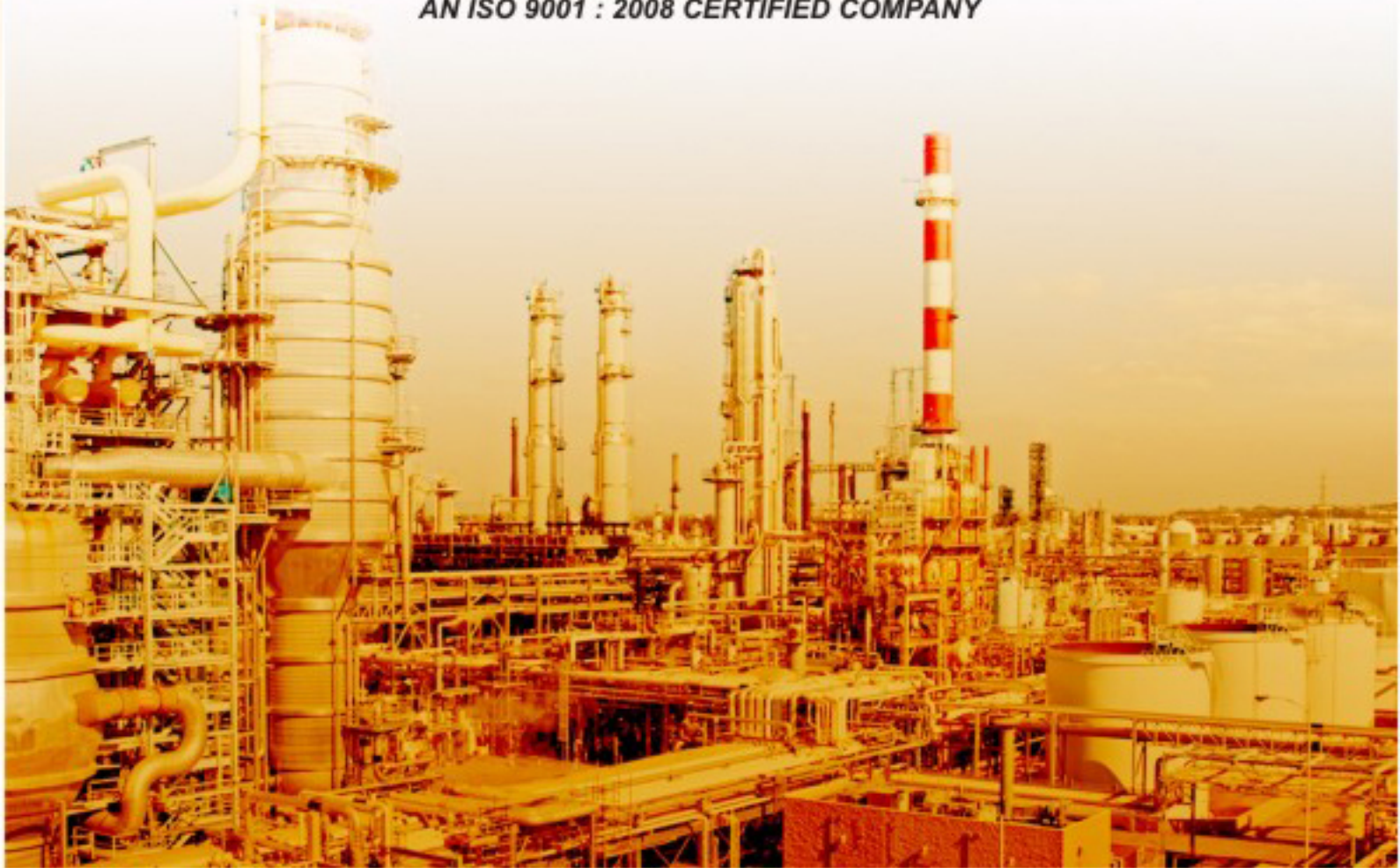




# UNIVERSAL WELDING & ENGINEERING COMPANY

AN ISO 9001 : 2008 CERTIFIED COMPANY



- PURE GASES
- PURE BULK GASES
- REFRIGERATION GASES
- RARE HYDROCARBON GASES & LIQUIDS
- GAS HANDLING SYSTEMS
- GAS REGULATORS
- CALIBRATION MIXTURES  
UHP GRADE MIXTURES  
LIQUID MIXTURES
- ANALYTICAL SERVICES  
ANALYSIS & CERTIFICATION

## ABOUT US

Universal Welding & Engineering Company started operations in the gas Industry in 1962 with a Indian Oxygen (Now Known as BOC India Ltd) dealership. Back then there were mainly two products Oxygen & Acetylene gas. Since then we have added over 20 products to our Inventory and keep expanding everyday.

We have a strong and robust infrastructure laid in place for the distribution of these products with personnel who are well versed and have accurate knowledge about gases. Most of our present employees are with us for the past 30 odd years and continue to be with us. The present sales of our company is \$ 0.5 million and we look towards increasing this to \$ 1.2 million within the next 2 years.

## BULK PURE GASES

Liquid Argon in bulk 1000 kL to 20,000 kL  
Liquid Nitrogen in bulk 1000 kL to 20,000 kL



## GASES IN CYLINDERS

Argon N5.0 Grade  
Nitrogen N5.0 Grade  
Oxygen N5.0 Grade  
Helium N5.0 Grade  
Hydrogen N5.0 Grade

Nitrogen N4.5 Grade  
Argon N4.5 Grade  
Helium N4.5 Grade

Zero Air  
Nitrous oxide  
Acetylene  
Carbon Dioxide

Argon commercial Grade Nitrogen commercial Grade Oxygen commercial Grade  
Hydrogen commercial Grade



## SPECIAL N6.0 GRADE GASES IN 47/50 LTR CYLN

### HYDROGEN, ARGON, NITROGEN AND AIR

All the gases are available in various cylinder Sizes i.e 0.5 ltrs, 3ltrs, 10 ltrs, 47 ltrs, 50 ltrs  
Pressure Up to 140 to 200 bar

## RARE HYDROCARBON GASES IN BULK OR IN SMALL PACKAGE

Cis 2 Butene	Trans 2 Butene	1-Pentene	Methyl Acetylene
3 Methyl Pentane	2 Methyl Pentane	2, Pentene	Ethynyl Cyclopropane
3 Methyl 1 Butene	2 Butene (Cis + trans)	2 Butyne	1 Butyne
Vinyl Acetylene	1 Propyne	Neo- Pentane	1,2 Butadiene
1,2 propadiene			

All Liquid and Gases available in sizes : LB - 0.41 Liters to 100 LB with Dipstick tube to withdrawal liquid from the cylinder.

## PRESSURE REGULATORS

- Pressure Regulators:
- Single Stage
- MOC : SS/MONEL/BRASS
- Double Stage
- Line Regulator
- HI Pressure Regulator Out put Pressure 0-100 Bar OR as per Customer Requirement



## GAS SAMPLING BOTTLES

- Purpose : Sampling Of Gases like LPG/Natural Gas /Permanent Gases.
- Easy to Purge/Easy to connect with Instruments like GC's , Analyzers.
- Connection : SS fine Control needle Valve, Flexible Hose (Optional), Pressure regulator Optional) .
- Pressure Rating up to 200 bar
- Certificates along with bottles
- Material test Certificates
- Radiography Certificates
- Hydro test Certificates



## CALIBRATION GAS MIXTURE

### ENVIRONMENTAL

Air Monitoring / Stack Emission / Pollution Control

CO<sub>2</sub> ppm/ % in Air / Nitrogen, CO ppm/ % / in Air/Nitrogen, H<sub>2</sub>S ppm/ % / in Air/Nitrogen, CH<sub>4</sub> ppm/ % / in Air/Nitrogen, NO ppm/ % / in Air/Nitrogen NO<sub>2</sub> ppm/ % / in Air/Nitrogen, SO<sub>2</sub> ppm/ % / in Air/Nitrogen, Laser gas mixtures : 4.5 %CO<sub>2</sub>, 13.5 %N<sub>2</sub> in He ,2-4 %CO, 6-8 % CO<sub>2</sub>, 6-8 %N<sub>2</sub> in He, 8.3-20 % Neon in He

### INSTRUMENT GAS MIXTURE

P-10, 10% Methane in Argon, P5, 5% Methane in Argon 8.5% Hydrogen in Helium.

LPG Gas Mixture, Natural Gas mixture refinery gas mixture, transformer oil dissolve gas standard.

All the mixtures are available on request

Industrial UHP grade Mixtures : Argon + Hydrogen ,Argon+Oxygen, Nitrogen+Hydrogen Mix

Fire Suppretion Mix :

Argonite (Argon 50 +Nitrogen 50 %),Inergen (N<sub>2</sub> 52 %+40 % Argon+ 8% CO<sub>2</sub>) at 150 to 200 bar

## REFRIGERATION GASES

### R- 134a

It is used in new medium-and high-temperature stationary commercial refrigeration, as well as chiller systems and home appliances. In addition, it can be used to retrofit existing R-12 refrigeration and air conditioning systems. It is also the global standard for new mobile air conditioning and can be used to retrofit existing R-12 mobile air conditioning systems.

ASHRAE No. :R-134a. Replaces:R-12

Packing : 10kg, 25kg, 61kg, 900kg, 18000kg, 22000kg refillable containers/cylinders. 13.6kg, 22.7 kg Disposable cylinders, Iso tanks, Tonners, DOT and Non DOT. 340gms and 500gms Small cans

### 404A Refrigerant

R 404A continues to lead the way as the global industry standard HFC refrigerant for new commercial refrigeration applications. R 404A delivers exceptional capacity and efficiency as an R-502 and R-22 replacement in refrigeration applications and is approved for use by the leading compressor and equipment manufacturers worldwide.

ASHRAE No. ; R-404A. Replaces : R-502

Packing : 8kg, 17kg, 47kg, 760kg cylinders/Tonners. 10.9kg Disposable cylinders ISO Tanks in DOT and Non DOT.

### R -123

Is an HCFC retrofit Refrigerant for R-11 in low-pressure centrifugal chillers. New centrifugal equipment design provides excellent energy efficiency. In retrofits of existing centrifugal chillers, systems modifications are often needed to increase capacity or avoid material incompatibility. Consult with the OEM for specific guidance.

ASHRAE No. R-123. Replaces : R-11

Packing : 100 kg drum, 18MT ISO tank

### R - 23 refrigerant

R - 23 is an HFC retrofit refrigerant for R-13 and R-503 in very low temperature applications [below -40°F to -100°F (-40°C to -73°C)] such as medical freezers and environmental chambers. It can be used in new systems as well as to retrofit existing systems.

ASHRAE No. R-23. Replaces: R-13 and R-503

Packing : 9kg, 38kg, 45kg Seamless, high pressure cylinders.

### R - 141b

R - 141b is ideal for spray since it is a liquid at atmospheric conditions and has low vapor thermal conductivity. These properties allow the production of easy to process polyurethane chemicals and the production of polyurethane foam with excellent physical properties.

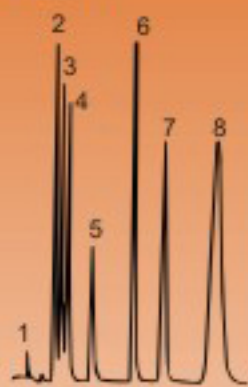
ASHRAE No. : R-141b

R - 141b is also an ideal blowing agent for panel application. Refex 141b has a low vapor thermal conductivity that gives the polyurethane core blown with Refex 141b good insulation value. Additionally, because HCFC 141b is a liquid at atmospheric conditions it allows the foam system to be easily processed and gives good flow properties to the foam. Good flow allows the material to fill the panels uniformly.

Packing : 235kg, 250kg drums. 18MT Iso tanks.

## Dissolved Gases in transformer oil Analysis (ASTM D-3612)

1. Hydrogen
2. CO<sub>2</sub>
3. Ethylene
4. Ethane
5. Acetylene
6. CO
7. Methane
8. Propane+Propylene



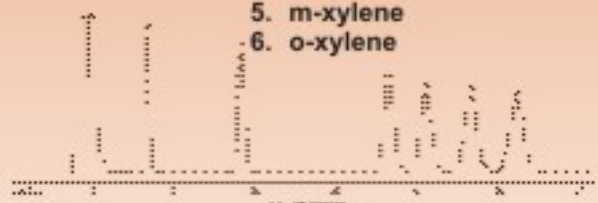
## Deuterium Mix Analysis

1. Deuterium
2. Nitrogen



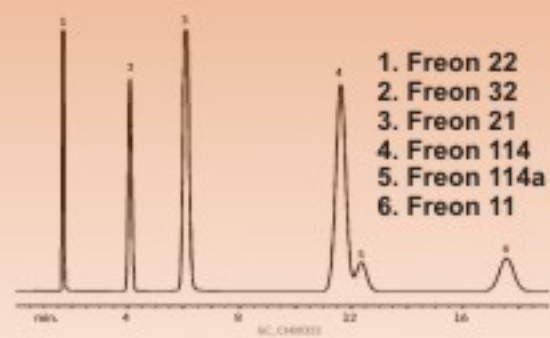
## Aromatics (xylene Isomers / BTEX) Analysis

1. benzene
2. toluene
3. ethylbenzene
4. p-xylene
5. m-xylene
6. o-xylene



## Chlorofluorocarbons Analysis

1. Freon 22
2. Freon 32
3. Freon 21
4. Freon 114
5. Freon 114a isomer
6. Freon 11



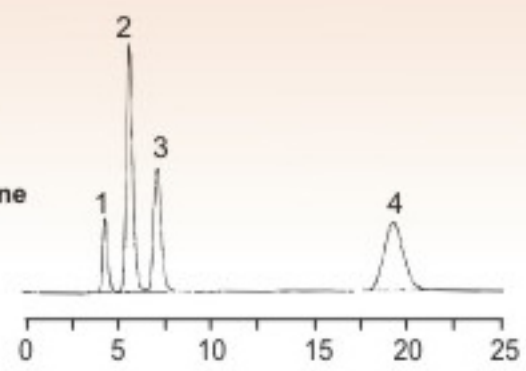
## Traces of CS<sub>2</sub> in Toluene

1. CS<sub>2</sub> (2 ppm)



## Bio Gas Analysis

1. Air
2. Methane
3. CO<sub>2</sub>
4. H<sub>2</sub>

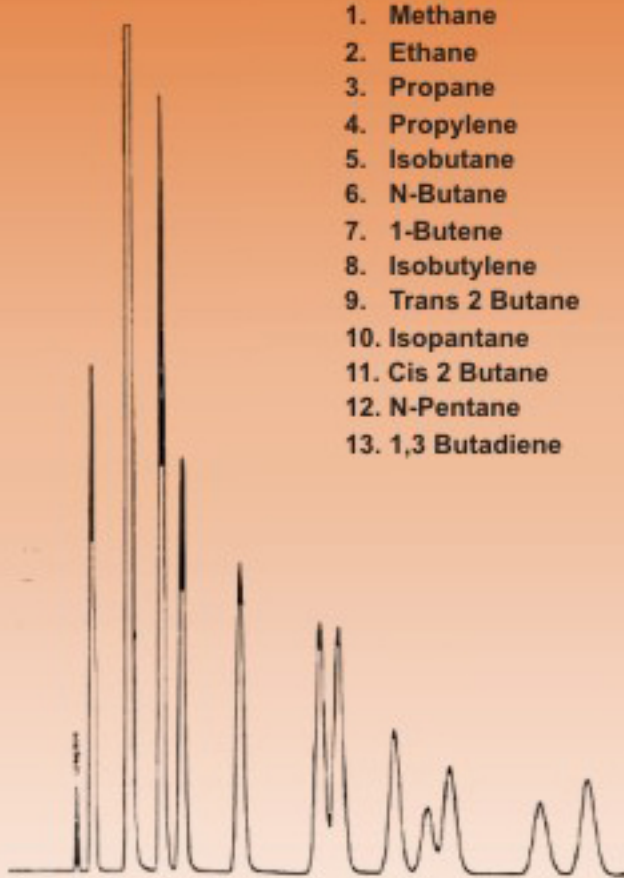


## Indian Alcohol Analysis

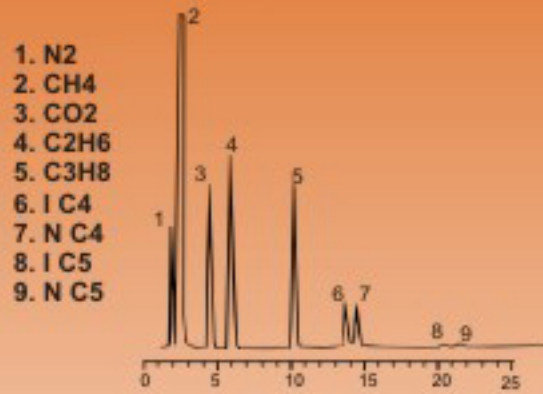
1. Acetaldehyde
2. Methanol
3. Acetone
4. Ethyl Formate
5. Ethanol
6. Ethyl Acetate
7. N-Propanol
8. Sec-butanol
9. Isobutanol
10. Active Amyl Alcohol
11. Isoamyl Alcohol
12. N-Amyl Alcohol



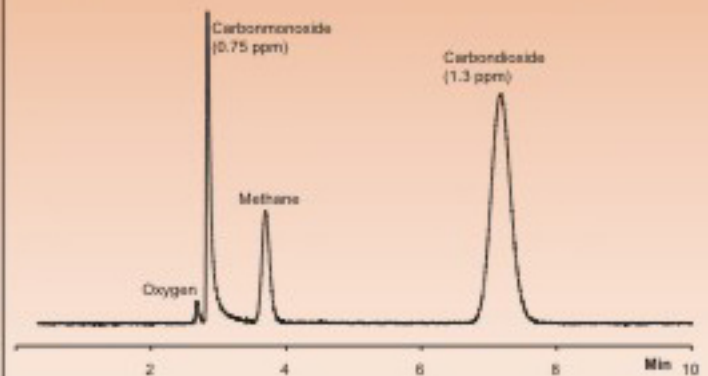
## LPG Analysis as per IP 405



## Natural Gas Analysis as per (ASTM D-1945)

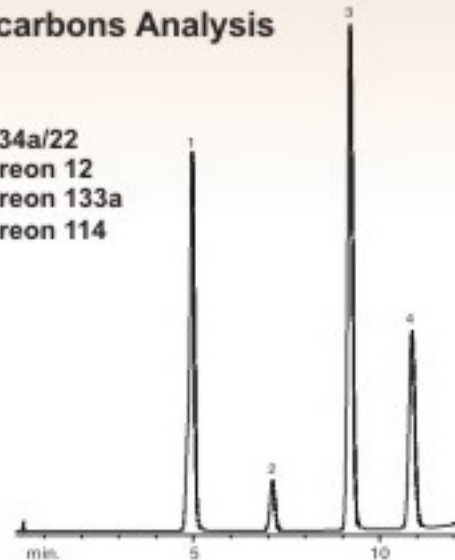


## Impurities in Permanent Gases as per UOP



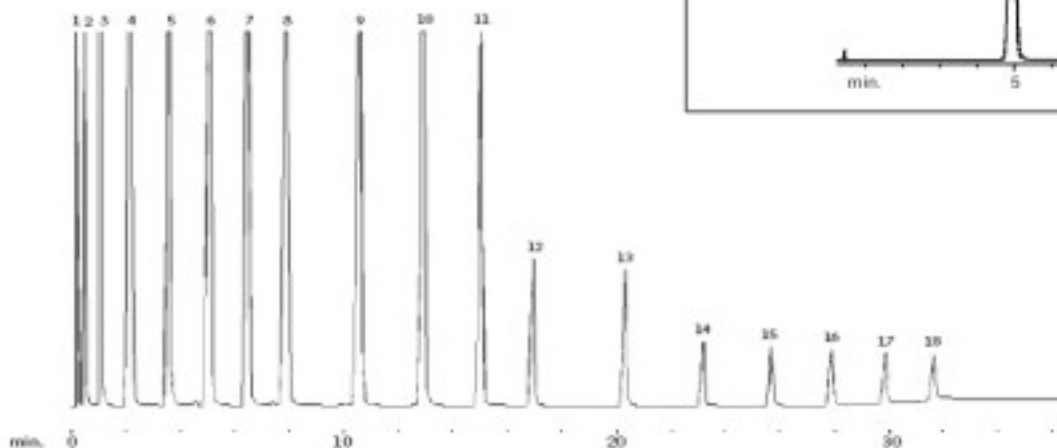
## Fluorocarbons Analysis

1. 134a/22
2. Freon 12
3. Freon 133a
4. Freon 114



- |                |                       |
|----------------|-----------------------|
| 1. Pentane     | 10. Hexadecane        |
| 2. Hexane      | 11. Octadecane        |
| 3. Heptane     | 12. Elcosane          |
| 4. Octane      | 13. Tetracosane       |
| 5. Nonane      | 14. Octacosane        |
| 6. Decane      | 15. Dotricontane      |
| 7. Undecane    | 16. Hexatricotane     |
| 8. Dodecane    | 17. Tetracontane      |
| 9. Tetradecane | 18. Tetratetracontane |

## Simulated Distillation Analysis (ASTM D-2887)



## ANALYTICAL TESTING FACILITY

### INDEPENDENT SAMPLING & TESTING LABORATORY

#### ● ANALYSIS OF NATURAL GAS ON GAS CHROMATOGRAPH

##### Natural Gas Components and Range of Composition Covered Component Mol %

- Helium 0.01 to 10
- Oxygen 0.01 to 20
- Carbon dioxide 0.01 to 20
- Ethane 0.01 to 100
- Propane 0.01 to 100
- n-Butane 0.01 to 10
- Isopentane 0.01 to 2
- Hexane isomers 0.01 to 2
- Hydrogen 0.01 to 10
- Nitrogen 0.01 to 100
- Methane 0.01 to 100
- Hydrogen sulfide 0.3 to 30
- Isobutane 0.01 to 10
- Neopentane 0.01 to 2
- n-Pentane 0.01 to 2
- Heptanes+ 0.01 to 1



## LPG ANALYSIS

##### LIQUIFIED PETROLEUM GAS ON GAS CHROMATOGRAPH COMPONENT AND RANGE OF COMPOSITION COVERED COMPONENT MOL %

- Ethane 0- 2 %
- Iso-Butane 0-22%
- Iso-pentane 0-1%
- Cis 2 Butene 0-2%
- 1,3 Butadiene 0-2 %
- Propane 0-60 %
- N-Butane 0-18%
- N-Pentane 0-1%
- Trans 2 Butene 0-2%
- 1-Butene 0-2%



## DISSOLVE GAS ANALYSIS IN TRANSFORMER OIL

##### ANALYSIS ON GAS CHROMATOGRAPH AND OIL EXTRACTION BY DGA MULTIPLE GAS EXTRACTOR

- The individual component gases that may be identified and determined in ppm includes
- Oxygen-O<sub>2</sub>
- Carbon monoxide-CO
- Methane-CH<sub>4</sub>
- Ethylene-C<sub>2</sub>H<sub>4</sub>
- Propane-C<sub>3</sub>H<sub>8</sub>
- Hydrogen-H<sub>2</sub>
- Nitrogen-N<sub>2</sub>
- Carbon dioxide-CO<sub>2</sub>
- Ethane-C<sub>2</sub>H<sub>6</sub>
- Acetylene-C<sub>2</sub>H<sub>2</sub>
- Propylene-C<sub>3</sub>H<sub>6</sub>



## TOTAL SULPHUR ANALYSIS

In LPG, LNG, CO<sub>2</sub> and all permanent gases on Sulphur Analyser

## PESTICIDES & HEAVY METALS

Analysis of pesticides & heavy metals like Pb, As, Hg, Cd, in food grade Co<sub>2</sub> & Nitrogen.

## ANALYSIS OF PERMANENT GASES

- Certifying Impurities in He/N<sub>2</sub>/H<sub>2</sub>/Argon/Air
- Oxygen
- Carbon dioxide
- Total Hydrocarbon
- Impurities Like :
- Moisture
- Carbon monoxide
- Total Sulphur



**UNIVERSAL WELDING & ENGINEERING COMPANY**

AN ISO 9001 : 2008 CERTIFIED COMPANY



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# Certificate of Registration

This certificate has been awarded to


**Universal Welding & Engineering Company**  
AB-4, Nandanvan Co-op. Industrial Estate, L.B.S. Marg, Opp. ACC Ltd., Thane  
(W), Maharashtra, 400604, India

in recognition of the organization's Quality System which  
complies with

**ISO 9001:2008**

The scope of activities covered by this certificate is defined below

**Trading of all type of Gases and Analytical Testing Facility**

Certificate Number:	38705/A/0001/UK/En		
Date of Issue: (Original Certificate)	13 April 2010		
Date of Issue:	13 April 2010	Issue No:	1
Expiry Date:	12 April 2013		
Issued by:	 <i>On behalf of the Schemes Manager</i>		

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