

# MEHRAN UNIVERSITY

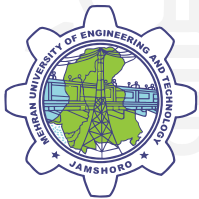
OF ENGINEERING & TECHNOLOGY, Jamshoro

Institute of

## PETROLEUM & NATURAL GAS ENGINEERING



### OIL & GAS LABORATORY Testing Service (OGLTS)



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# DRILLING FLUID & PETROPHYSICS LABORATORY

S / No

Equipment/Company/Manufacturer

Method

Purpose

1

Metal Mud Balance  
OFI Testing Equipment Inc.

ASTM D-4380

Mud weight/Density

2

Marsh funnel Viscometer  
OFI Testing Equipment Inc.

ASTM D-6910

Mud Viscosity

3

8-Speed Electronic Viscometer  
OFI Testing Equipment Inc.

API RP 13B-1  
& 13B-2

Mud Rheology  
Apparent, Plastic  
Viscosity & Yield Point

4

Shearometer  
Fann Instrument Company

API  
Specification:  
13A

Mud strength  
Gel Strength

5

Sand Content Kit with case  
OFI Testing Equipment Inc.

ASTM D-4381

Mud to sand ratio

6

Retort Kits (20ml & 10ml)  
OFI Testing Equipment Inc.

API  
Specification:  
13A

Volume of water,  
oil and solid content  
in mud

7

**pH Meter**  
**EUTECH Instruments**

**ASTM E-70**

**pH of Mud**

8

**API Filter press**  
**OFI Testing Equipment Inc.**

**API RP 13B-1 &  
13B-2**

**Water loss pressure  
apparatus to measure mud  
filtrate and mud thickness**

9

**Electrical Stability Meter  
(Emulsion tester)**  
**OFI Testing Equipment Inc.**

**API RP 13B-1  
& 13B-2**

**Mud emulsion stability  
/ electrical stability  
of mud**

10

**Core Drill machine**  
**SHIBUYA Trading Co. Ltd**

**API RP 13B-2**

**Core Sample Cutting**

11

**Drying Oven**  
**ISUZU SEISAKUSHO CO. LTD**

**ASTM D2216**

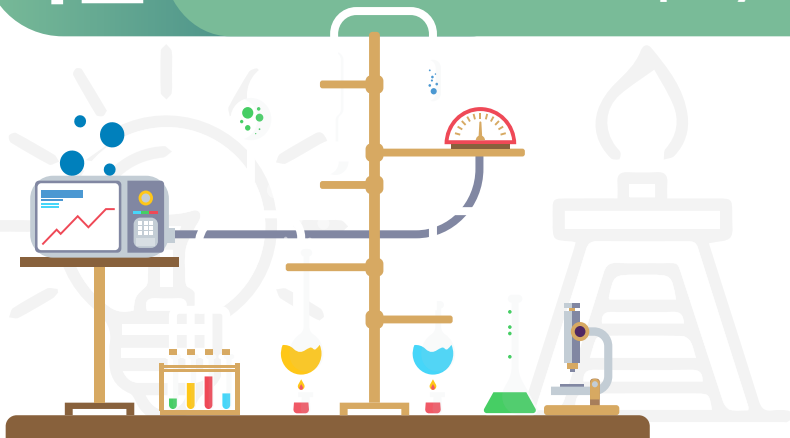
**For Dying Purpose**

12

**Multi Mixer**  
**Fann Instrument Company**

**API  
Specification:  
13A**

**Mixing of drilling fluids  
(If separate test required  
for material mixing)**



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# GAS ENGINEERING LABORATORY



S / No

Equipment/Company/Manufacturer

Method

Purpose

1

Pressure Hydrometer

ASTM D-1657

Specific gravity & API gravity of volatile Hydrocarbons, and N.Gas

2

Gas Measurement Devices  
(Dry gas meter, Test Meter )

ASTM D-1071

Flow rate and Error detection of gas

3

8LPG Vapor Pressure

ASTM D-6897

LPG Vapor pressure

4

Apparatus for copper corrosion

ASTM D-1838

Copper corrosion in LPG

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# PVT LABORATORY



S / No	Equipment/Company/Manufacturer	Method	Purpose
1	PVT Cell VINCI Technologies	PVT Analysis	PVT Test's for Reservoir Fluid Evaluation 1.Constant Composition Expansion/ Constant Mass Expansion, 2. Differential Liberation/ Differential Vaporization
2	Rolling Ball Viscometer (HPHT)		Viscosity of reservoir fluids at High pressure and high temperature
3	Densitometer (HPHT)		Density of reservoir fluids at High pressure & high temperature

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# GENERAL OIL TESTING LABORATORY



S / No	Equipment/Company/Manufacturer	Method	Purpose
1	Viscometer Say-Bolt (two tube type)	ASTM D-88	Viscosity of Liquids
2	Electric Muffle Furnace		Determination of Ash content In crude oil
3	Loss on Heating Tester	ASTM D-IP-45	Loss on Heating in Bitumen materials
4	Copper Corrosion Tester	ASTM D-130	Corrosiveness of fuel oils toward copper strip
5	Emulsion Tester	ASTM D-1401	Determination of Emulsion characteristics of Oil
6	Centrifuge for Crude oil	ASTM D-96	Water and sediment in crude oil

7

Hydrometers  
Specific/ API Gravity



Determination Of  
Specific And API Gravity  
of Liquids

8

Pycnometer

ASTM D-854

Determination of  
Density of Liquid  
Petroleum Products

9

Rams Bottom Carbon Residue  
Apparatus

ASTM D-524-15

Carbon Residue in  
Petroleum Crude Oil

10

Asphalt Ductility Tester

ASTM D-113

Ductility Of Asphalt



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# PETROLEUM REFINERY ENGINEERING LABORATORY

S / No	Equipment/Company/Manufacturer	Method	Purpose
1	Vapour Pressure (VP) (Youshida Kagaku)	IP-69	Reid Vapour Pressure (RVP) of Volatile Liquids
2	Distillation Tester (Youshida Kagaku)	ASTM D86-67 IP 132/77	Distillation of Gasoline & Diesel
3	Saybolt Chromometer (Youshida Kagaku)	ASTM D 156-02	Colour of lighter hydrocarbons
4	Flash & Fire Point Cleveland Open cup (TANAKA Scientific Inst.)	ASTM D62-72 IP 36/67	Flash & Fire Point of Non-Volatile Liquids
5	Distillation Tester + Hydrometer.	ASTM D 976-66 IP 218/67	Cetane Index of Diesel Oil
6	Dropping Point Tester	ASTM D 566-64 IP 172/65	Dropping Point of Lubricating Grease



7

Smoke Point Tester  
(Youshida Kagaku)

IP 57/55

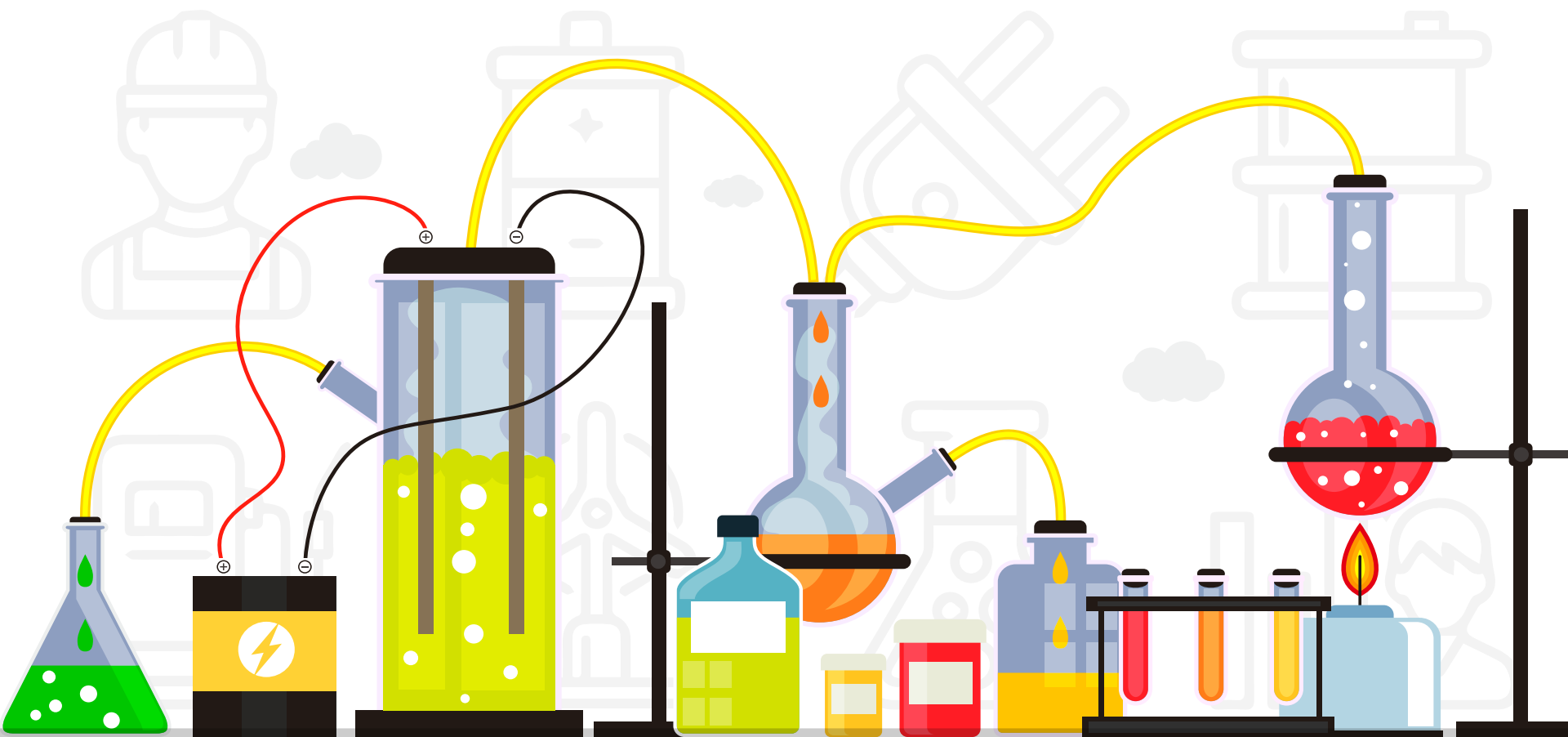
Quality of Kerosene

8

Aniline Point + Hydrometer

IP 21/53

Diesel Index of Diesel Oil



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