur Condenser H,S 0-10% H25:Size Ratio. Reaction Optimizing OMA-2000 Outlet of Sulfur Condenser H,S 0-1% Scrubbing Efficiency Monitoring LGA-4100 Outlet of Sulfur Condenser H,S 0-1% Scrubbing Efficiency Monitoring LGA-4100 In-situ on Funace O, 0-21% <td></td> <td>Coke Overrexhoust Gus</td> <td>O_2</td> <td></td> <td></td> <td>LGA-4100</td>		Coke Overrexhoust Gus	O_2			LGA-4100			
Outlet of Desulfurization H ₂ S 0-500mg/Nm ² Desulfurization LGA-4500IC CDQ O ₂ O ₂ CO 0-5% LGA-4100 CDQ CO 0-20% Process Optimizing. Safety Control LGA-4100 CDQ CO 0-20% Process Optimizing. Safety Control LGA-4100 CDQ CO/CO ₂ 0-20%/O-30% Process Optimizing. Safety Control LGA-4100 CDQ CO/CO ₂ 0-20%/O-30% Process Optimizing. Safety Control LGA-4100 CDQ CO/CO ₂ 0-20%/O-30% Process Optimizing. Safety Control LGA-4100 Colulate of Catalytic Reactor H ₂ S 0-100% H2S:Air Proportioning. Reaction Optimizing LGA-4100 Outlet of Sulfur Condenser H ₂ S 0-13%/O-2% Oxidization Control GRD-2000 Outlet of Sulfur Condenser H ₃ S 0-1% Combustion Optimizing. Energy Saving LGA-4100 Outlet of Sulfur Condenser H ₃ S 0-1% Combustion Optimizing. Energy Saving LGA-4100 In-situ on Furnace O ₂ 0-21% Burning Loss Control					IGdS				
Coking CDQ Circulating Gas Coking CDQ O_3 0-5% Coking CDQ CO 0-20% Process Optimizing, Safety Control LGA-4100 Coking CDQ CO Acid Gas H-5 0-10%/0-20% Claus Sulfur Recovery GRD-2000 Acid Gas H-5 0-10%/0-2% Outlet of Catalytic Reactor H-5 0-10%/0-2% Outlet of Sulfur Condenser H-5 0-1%/0-2% Outlet of Sulfur Condenser H-5 0-1%/0-2% Outlet of Sulfur Condenser H-5 0-1% Outlet of Incinerator O-0 0-5% Combustion Optimizing, Energy Saving LGA-4100 Charristu on Furnace Co 0-21% Burning Loss Control LGA-4100 Calorific Value Cox On 2-6% Process Optimizing, Energy Saving LGA-4100 Calorific Value Cox On 2-6% Process Optimizing, Energy Saving LGA-4100 Calorific Value Cox On 2-6% Fuel Gas Proportioning, Cost Accounting LGA-2000			-		Desulfurization Efficiency Control				
Coking CDQ CDQ CO CO O-5% CO Process Optimizing, Safety Control LGA-4100 LGA-4100 Coking CO CDQ CO/CO2 0-20%/0-30% Process Optimizing, Safety Control LGA-4100 Coking CDQ CO/CO2 0-20%/0-20% Process Optimizing, Safety Control LGA-4100 Coking CDQ CO/CO2 0-20%/0-20% Process Optimizing, Safety Control LGA-4100 Coking CdG Cas H,S 0-10%/0-20% H2S:Aif Proportioning, Reaction Optimizing CA-4100 Coking CdG Cas H,S 0-10% H2S:Aif Proportioning, Reaction Optimizing CA-4100 Coking Cdas Scrubber H,S 0-10% Scrubbing Efficiency Monitoring LGA-4100 Outlet of Sulfur Condenser H,S 0-1% Scrubbing Efficiency Monitoring LGA-4100 Outlet of Sulfur Condenser H,S 0-1% Scrubbing Efficiency Monitoring LGA-4100 Outlet of Incinerator O, 0-5% Combustion Optimizing, Energy Saving LGA-4100 In-situ on Furnace O_2 0-21% Burning Loss Cont		Outlet of Desulturization	H ₂ S	-	·	LGA-4500IC			
Coking CDQ CO 0-20% Process Optimizing, Safety Control LGA-4100 COQ CO/CO 0-20%/0-20% Process Optimizing, Safety Control LGA-4100 COQ CO/CO 0-20%/0-20% Process Optimizing, Safety Control LGA-4100 CoQ CO/CO 0-10%/0-20% Process Optimizing, Safety Control LGA-4100 Acid Gas H,5 0-100% H2S:Air Proportioning, Reaction Optimizing DAA-2000 Outlet of Catalytic Reactor H,5 0-100% H2S:Air Proportioning, Reaction Optimizing DAA-2000 Outlet of Sulfur Condenser H, 0-5% Oxidization Control GRD-2000 Outlet of Incinerator O, 0-1% Scrubbing Efficiency Monitoring LGA-4100 Outlet of Incinerator O, 0-0-5% Combustion Optimizing, Energy Saving LGA-4100 In-situ on Furnace O, 0-21% Burning Loss Control LGA-4100 In-situ on Furnace CO 0-21% Process Optimizing, Energy Saving LGA-4100 Colorific Value Nixed Gas CH, 0-60%					ng Gas				
Coking CDQ CDQ CO/CO, CDQ CO/CO, CO/CO, CDQ O-30% CO/CO, CDQ Process Optimizing, Safety Control LGA-4100 LGA-4100 Value Colo CO/CO, CDQ 0-20%/O-30% Process Optimizing, Safety Control LGA-4100 Colo CDQ 0-10%/O-20% GRD-2000 GRD-2000 Value H,S 0-10%/O-2% H2S:SO2 Ratio, Reaction Optimizing DA-400 Outlet of Sulfur Condenser H,S 0-1%/O-2% M2S:SO2 Ratio, Reaction Optimizing GRD-2000 Outlet of Incinerator O, 0-1% Scrubbing Efficiency Monitoring LGA-4100 Outlet of Incinerator O, 0-5% Oxidization Control GRD-2000 Outlet of Incinerator O, 0-5% Combustion Optimizing, Energy Saving LGA-4100 Outlet of Incinerator O, 0-21% Burning Loss Control LGA-4100 In-situ on Furnace O, 0-21% Process Optimizing, Energy Saving LGA-4100 Calorific Cover Gas CO 0-40% Process Optimizing, Energy Saving LGA-4100 Coke Oven Gas		CDQ	O ₂	0~5%		LGA-4100			
Coking CDQ CO/CO2 0-20%/0-30% IcA-4100 CQ CQ 0-10%/0-20% GRD-2000 GRD-2000 Acid Gas H,s 0-10% H2S:Air Proportioning, Reaction Optimizing IcA-4100 Outlet of Catalytic Reactor H,s 0-10% H2S:Air Proportioning, Reaction Optimizing IcA-4100 Outlet of Catalytic Reactor H,s 0-15% Oxidization Control GRD-2000 Outlet of Sulfur Condenser H,s 0-5% Oxidization Control GRD-2000 Outlet of Sulfur Condenser H,s 0-5% Oxidization Control GRD-2000 Outlet of Isulfur Condenser H,s 0-5% Oxidization Control GRD-2000 Outlet of Isulfur Condenser H,s 0-1% Scrubbing Efficiency Monitoring IcA-4100 Outlet of Isulfur Condenser H,s 0-1% Scrubbing Efficiency Monitoring IcA-4100 Outlet of Isulfur Condenser H,s 0-1% Burning Los Control IcA-4100 In-situ on Furnace Co 0-2%/0-5% Process Optimizing, Energy Saving IcA-4100						LGA-4100			
Coking CDQ H₂ 0~10%/0~20% GRD-2000					Process Optimizing, Safety Control	LGA-4100			
Claus Sulfur Recovery Acid Gas Outlet of Catalytic Reactor H,S H,S (0,C) 0-100% H2S:SO2 Ratio, Reaction Optimizing LGA-4100 Outlet of Sulfur Condenser H,S (0,C) Outlet of Sulfur Condenser H,S (0,C) 0-1% Oxidization Control GRD-2000 Outlet of Sulfur Condenser H,S (0,C) 0-5% Oxidization Control GRD-2000 Outlet of Iail Gas Scrubber H,S (0,C) 0-5% Combustion Optimizing, Energy Saving LGA-4100 Outlet of Incinerator Chimney Soc. 0-1% Scrubbing Efficiency Monitoring LGA-4100 Hot Rolling in-situ on Furnace O 0-1% Burning Loss Control LGA-4100 Calorific Converter Gas/Blast Furnace Gas CO 0-21% Burning Loss Control LGA-4100 Converter Gas/Blast Furnace Gas CO 0-20% Process Optimizing, Energy Saving LGA-4100 Coke Oven Gas CH, 0-60% Process Optimizing, Cost Accounting LGA-C300 H,b 0-60% Fuel Gas Proportioning, Cost Accounting LGA-C300 LGA-C300 Mixed Gas CH, 0-10% Process Optimizing, Safety Control Specificati	C 1 · ·		CO/CO ₂	0~20%/0~30%		LGA-4100			
Claus Sulfur Recovery Acid Gas Outlet of Catalytic Reactor H,S H,S (0,C) 0-100% H2S:SO2 Ratio, Reaction Optimizing LGA-4100 Outlet of Sulfur Condenser H,S (0,C) Outlet of Sulfur Condenser H,S (0,C) 0-1% Oxidization Control GRD-2000 Outlet of Sulfur Condenser H,S (0,C) 0-5% Oxidization Control GRD-2000 Outlet of Iail Gas Scrubber H,S (0,C) 0-5% Combustion Optimizing, Energy Saving LGA-4100 Outlet of Incinerator Chimney Soc. 0-1% Scrubbing Efficiency Monitoring LGA-4100 Hot Rolling in-situ on Furnace O 0-1% Burning Loss Control LGA-4100 Calorific Converter Gas/Blast Furnace Gas CO 0-21% Burning Loss Control LGA-4100 Converter Gas/Blast Furnace Gas CO 0-20% Process Optimizing, Energy Saving LGA-4100 Coke Oven Gas CH, 0-60% Process Optimizing, Cost Accounting LGA-C300 H,b 0-60% Fuel Gas Proportioning, Cost Accounting LGA-C300 LGA-C300 Mixed Gas CH, 0-10% Process Optimizing, Safety Control Specificati	Coking	CDQ	H ₂			GRD-2000			
Outlet of Catalytic Reactor H ₃ S/SO ₂ 0-1%/O-2% H23:SO2 Ratio. Reaction Optimizing OMA-2000 Outlet of Sulfur Condenser H ₂ 0-5% Oxidization Control GRD-2000 Outlet of Sulfur Condenser H ₂ 0-5% Oxidization Control GRD-2000 Outlet of Incinerator O ₂ 0-5% Combustion Optimizing, Energy Saving LGA-4100 Outlet of Incinerator O ₂ 0-200/0~1000)ppm Emission Monitoring CEMS-2000 Hot in-situ on Furnace O ₂ 0-21% Burning Loss Control LGA-4100 In-situ on Furnace O ₂ 0-21% Process Optimizing, Energy Saving LGA-4100 Converter Gas/Blast Furnace Gas CO 0-20% O-40% LGA-4100 Coke Oven Gas CH ₄ 0-60% LGA-200% LGA-2000 Wixed Gas CO 0-40% Fuel Gas Proportioning, Cost Accounting LGA-C300 H ₂ 0-60% H ₂ 0-40% LGA-2000 LGA-C300 Value Mixed Gas CO 0-50% Process Optimizing, Safety Co				Claus Sulfur Re	covery				
Outlet of Catalytic Reactor H ₃ S/SO ₂ 0-1%/0-2% H2S:SO2 Ratio, Reaction Optimizing OMA-2000 Claus Exhaust Gas Cleaning Outlet of Sulfur Condenser H ₂ 0-5% Oxidization Control GRD-2000 Outlet of Tail Gas Scrubber H ₂ 0-1% Scrubbing Efficiency Monitoring LGA-4100 Outlet of Incinerator O ₂ 0-5% Combustion Optimizing, Energy Saving LGA-4100 Chimney SO ₂ (0-2000/0~1000)ppm Emission Monitoring CEMS-2000 Hot in-situ on Furnace O ₂ 0-21% Burning Loss Control LGA-4100 In-situ on Furnace O ₂ 0-20% Process Optimizing, Energy Saving LGA-4100 Converter Gas/Blast Furnace Gas CO 0-20% 0-20% LGA-4100 Coke Oven Gas CH ₄ 0~60% LGA-20% LGA-2000 Wixed Gas CH ₄ 0~60% Fuel Gas Proportioning, Cost Accounting LGA-C300 H ₂ 0-40% H ₂ 0~10% LGA-C300 LGA-C300 Water Gas CO 0-5% 0-10% LGA-C300 LGA-C300			H ₂ S	0-100%	H2S:Air Proportioning, Reaction Optimizing	LGA-4100			
Claus Exhaust Gas Cleaning Outlet of Sulfur Condenser H2 0-5% Oxidization Control GRD-2000 Outlet of Tail Gas Scrubber H3 0-1% Scrubbing Efficiency Monitoring LGA-4100 Outlet of Incinerator 02 0-5% Combustion Optimizing, Energy Saving LGA-4100 Chimney SO2 (0~2000/0~1000)ppm Emission Monitoring CEMS-2000 Hot Reheating Furnace Burning Loss Control LGA-4100 in-situ on Furnace Co 0~21% Burning Loss Control LGA-4100 in-situ on Furnace CO 0~21% Burning Loss Control LGA-4100 Converter Gas/Blast Furnace Gas CO 0~20% Coke Oven Gas LGA-4100 Co 0~20% Coke Oven Gas CO 0~60% LGA-200 Hixed Gas CH4 0~60% Fuel Gas Proportioning, Cost Accounting LGA-C300 Blast Furnace Gas CO 0~0~5%/0~1% Process Optimizing, Safety Control Specifications Others Industrial boilers/calciners CO 0~5%/0~1% Process Optimizing, Safety Control Specifications <td></td> <td>Outlet of Catalytic Reactor</td> <td></td> <td></td> <td></td> <td></td>		Outlet of Catalytic Reactor							
Outlet of Sulfur CondenserH1 20~5%Oxidization ControlGRD-2000Outlet of Tail Gas ScrubberH2S0~1%Scrubbing Efficiency MonitoringLGA-4100Outlet of IncineratorO20~5%Combustion Optimizing, Energy SavingLGA-4100ChimeySO2(0~2000/0~1000)ppmEmission MonitoringCEMS-2000Hotin-situ on FurnaceO20~21%Burning Loss ControlLGA-4100in-situ on FurnaceCO0~2%/0~5%Process Optimizing, Energy SavingLGA-4100in-situ on FurnaceCO0~2%/0~5%Process Optimizing, Energy SavingLGA-4100Converter Gas/Blast Furnace GasCO0~60%LGA-4100LGA-4100Converter Gas/Blast Furnace GasCO0~60%LGA-200%LGA-2000ValueCo0~40%Fuel Gas Proportioning, Cost AccountingLGA-C300Mixed GasCO0~5%0LGA-C300LGA-C300H2CO0~5%/0~1%Process Optimizing, Safety ControlSpecificationsOthersIndustrial boilers/calcinersCO0~5%/0~1%Process Optimizing, Safety ControlSpecifications									
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Outlet of Sulfur Condenser	H.		5	GRD-2000			
Outlet of Incinerator ChimneyO20-5%Combustion Optimizing, Energy Saving Emission MonitoringLGA-4100 CEMS-2000Hot Rollingin-situ on FurnaceO20-21%Burning Loss ControlLGA-4100in-situ on FurnaceO20-21%Burning Loss ControlLGA-4100in-situ on FurnaceCO0-2%/0-5%Process Optimizing, Energy SavingLGA-4100CalorificConverter Gas/Blast Furnace GasCO0-2%/0-5%Process Optimizing, Energy SavingLGA-4100CalorificConverter Gas/Blast Furnace GasCO0-20%LGA-4100LGA-4100CalorificCoke Oven GasCO0-20%LGA-60%LGA-60%H20-60%H20-40%LGA-C300LGA-C300Wixed GasCO0-50%H20-40%LGA-C300Blast Furnace GasCO0-55%/0-1%Process Optimizing, Safety ControlSpecificationsOthersIndustrial boilers/calcinersCO0-55%/0-1%Process Optimizing, Safety ControlSpecifications									
Chimney SO2 (0~2000/0~1000)ppm Emission Monitoring CEMS-2000 Hot Rolling in-situ on Furnace O2 O~21% Burning Loss Control LGA-4100 in-situ on Furnace CO O~21% Process Optimizing, Energy Saving LGA-4100 Calorific Converter Gas/Blast Furnace Gas CO O~60% LGA-4100 Calorific Coke Oven Gas CO O~60% LGA-20% Kated Gas CH4 O~60% LGA-20% LGA-2000 Mixed Gas CO O~40% Fuel Gas Proportioning, Cost Accounting LGA-C300 Blast Furnace Gas CO O~50% Process Optimizing, Safety Control Specifications Others Industrial boilers/calciners CO O~55%/0~1% Process Optimizing, Safety Control Specifications									
Reheating Furnace Rolling in-situ on Furnace O2 0~21% Burning Loss Control LGA-4100 Rolling in-situ on Furnace CO 0~2%/0~5% Process Optimizing, Energy Saving LGA-4100 Calorific Converter Gas/Blast Furnace Gas CO 0~20% Co 0~20% Converter Gas/Blast Furnace Gas CO 0~60% CO 0~20% LGA-4100 Calorific Converter Gas/Blast Furnace Gas CO 0~60% LGA-4100 LGA-4100 Mixed Gas CH4 0~60% H2 0~40% Evel Gas Proportioning, Cost Accounting LGA-C300 Blast Furnace Gas CO 0~40% Process Optimizing, Safety Control Specifications Others Industrial boilers/calciners CO 0~5%/0~1% Process Optimizing, Safety Control Specifications									
Notin-situ on Furnace O_2 $0-21\%$ Burning Loss ControlLGA-4100Rollingin-situ on FurnaceCO $0-2\%/0-5\%$ Process Optimizing, Energy SavingLGA-4100CalorificConverter Gas/Blast Furnace GasCO $0-60\%$ LGA-4100Converter Gas/Blast Furnace GasCO $0-60\%$ LGA-4100Converter GasCO $0-60\%$ LGA-4100Mixed GasCH_4 $0-60\%$ LGA-200Mixed GasCO $0-40\%$ Fuel Gas Proportioning, Cost AccountingBlast Furnace GasCO $0-50\%$ LGA-200OthersIndustrial boilers/calciners O_2 $0-55\%/0-1\%$ Process Optimizing, Safety ControlSpecificationsCO $0-55\%/0-1\%$ Process Optimizing, Safety ControlSpecifications	Hat		0.0.2			02000			
Kolling in-situ on Furnace CO 0~2%/0~5% Process Optimizing, Energy Saving LGA-4100 Calorific Value Analysis Converter Gas/Blast Furnace Gas CO 0~60% LGA-4100 Converter Gas/Blast Furnace Gas CO 0~20% LGA-4100 Converter Gas/Blast Furnace Gas CO 0~20% LGA-60% Coke Oven Gas CH4 0~60% LGA-200 Mixed Gas CO 0~40% Fuel Gas Proportioning, Cost Accounting LGA-C300 Mixed Gas CO 0~40% CO 0~50% LGA-C300 Blast Furnace Gas CO 0~50% LGA-C300 LGA-C300 H2 0~10% O CO 0~50% LGA-C300 H2 0~10% O Specifications Specifications		in situ on Furnanar	0	3		104 (100			
Calorific Converter Gas/Blast Furnace Gas CO 0~60% LGA-4100 Calorific Converter Gas/Blast Furnace Gas CO 0~60% LGA-4100 LGA-4100 Calorific Coke Oven Gas CH ₄ 0~60% LGA-20% LGA-C300 Value Mixed Gas CH ₄ 0~60% LGA-20% LGA-C300 Mixed Gas CH ₄ 0~60% H ₂ 0~40% LGA-C300 Blast Furnace Gas CO 0~50% H ₂ 0~40% LGA-C300 Others Industrial boilers/calciners CO 0~5%/0~1% Process Optimizing, Safety Control Specifications	Rolling				-				
Calorific Converter Gas/Blast Furnace Gas CO 0~60% LGA-4100 Calorific Coke Oven Gas CH ₄ 0~60% LGA-20% LGA-200 Value Mixed Gas CO 0~40% Fuel Gas Proportioning, Cost Accounting LGA-C300 Mixed Gas CH ₄ 0~60% H ₂ 0~40% LGA-C300 LGA-C300 Blast Furnace Gas CO 0~50% H ₂ 0~40% LGA-C300 LGA-C300 Others Industrial boilers/calciners CO 0~55%/0~1% Process Optimizing, Safety Control Specifications	g	In-silu on Furnace	CO			LGA-4100			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Convertex Cas/Direct Frances C	<u> </u>		-11a1y515	104 1100			
Calorific Value Coke Oven Gas CH ₄ 0~60% LGA-C300 Mixed Gas CO 0~40% Fuel Gas Proportioning, Cost Accounting LGA-C300 Mixed Gas CH ₄ 0~60% H ₂ 0~40% LGA-C300 Blast Furnace Gas CO 0~50% H ₂ 0~10% LGA-C300 Others Industrial boilers/calciners CO 0~55%/0~1% Process Optimizing, Safety Control Specifications		Converter Gas/Blast Furnace Gas				LGA-4100			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $									
Value $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ Fuel Gas Proportioning, Cost AccountingLGA-C300Mixed Gas $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ Blast Furnace Gas $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ OthersIndustrial boilers/calciners $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$	Colorifie	Coke Oven Gas							
Mixed Gas CH ₄ 0~60% LGA-C300 H ₂ 0~40% CO 0~50% LGA-C300 Blast Furnace Gas CO 0~10% LGA-C300 LGA-C300 Others Industrial boilers/calciners CO 0~5%/0~1% Process Optimizing, Safety Control Specifications									
$\begin{array}{ c c c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Value				ruel Gas Proportioning, Cost Accounting				
Blast Furnace Gas CO 0~50% LGA-C300 Others Industrial boilers/calciners 02 0~5%/0~1% Process Optimizing, Safety Control Specifications		Mixed Gas				LGA-C300			
Blast Furnace Gas H₂ 0~10% LGA-C300 Others Industrial boilers/calciners O₂ 0~5%/0~1% Process Optimizing, Safety Control Specifications									
Others Industrial boilers/calciners OQ 0~5%/0~1% Process Optimizing, Safety Control Specifications		Blast Europe Car	CO	0~50%		1 GA C200			
Others Industrial boilers/calciners O2 0~5%/0~1% Process Optimizing, Safety Control Specifications		Blast Futflace Gas	H ₂	0~10%		LGA-C300			
Others Industrial boilers/calciners 0~5%/0~1% Process Optimizing, Safety Control Specifications			H ₂ 0~10%						
/(0~5000/0~2000)ppm	Others	Industrial boilers/calciners			Process Optimizing, Safety Control	Specifications			
			00	/(0~5000/0~2000)ppm					

Oil&Gas

Industry	Application	Measuring Position	Objects to measure	Instruments
	FCC	Outlet of Regenerator	CO,CO ₂ , O ₂	LGA-4100
	Hydrogen Production	Process gases	CO, CO_2, C_2H_4	LGA-4500
Oil		Feedstock gas	H ₂ S	OMA-3120/LGA-4500
• · ·		Outlet of Claus Reactor	H ₂ S/SO ₂	OMA-3510
Refining	Sulfurrecovery	Outlet of Condenser	H ₂	TAI-2020
		Exhaust gas incineration	SO ₂	OMA-3110
		Emission gas	SO ₂ ,H ₂ S,O ₂ ,particulate, velocity	CEMS-2000,LGA-4100
	Ethylene Cracking	Outlet of cracking furnace	CO, Co_2, C_2H_2	LGA-4100/4500, PGC
	PTA	Process gases	O ₂ , CO, CO ₂ , H ₂ O, CH ₃ COOH	LGA-4100/4500, SUPNIR
	EO/EG	Process gases	O ₂ , CO ₂ , CH ₄ , C ₂ H ₆ , C ₂ H ₄ , EO, Ar, N ₂	MGA, LGA-4500
Petrochemical	PE	Process gases	$CO, CO_2, C_2H_4, C_2H_6, O_2$, trace H_2O	LGA-4500, TAI-2000/880
retroenenneur	PP	Process gases	CO, CO ₂ , C ₃ H ₄ , C ₃ H ₈ , H ₂ , C ₄ H ₈ , C ₄ H ₉ CL, Trace H ₂ O, O ₂	LGA-4500, TAI-2000/8800/3020T
	PS	Process gases	O ₂ , CO/CO ₂ , Trace H ₂ O in Benzene	LGA-4500
		Feedstock C2H4	H,O, O, in C,H,	LGA-4500
	PVC (VCM)	Feedstock Cl2	O ₂ , trace H ₂ O in Cl ₂	LGA-4500
		EDC gas	Cl ₂ , Trace H ₂ O in EDC	OMA-3010, LGA-4500
		Recycle gas	0 ₂ , CO, CO ₂ , C ₂ H ₄	LGA4500/4100
		HCLstripping	O ₂ in HCL	LGA-4500
Chemical	Methanol Ammonia Synthesis	Process gases	O ₂ , CO, CO ₂ , NH ₃	LGA-4500/4100
	Urea Synthesis		NH ₃ , Co ₂	LGA-4500
	Hydrogen Peroxide	Oxidation	O ₂	LGA-4100
	Sulfuric Acid	Feedstock gas	SO ₂	OMA-3110
DeNOx	SCR of	utlet	NH ₃ slip	LGA-4500/4100
DeNOX	Emissio	onstack	NOx, SO ₂ , O ₂ , CO, CO ₂	CEMS-2000
	Extraction	Rawgas	High H ₂ S, CO ₂	LGA-4500PA (portable)
	Purification	Acid gas removing	High H ₂ S	LGA-4500
		Sulfur recovery exhaust gas	H ₂ S/SO ₂	OMA-3510
Natural Gas		Exhaust gas treatment	SO ₂	OMA-3110
		Purified gas	Trace H ₂ S, H ₂ O	LGA-4500IC
	Transportation	Pipelines and stations	Trace H ₂ S, H ₂ O	LGA-4500IC
	Compression	CNG	Trace H ₂ S, H ₂ O	LGA-4500IC

Other Applications

Industry	Measuring Position	Gas Measured	Measuring Purpose	Instrument
	Incinerator	0 ₂ , CO	Incinerator Combustion Control	LGA-4100
	Outlet of Acid Scrubber	HCL, HF	Input Control of Calcium Hydroxide	LGA-4100
Vaste	Outlet of Bag House Filter	HCL, HF	Filter Efficiency Control	LGA-4100
ncineration	Outlet of SCR Reactor	NH ₃	NH ₃ Injection Control and NH ₃ Slip Detection	LGA-4100
lemenation		HCL+H ₂ O	Dry HCL Exhaust	LGA-4100
	Stack Inlet	SO ₂ , NOx, O ₂ , CO, Co ₂ , Dust, TPF	Emission Monitoring	CEMS-2000B
	Inlet of SCR Reactor	NOX, O ₂	Eluc ana Manitarina	CEMS-2000B
	Outlet of SCR Reactor	NOx, O ₂ , Dust, TPF, Humidity	Flue gas Monitoring	CEMS-2000B
Thermal Power	Outlet of SCR Reactor	NH ₃	NH ₃ Injection Control and NH ₃ Slip Detection	LGA-4100
	Inlet of Desulfurization Reactor	SO ₂ , O ₂ , Velocity, Humidity	Desulfurization Efficiency Control	CEMS-2000B
	Outlet of Desulfurization Reactor	SO ₂ , NOx, O ₂ , Dust, TPF, Humidity	Desulturization Efficiency Control	CEMS-2000B
	Chimney	SO ₂ , NOx, O ₂ , Dust, TPF, Humidity	Emission Monitoring	CEMS-2000B
	Inlet of Coal Mill	0 _{2′} CO		LGA-4100
	Outlet of Coal Mill	0 _{2'} CO	Safety Control	LGA-4500
	Outlet of Bag Filter	0 ₂ , CO	salely Connor	LGA-4100
	Coal Bunk	O _{2'} CO		LGA-4500
Cement	Kiln Outlet	O ₂ , CO, CO ₂	Combustion Optimizing	LGA-4100
	Outlet of Preheater Tower	O ₂ , CO, CO ₂	Process Optimizing	LGA-4100
	Inlet of Coal Mill	O _{2'} CO		LGA-4100
	Outlet of Coal Mill	O ₂ , CO	Cafaba Cambral	LGA-4500
	Outlet of Bag Filter	0 ₂ , CO	Safety Control	LGA-4100
	Coal Bunk	0,, CO		LGA-4500