

# COMPUTERISED TEST & CALIBRATION UNIT

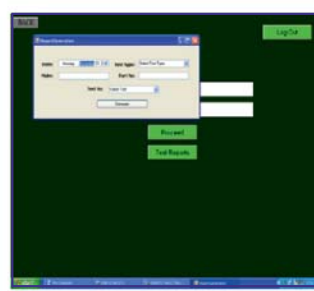
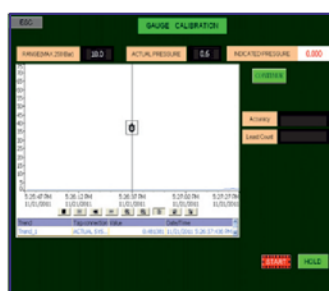
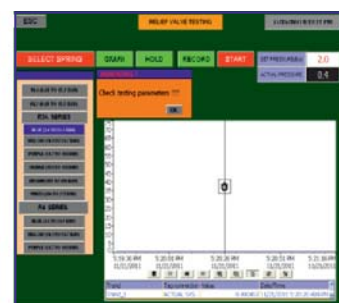
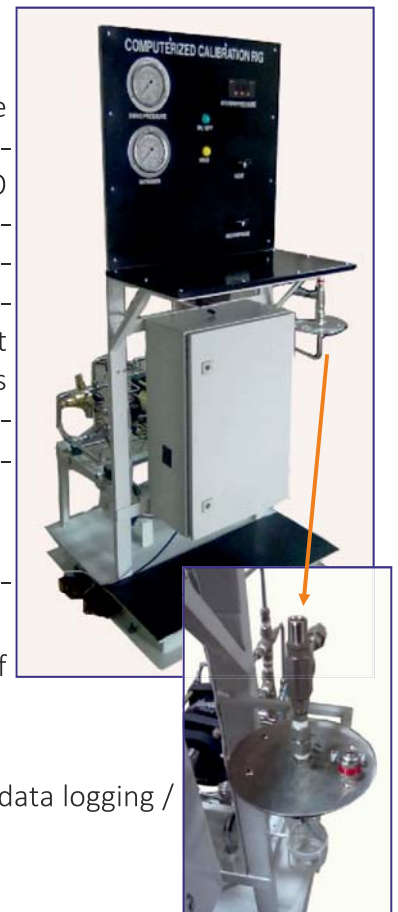


## SAFETY RELIEF VALVES, PRESSURE TRANSDUCERS & PRESSURE GAUGES

In petrochemical establishments, as well as industrial process plants there are literally hundreds of Safety Relief Valves, Pressure Transducers as well as Pressure Gauges, which periodically require pressure testing and calibration. For ISO traceability documentation requirements, the test certificates need to be auto-generated as well as electronically preserved. This process is tedious to do manually and hence we have successfully developed a 'Computerized Test & Calibration Unit' that can automate the process of testing, calibrating and certifying not only Safety Relief Valves, but also Pressure Transducers and Pressure Gauges with minimum human intervention. Quick & Easy. The tests are done pneumatically (either compressed air or Nitrogen), even for Hydraulic appliances, to augment accuracy of tests and reliability.

The test rig consists of the following

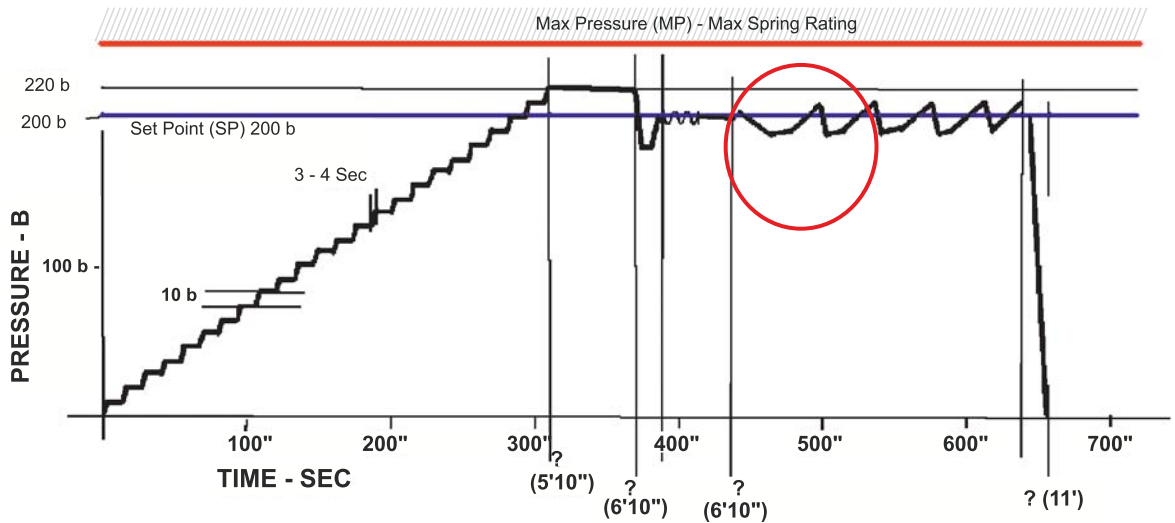
- ◇ A fully automatic PLC controlled air driven gas booster system to augment pressure of the supply source to the desired test value.
- ◇ A test Platform to mount the device under test & calibration (Relief valve, Transducer or Pr Gauge).
- ◇ Electrical controls and a PLC
- ◇ Laptop with customized SCADA software, mimics, soft key controls, and data logging / printing facilities.



# Advanced Technology, Unique Machines

## PROCESS CONTROL

Gradual pressurization by PLC to avoid accidents. Pressure holding above set point to adjust spring tension.



SAMPLE TEST & CALIBRATION SEQUENCE FOR SET PRESSURE 200 B

## AUTO GENERATED TEST RESULTS WITH PASS FAIL STATUS



## Indian Oil Corporation Limited R&D Centre

Address : Sector - 13, Faridabad - 121007, Haraya (India)  
 Phone No: 91-129-2283702, 2283707, 2285511-12  
 Fax : 91-129-2286621 (STD Code - 0129)

### RELIEF VALVE PRESSURE TEST AND CALIBRATION CERTIFICATE

Name : SHINE NAIR

Date : 21/11/2011

Tag No.: ABC

Test No.: RVP\_21112011\_2

Make/Model: 123

Colour Coding : PURPLE

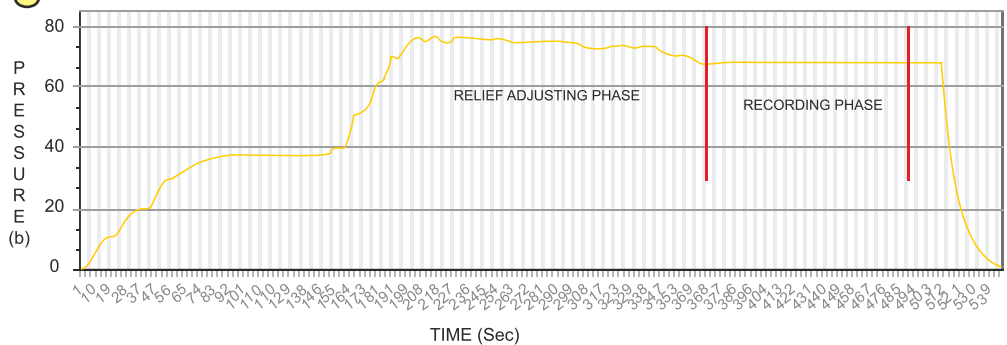
Max Pressure during Test (b) : 77.1

Desired Test Pressure (b) : 75

S No.	Time (Sec)	Pressure *b)
1	308	73.2
2	318	73.4
3	328	73.3
4	338	73.2
5	348	70.6
6	358	70.2

Pass / Fail Status : **FAIL**

Max Relief Adjustment and repeatability tests to 1000 b by pneumatic means and to 10,000 b using hydraulic means



**GEM PRESSURE SYSTEMS (INDIA) PVT. LTD.**

Office :  
 4-2-254, Old Bhoiguda,  
 Secunderabad - 500003  
 Phone : 040-27711742, 27700326  
 Telefax : 040-27711742

Factory :  
 5-11, Sharif Nagar  
 RCI Road, Hyderabad - 500005.  
 R. C. Dist. Telangana, India  
 Phone : 040-64640125, 996314448  
 Help Line : 076808 12266