



# **POWER TECH TESTING AND SERVICES (INDIA)**

# **VALVE TECH TESTING AND SERVICES S.P.C (Bahrain)**

Online safety valves testing & calibration (Trevi Test)/ Offline safety valves testing &calibration

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# Online Safety valve Testing & Calibration

With Fully automatic & Advanced Modes

- Automatic Mode
- Load Mode
- Manual Mode
- Set pressure 0.01% accuracy with ASME code

\* NO HYDRAULIC \* NO AIR REQUIRED \* NO HAND











#### **About Us:**

Established in 2007, Power Tech Group Company is one of the largest and leading manpower service providing in Middle East countries. We have presence in 6 countries spanning all across Middle East Countries and manned by 500 Technicians/Engineer.

We are an ISO 9001:2015 certified & OHSAS 18000:2007 Company for establishing Quality Service as per the customer's needs and satisfaction with the help of our technically sound, experienced team.

Our Company is managed by a dedicated team of professionals having rich experience and have put in decades of dedication in managerial positions in Power Plant. Desalination plant and Refinery.

It is headed by the managing director who was the former engineer in Ministry of electricity and Hidd Power Company with 35 years of experience with multinational and in major industries in GCC

The key drivers to our success is our own "Chennai Power and Desalination Training Institute" Which is approved by Government of India. We provide in-house training for Power Plants. EHS, Permit Systems and regular tool box talks. We provide highest standards of training and services to the employees and customers.

#### **Actuator Maintenance:**

We specialize in the repair, maintenance and life extension of various types of actuators:

- a) Pneumatic
- b) Hydraulic
- c) Electrical

Our services include Mechanical and Electrical repairs.

We provide a fast and efficient service with the objective of maximizing plant efficiency and reliability Work is carried out by an experienced team of engineers at our workshop for:

- Fault investigation
- Workshop diagnostics
- Sourcing of components



- Functional checks
- Site installation
- Ensure correct operation.







# 2) Valve Maintenance& Testing:

Maintenance of different types of Industrial valves is done by PTD:

- Safety Valves
- Gate valves
- Globe Valves
- Butterfly valves
- Check valves
- Pressure reducing valves

Complete Valve overhaul is carried out and defective Internals are identified and replaced:

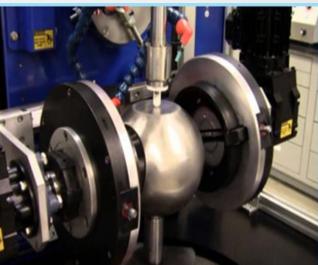
- Glands
- Bushings

- ☐ Gaskets
- ☐ Packing's
- ☐ O-rings

### **Valve Testing:**

- □ Valves of all types are to be tested periodically to check the performance and seat tightness against pressure.
- □ PTD offers services for pressure testing of all Valves by Pneumatic/Nitrogen/Hydraulic testing medium.
- Test is performed by specially designed test bench and test line with accurately calibrated Pressure transmitter and Gauges.
- □ Valve seat tightness will be checked by Leak/bubble counter and report will be submitted.
- ☐ Testing of Valves done as per International testing standards- ASTM Procedures.
- ☐ Performance of Valve is ensured before handing over to Customer.





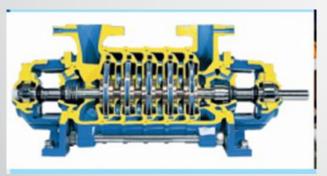






### 3) Pump Overhaul and Maintenance:

- PTD offers Corrective/Breakdown maintenance services of all Industrial Pumps-
- Single and Multistage Centrifugal Pumps,
- Positive displacement Pumps,
- Metering pumps etc.
- High precision, high quality service and Maintenance is offered to our Customers.
- Trained and skilled personnel in rotating machinery equipment maintenance perform Overhauling/Maintenance Jobs.
- Dynamic balancing of Rotors is offered based on machine requirement.
- Maintenance activities are performed by in-house equipment's, facilities and by using genuine spares.
- Trial run of equipment after completion of Maintenance.













### 4) Off-line Testing of all Valves: Offline testing of Valves are performed in Offline test bench.

#### **Valve Seat Tightness Test:**

- •The test bench can perform seat tightness test for all types of valves.
- •Seat tightness level is measured by number of bubbles in Bubble leak counter.
- Provision for Connecting bubble counter is by simple manual tube connection.
- •Seat tightness level is measured by Leak counter manually and graph reports.
- •Trend graph reports are printable for Pressure drop in bar and % values.
- •Seat tightness test can be performed for all types of Valves in the range of 0-200 bar.

### **Valve Hydro test:**

- •Hydro test of Valve body, Pipeline is performed by Offline test bench.
- •The test bench can be utilized to perform hydraulic pressure test up to 200 bar.
- Provision for connecting Hydro test Pump is by Hose and Valve Connection.
- •Manual/automatic pumping methods can be followed.
- Pressure drop is generated from SCADA system.
- Pressure drop printouts are generated by system.

#### **Test Bench Features:**

- •Test bench is capable of Offline testing and Calibration of Safety/relief Valves
- Flange sizes Valves of sizes ½" to 4" sizes Class 150 # and Class 300 #.
- •Threaded type safety valves ½" to 1 ½ "

#### **Pascal Portable Test bench:**

- Bench is made from high quality Titanium Grade-2 Material.
- Robust structural fabrication suitable for testing high pressure valves.
- Nipple adaptors and leg joints are welded with Titanium material.
- Bench is designed to test different sizes of valves with flanged and threaded ends as per ASME B16.5 standard.













#### **Technical specification:**

-Test Pressure: 0---- 200 bar

-Testing Media: Air/N2/Water

- Operating Mode: Automatic/Manual

-Mounting of Valves: Manual mounting

Instrumentation : Tested &certified Solenoid Valve, Pressure transmitter and pressure gauge for Very accurate measurement and Controls.

: SS # 316 welded by approved welding procedure.

#### Software:

Piping's

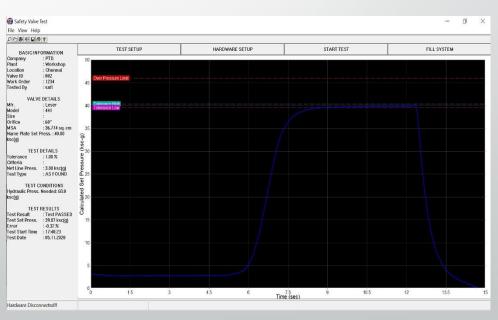
• The Offline testing Operations are performed by User-friendly software system supplied by Expiron HS SCADA system.

- Expiron HS is a Powerful software Platform that incorporates innovative applications for Human Machine Interface HMI and SCADA system.
- Experon is built upon the proven technologies of Expiron platform for ease of Operation.

#### **Trends & Graphs:**

- Live monitoring of the Test via Laptop is built-in feature of HMI
- Real-time trends and Graphs are available for Valve testing and Calibration,
- Trends are available for User selectable periods in Interval of 01 Sec





#### 5) Online Safety Valve Testing - Trevi Test.

- Safety Valves are Vital for Equipment & Personal safety in any Industry.
- Proper and correct functioning of Safety Valves is critical for life of equipment and safety of Plant personnel.
- Periodic testing of safety valve while equipment in service is the guiding principle of Trevi-test.
- PTD Utilizes most advanced Software and fully automated system to eliminate human error. From automatic Calibration of sensors to output of the Final test results, the totally computerized operation delivers superior performance with regard to setup, ease of use, accuracy of reporting.
- KT3000 Accutest safety valve testing machine is manufactured in USA and approved by German standard TUV SUD.

  State Of Art machine with accuracy +/-1 % in testing the Set Value of Safety Valves On-line.
- -Our machine is advanced fully automated, the system provides superior performance with regards to setup, Operational case, accuracy of results and reports.







### **Advantages of Accutest Method:**

Totally automated Operation, battery Operated motor with battery life under normal usage.

Set pressure automatically calculated by measuring Lift force, Line pressure and Acoustic trigger.

Universal mounting assembly ensures use on all types of exposed Spindle Valves.

No requirement of hydraulics, cylinders or hand Jack.

Light weight, Compact design for Portability in the Plant load rig allows for lift forces up to 4500 kgs( 10,000 lbs).

System and sensor calibration services are available.









6) Boiler Maintenance: Power Tech Development Capabilities include

**O&M services:** Boiler Shutdown Maintenance

Boiler De-scaling

Softener Installation and Maintenance

O&M of Boiler

O&M of Coal Handling Plant.

**Fabrication & Erection:** Boilers/ducting

Thermic Fluid Heater
Interconnecting Ducts
Supporting steel structural
Chimney Fabrication & erection

Pipeline for steam supply and condensate

Accessories like APH, dust collector, air preheater etc.

**Insulation & Refractory:** Hot Insulation

Wrapping Coating Boiler Refractory

Pipeline : Water Piping

Airline Piping Steam line Piping Thermic Oil Piping Utility Piping's.







#### 7) Heat Exchanger Retubing / Maintenance:

Heat Exchangers are Important Heat transfer Equipment in Power & Process Industry.

Trouble free Performance of the Heat exchanger is critical for Plant Operations and reliability.

PTD offers complete end to end services including Retubing and repair of Heat exchanger tubes as per customer needs.

Scope of service includes complete disassembly, Inspection, Manual Cleaning, Hydro jetting and hydro testing of heat exchanger.

Rectification of Leaking tubes and final assembly.

Testing and Handover to Customer site.







#### 8) Structural Fabrication & erection

Structural steel is used for making construction materials in a variety of shapes.

Steel is the most durable building material than any other alternatives due to

### Long durability

- High tensile strength
- Fire resistant
- Longevity
- Low maintenance





PTD structural team performs structural work as per site specific requirements in shapes such as I-beams, Channels, angles for structural requirements.

These materials support a high load without excessive sagging.







#### 9) Online Leak Sealing

- -Online sealing is an innovative leak arresting method of minimizing equipment downtime due to leak
- -Minimizing equipment downtime is vital to have increased reliability and plant output.
- -A variety of leaks a various system are sealed on- site, safety, efficiently, non-destructively and cost-efficiently without isolation and without loss in production.
- -This minimizes noise and emission levels, erosion damage and improves plant safety whilst maintaining equipment integrity and safety.

#### **Advantage of Online Leak Sealing:**

- -Innovative and Scientific Approach to Leak rectification.
- -Customized Solution for addressing specific needs.
- -Rich experience and proven track record makes Power Tech Testing Services preferred Choice.







# **Group of Companies:**



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#### PASCAL ONLINE / OFFLINE TESTBENCH MANUFACTURERS

Manufacturing & Supply of Online safety valve testing machine & Offline valve testing machine

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# **Our Key Clients**













# **BAHRAIN**













**EGYPT** 



# **INDIA**













# **INDIA**













# **INDIA**