Set up in the year 1990 to carry out R & D in the LPG business segment , LERC is a unique collaborative venture of the three Oil Majors in India which do not have a parallel anywhere in the world.

LERC continually develops the most advanced, safe, energy efficient and environment friendly equipment and systems for the LPG industry in India through research, innovation and technology alliances.

Continuous Improvement

LERC

LPG Equipment Research Centre

A Joint Undertaking of IndianOil Corporation Ltd., Bharat Petroleum Corporation Ltd. & Hindustan Petroleum Corporation Ltd.

Bangalore-560016, INDIA

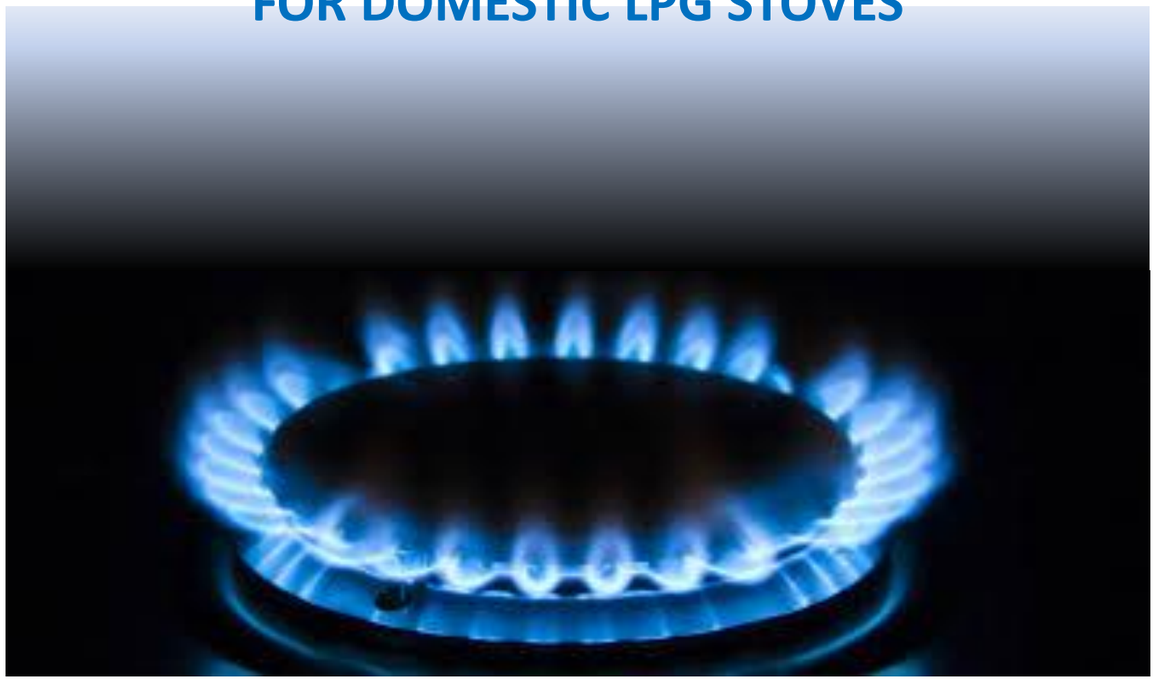
इंडियनऑयल IndianOil

Bharat Petroleum

हिन्दुस्तान पेट्रोलियम HP

COMBUSTION LABORATORY

FOR DOMESTIC LPG STOVES



Nothing In This World Is As Powerful As

AN IDEA WHOSE TIME HAS COME

With an annual domestic consumption of around 14 million metric tonnes, Liquefied Petroleum Gas (LPG) is the dominant household fuel in the country. As the LPG consumption continues to grow, there is a need for increased focus on the energy efficiency, indoor air pollution and safety of the domestic LPG stoves operated at crores of households across the nation. Foreseeing this evolving requirement, LERC , as the nodal agency in the country for technological advancement in the LPG scenario, has created the nation's most complete and advanced Combustion Lab for domestic LPG Stove Testing. The Combustion Lab of LERC, which employs fully computerized test equipments, is intended to serve as the backbone facility for R&D efforts for developing more energy efficient and safer LPG stoves – not only by LERC but also by similar agencies or individuals who pursue this cause.

LERC

LPG Equipment Research Centre

Highly equipped laboratory with state-of the–art technology for testing Domestic LPG Stoves as per IS 4246:2002 and IS 5116:1996. Testing facilities include :-

1. Gas Soundness Test
2. Strength and Rigidity Test
3. Gas Consumption Test
4. Ignition and Flame Travel Test
5. Flame Stability Test
6. Noise Control Test
7. Flashback Test
8. Formation of Soot Test
9. Resistance to Draught Test
10. Combustion Test
11. Fire Hazard & Limiting Temperature Test
12. Thermal Efficiency Test

COMBUSTION TEST

This test analyses the flue gases which are the products of Combustion to determine the Carbon Dioxide (CO2) and Carbon monoxide (CO) content and directly measures the toxic level of flue gas emission using a flue gas analyser working on Infrared principle. In addition, this flue gas analyser also measures the Combustion Efficiency of the burner under test.

RESISTANCE TO DRAUGHT TEST

This test measures the performance of LPG Stoves when placed in a localized air current of 2 m/s, by checking the flame extinction. Wind conditions are simulated using computer control and variable frequency drive for fan operation.

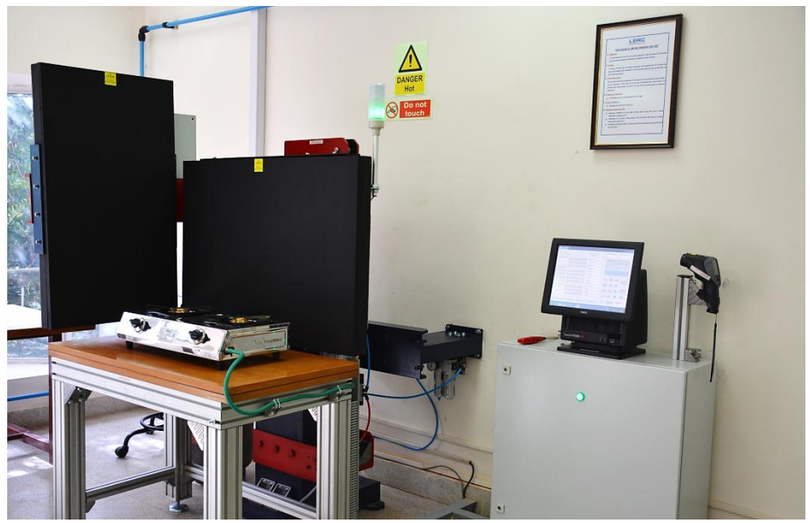
STRENGTH & RIGIDITY TEST

Strength of LPG Stoves to resist getting deformed when loaded with heavy cooking utensils is tested using this computer aided test rig .

GAS CHROMATOGRAPH BASED CALORIFIC VALUE DETERMINATION

Calorific Value of LPG used for is critically significant in accurately determining the Thermal Efficiency of LPG Stoves. Gas Chromatography based calorific value measurement of LPG is adopted at LERC's Combustion Lab for realistic determination of this test parameter.

Computerized test equipment for measuring surrounding temperature rise when LPG Stoves are in operation. Also incorporates facility for measuring temperature increase of stove body and knobs..



FIRE HAZARD & LIMITING TEMPERATURE TEST