

REDEFINING MAINTENANCE STANDARDS

WELCOME



An Introduction to Seetru Engineering Services

Seetru Engineering Services (SES) are the service arm of Seetru Limited who are a long established Safety Valve manufacturer of over 60 years. SES has been founded on the ability to react to our customers' individual requirements and to deliver total engineering solutions that improve the safety, quality, and value of our customers' activities.

Today, our pedigree is demonstrated through our skilled people and our patented, unique and exceptional new products and solutions.

Our aim is to deliver the benefits of value engineering and innovation, working with our customers, extending the available plant uptime, improving safety, life span and maximising the availability and performance of processes and equipment in many of the world's most challenging environments.

*Mark Reeve
General Manager
Seetru Engineering Services*



MAINTENANCE
REFURBISHMENT SERVICES
SAFETY AND RELIEF VALVE OVERHAUL
WORKSHOP SERVICES
CONTROL VALVE OVERHAUL
ISOLATION VALVE OVERHAUL



ON-SITE SERVICES
OFFSHORE CAPABILITIES
CABINS
PORTABLE WORKSHOPS
CERTIFIED STAFF
TRU-TEST® & COMPU-TEST™ TRAINING



TRU-TEST®
IN-SITU TESTING



COMPU-TEST™
WORK BENCH TESTING



CONDITION RATING®
HEALTH MONITORING & CALIBRATION



SPECIALIST SERVICES
MACHINE LAPPING
CONTROL VALVE REFURBISHMENT
ISOLATION VALVE REFURBISHMENT



APPROVALS & GLOBAL SERVICING
COMPANY APPROVALS
CERTIFIED TECHNICIANS
TEST CABIN APPROVALS
SES FEATURES & BENEFITS
GLOBAL SERVICING



Seetru Engineering Services

The service arm of Seetru, SES, draws on the organisation's experience and expertise as a safety valve manufacturer to provide the management and maintenance of customers' inventories of safety valves irrespective of safety valve type, size and make.

Valve Management Solutions

- Whether you have one valve or a thousand valves
- Whether you want on-site work or to send your valves away
- Whether your requirement is in normal working hours or 24/7



Workshop Facilities

Seetru Engineering Services have at their disposal an extensive range of test rigs to meet specialist requirements.

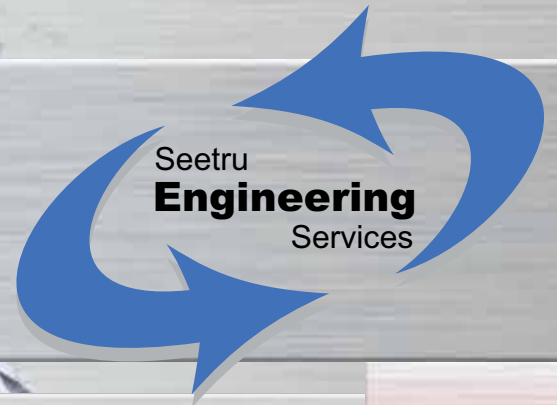
Safety Valve Knowledge And Experience

Seetru's depth of knowledge and experience of safety valves means that we can aid our customers in the development, implementation and operation of high quality valve management programmes, including degreasing and cleaning for oxygen service, hygienic (HACCP) and other environments.



WORKSHOP

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Valve Repair

If repair work is required, Seetru have all the capabilities and facilities of a safety valve manufacturer available to carry out the necessary work. Including surface preparation and re-finishing, de-greasing for oxygen service and HACCP.

Safety Valve Testing

The most common test method for safety valves and relief valves is bench testing performed in a workshop. Such tests are typically carried out in conjunction with a strip down, inspection and overhaul. This requires the valve to be removed from operation and transferred to a workshop.



Safety Valve Services

Seetru provide full on-site or off-site (return to our workshops) safety valve maintenance, overhaul, testing and calibration services. For every type, make and model of safety valves.



Standard Overhaul:

- Pre-test
- Dismantle
- Clean
- Inspect
- Overhaul
- Reassemble
- Set and test
- Re-finishing
- Protect
- Certification





On-site and Off-shore Services

- Maintenance
- Overhaul
- Testing
- In-situ testing
- Health / Condition Monitoring
- Inspection
- Calibration
- Certification

Valve Management Services

Seetru Engineering Services will devise, organize and implement high quality management programmes for inventories of Safety Valves for customers in all locations: providing support for the risk assessment process necessary for development of inspection regimes.



Safety Valve Life Cycle Management

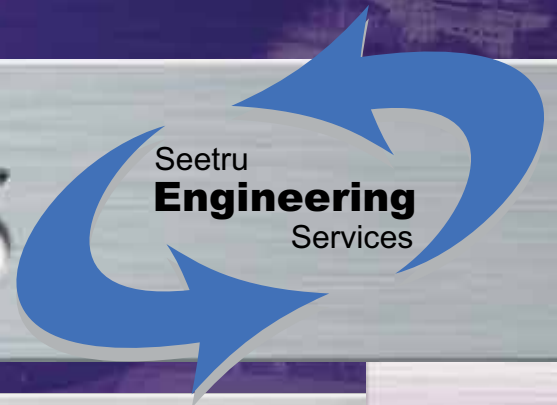
- In service or in workshop
- Objective measurement of condition
- In-situ condition or health monitoring
- Support for Risk Based Inspection
- Calibration
- Metricated assessment of internal components
- Reduced need to remove valves for overhaul

Tru-test® & Compu-test™ Training (Theoretical and Practical Course)

- What is In-Situ testing? incl. Hot & cold testing
- In-Situ Testing versus bench testing and overhaul
- What does the Tru-test® measure
- Tru-test® principles of operation
- What is an effective seal area
- Scope of Tru-testing
- Test procedures
- Analysis of test results
- Practical demonstration of the Tru-test® system



SERVICES



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Services



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Off-shore Services

All Seetru Engineering Services technicians are fully trained and certified for offshore working including:

- BOSIET
- S-Cape
- Medically Certified
- ASME
- Fully experienced in working in this demanding environment.

Off-shore Cabin Equipment

- DNV - Det Norske Veritas Certified (DNV 2.7.1) and BSEN 12079
- Full MPI, NDT inspection, material and welding certified
- Zone 2 electrical certification
- Fully equipped PSV workshop



On-site Valve Consultancy Inspection

External engineers are available for site visits to inspect the valve while it is still in-situ, they will then determine whether the valve can be tested and calibrated while still on the system or whether it will have to be sent back to the workshop to be overhauled.

24/7 Emergency Call Out

Every year, companies could lose thousands of pounds over unexpected system shutdowns; to reduce this, our engineers can be contacted 24 hours a day, 7 days a week, for emergencies: thus saving precious time and money.



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Lift Measuring Transducers

Seetru always use 0.1% accuracy lift transducers to provide the most accurate set point or full lift analysis during all PSV testing.

Double Acting Ram's

Also only double acting rams are used, to ensure a closing force (should this be required), is always available instantly.

Tru-test® - Saving You Time and Money

Dismounting safety valves from their operational location can be a time consuming, risky and expensive operation. The Seetru Tru-test® system provides the capability to test safety and relief valves in-situ, without the onerous requirement to remove the valve from the system or shut the system down. Thus providing a cost effective means of managing safety valve and relief valve inventories.



A Bar Above The Rest

The state-of-the-art Tru-test® system has extensive integrated capabilities to simultaneously measure: force, displacement, acoustic and pressure data. This makes it highly versatile, and with integrated Condition Rating® technology it is a world beating technology.

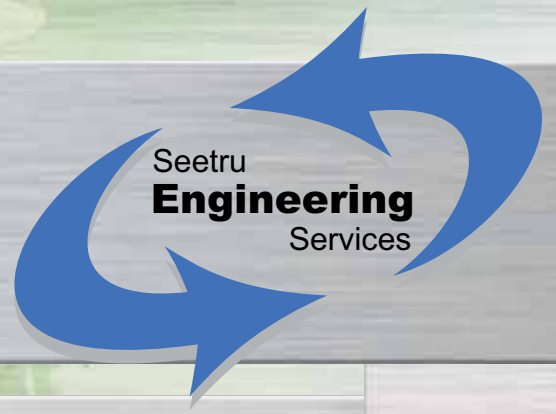
Tru-test® - Providing Valve Confidence

The Seetru Tru-test® system offers the important capacity of testing in-situ under actual operating conditions. In-situ testing provides added confidence in the protection afforded by the safety valve. It also supports the optimization/minimization of maintenance downtime through Seetru operated condition monitoring of safety valves in service.



TESTING

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Tru-test® Measurement System

The Tru-test® system measures the force required to initiate minimal separation of the disk from the valve seat. This force divided by the effective disk area of the valve gives the equivalent pressure at which the disk just starts to lift away from the seat. This compares with the set pressure as normally measured with a bench test or leak test.

Hot Testing In-Situ

Hot in-situ testing involves lifting the disk of the valve very slightly away from the seat while the valve is in service and exposed to the fluid pressure. This form of testing offers many operational, safety and cost advantages.



Cold Testing

Testing can also be carried out without system pressure. This can be carried out in-situ or in our service centre or workshops. The set pressure can be adjusted in-situ after repairs have been carried out. Thus eliminating the requirement to dismantle the valve: especially important with larger valves or in hygienic or hazardous applications.

Footprint Test

A calibration test of the valve can be carried out before installation; then future tests can be compared and verified against this calibration test to monitor the condition or deterioration of the valve.





Seetru Compu-test™

Is a comprehensive computerized safety valve diagnostic system add-on for conventional safety valve test benches. Using the Compu-test™ system enables objective diagnostic analysis of the critical assessment criteria for safety valves, namely:- Set Pressure, Condition Rating® and Bubble Leak Rate.

Automatic Measurement Of Set Pressure

The fast operating Seetru Compu-test™ system automatically calculates the set pressure. The informative and comprehensive display shows:-

- Set pressure (pass / fail indication)
- Start to leak pressure (pass / fail indication)
- Re-sealing performance after test (pass / fail indication)
- Analytic display showing exact operation over whole of test



Automatic Measurement Of Condition Rating®

The fast operating Compu-test™ automatically calculates and displays the Condition Rating® together with the exact operation over the whole test. This measurement of the calibration of safety valves is also presented through a simple traffic light result presentation.

Automatic Electronic Kellogg Bubble Count Test

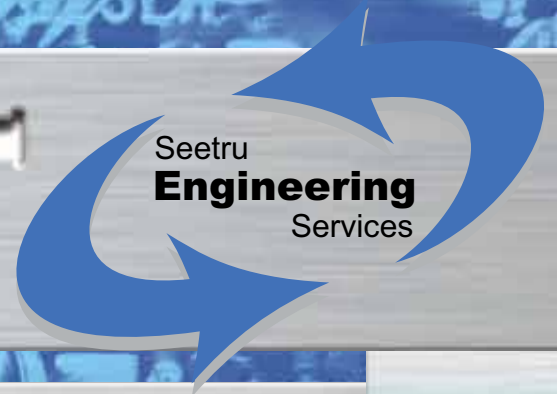
The fast operating Compu-test™ automatically measures and calculates the bubble count / leak rate in a manner compliant with the requirements of API 527. The informative and comprehensive display:-

- Manages the test sequence
- Shows the bubble leak rate
- Provides a Pass / Fail Indication



U-TEST

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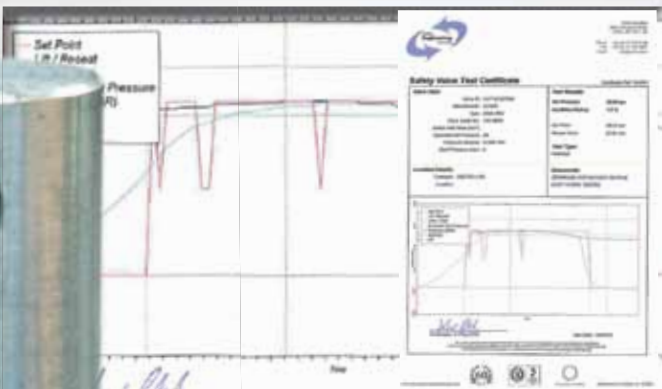


Compu-test™ Summary

- Fully computerized
- Automated and objective
- Set pressure measurement
- Electronic bubble count leak rate test
- Condition Rating® measurement
- Detailed analysis of valve operation
- Computerized full test records for certificate
- Test results printout on certificate
- Patented worldwide

Compu-test™ = Intuitive And Easy To Use

The Compu-test™ system can be used in either manual or automatic analysis modes. In automatic mode the Compu-test™ system automatically evaluates all the key diagnostic parameters extremely quickly and objectively, the user can also carry out the same evaluation entirely in manual mode. In either mode it is fast and simple to use. Experienced and inexperienced safety valve technicians will find the Compu-test™ system intuitive and easy to use.



Certification Generation System

The electronic measurements are objective and are recorded directly into the system database for future use. The system will generate certification documentation recording all the diagnostic test data and the summary diagnostic results.

Enhancing Maintenance Quality

The objective precision of the diagnostic information, and the ease with which the Compu-test™ system produces objective diagnostic results, strongly enhance the quality of safety valve maintenance operations. Thus leading to greatly reduced risk associated with safety valves in operation.



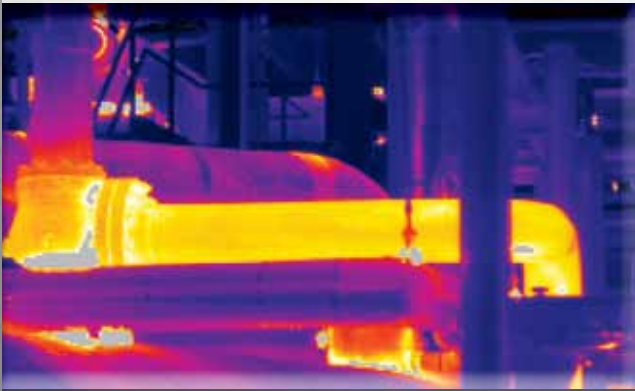


Condition Rating®

Measures safety valve condition and calibration. It can be used before and after overhaul to metricate the overhaul process and to provide confidence that the safety valve is calibrated once it is overhauled.

Condition Rating® = Quick, Accurate Testing

Seetru have developed a quick and accurate computerized test that measures both the calibration and the mechanical condition of a safety valve. So now, for the first time, there is a scientific and objective means of evaluating any degradation in the condition of a safety valve and whether it can continue to perform correctly in operation.

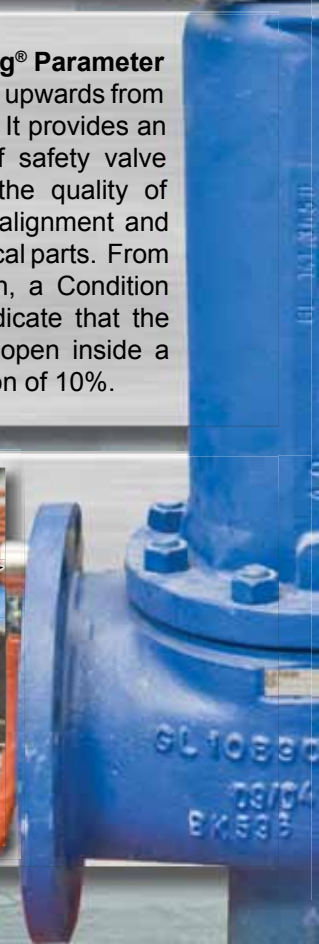


The Seetru Condition Rating® Parameter

Is a percentage value ranging upwards from the perfection value of zero. It provides an extremely sensitive scale of safety valve status or health, covering the quality of sealing surfaces as well as alignment and freedom of action of mechanical parts. From the point of view of function, a Condition Rating® value of 9% will indicate that the valve will not even start to open inside a system pressure accumulation of 10%.

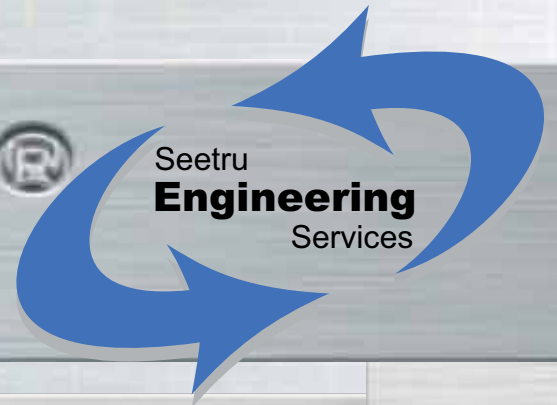
Acoustic Sensor

Is used to accurately measure the leak point of the safety valve. This measures the tiny ultrasonic vibrations caused when flow is established. Seetru calibrate acoustic sensors according to international standards.



CONDITION RATING®

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Reducing Cost

Condition Rating® provides measurement of whether a valve requires overhaul, thus eliminating the unnecessary cost and risks of removing and overhauling valves purely by date. It is the ideal objective metrication technology to support the implementation of a Risk Based Inspection regime.

Exterior Condition Can Be Deceiving

The external appearance of a safety valve does not provide a reliable indication of its internal condition. Good external appearance does not equate to good internal condition and conversely a poor external condition does not necessarily indicate a poor internal condition



Confirming Standard Of Overhaul

Carrying out Condition Rating® post overhaul enables Seetru to scientifically and objectively measure the effectiveness of the refurbishment; it also confirms that the valve is not only set correctly, but that it is calibrated and is suitable for re-instatement to provide continued protection of the pressure system.

Why Condition Rating?

The only reliable method of metrication is to objectively measure against known values using a technique based on formal theory, using a reliable and effective measuring system.

That is Seetru Condition Rating®.





Not Just Safety Valves!

That's right, we have extensive workshop facilities to enable us to refurbish a wide range of control and isolation valves including:-

- Gate valves
- Check valves
- Globe valves
- Actuators

In-Situ Valve Re-Conditioning

Repairing leaking valves in industrial pipelines is a laborious and costly operation involving extended downtime and production losses. Losses are minimized when valves are overhauled and re-ground in-situ avoiding the need to dismantle and remove defective valves from the pipeline.



Simple, Efficient And Cost Effective

The Seetru range of valve grinding machines provides a total valve maintenance solution providing our customers with efficient, simple, cost effective and easy to use equipment and services.

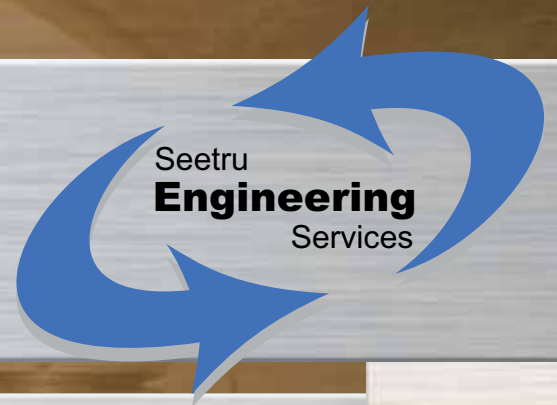
Expert Service

As a result of years of practical experience of valve maintenance in power stations and process industries our services have been developed to provide our customers with perfectly functioning valves. Seetru Engineering Services aim to be on hand to solve valve problems on and off site, whether night or day, on hand ready to maintain your valves: ensuring they are out of service for as short a time as possible.



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Control and Isolation Valve Calibration
Seetru Engineering Services has extensive workshop facilities and is able to calibrate and refurbish a wide range of types and sizes of control and isolation valves. Seetru Engineering Services are here to help with your maintenance requirements.



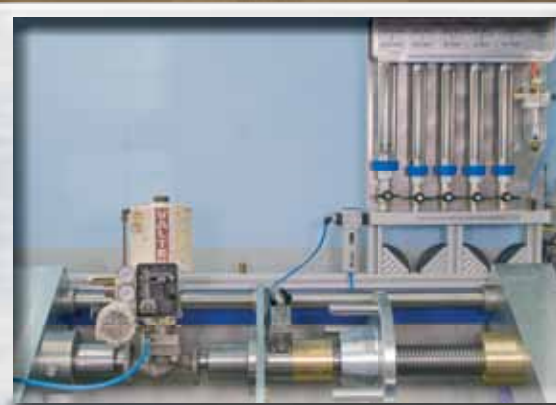
Skilled Maintenance Engineers
The Seetru Engineering Services team of fully qualified engineers are able to operate our extensive range of machinery to make sure your valves are overhauled with the highest quality of care. All technicians are fully ASME certified.



Control Valve Test Facility
Seetru Engineering Services workshop contains state-of-the-art control valve test benches that are capable of full control valve positioning and testing also full body hydraulic tests in a state-of-the-art low body shell compression force clamping systems.



Flow Measurement
Seetru Engineering Services control valve test rigs are complete with full range seat leakage test capability incorporating a range of flow measuring equipment.



APPROVALS

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Seetru Engineering Services Approvals

- SAFed,
- Royal & Alliance,
- Lloyds Register,
- BS EN ISO 9001:2008,
- HSB,
- Allianz,
- NEBOSH and IOSH qualified staff,
- Specialist Hygienic compliance, e.g HACCP & GMP,
- ABB,
- Achilles,
- SAFEcontractor.

Certified Technicians

All Seetru Engineering Services technicians are BOSIET and Energy and Utility skills trained technicians. Certified and medically assessed for offshore activities. All hold safety passports and IOSH qualifications. All technicians are ASME certified and security vetted for work at licensed installations.



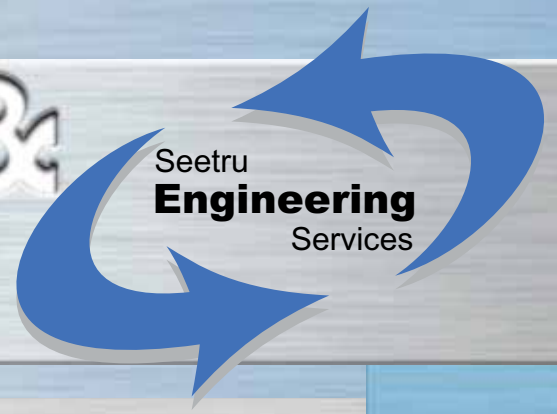
Portable Test Cabin Approvals

Workshop Containers are fully certified for off-shore use and approved to:

- DNV 2.7-1
- BS EN 12079
- ATEX



FEATURES & BENEFITS



Seetru have:

- Turnover in excess of 7 million pounds per year.
- Manufactured safety valves and ancillaries since 1949.
- An in-house dedicated design and development team – PED approved and UV stamped safety valves.
- Seetru representatives providing support on sites worldwide.
- Investment into the latest safety valve technology.
- Collective experience across the company of over 2000 years.

Seetru Engineering Services have:

Fully Trained Safety Valve Technicians

- Available for all valve maintenance tasks.
- ASME Trained Technicians.
- ISO 9001 Accredited.
- Safety and insurance accepted.
- NEBOSH qualified health & safety management team.
- Specialist Hygienic compliance, e.g HACCP & GMP.
- Safety passport, BOSIET & Energy and Utility skills trained technicians.



Flexible Overhaul Facilities

- The ability to test, overhaul and certify all safety valves from any manufacturer.
- The equipment to test high-pressure safety valves.
- Experience in supporting safety valves in a vast array of industries.
- We can overhaul your safety valves whilst you wait.

Trusted On-site Experience

- We can test safety valve in-line whilst plant is operational (Tru-testing).
- The ability to In-situ Tru-test in Hazardous (Explosive) environments.
- Patented cutting edge condition / health monitoring technology.
- Mobile Workshops.



Valve Management Solutions

- Document operating procedures.
- Full Maintenance/Management packages.
- Training facility to enable your staff to overhaul safety valves.

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Seetru
Engineering
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WORLDWIDE

GLOBAL
SERVICING



Seetru Engineering Services have provided services all across the world including:

- England
- Portugal
- Slovakia
- Tunisia
- Ireland
- Germany
- Russia
- Libya
- France
- Norway
- Qatar
- Kazakhstan

If you would like to find out where your nearest workshop is contact our head office at:

Seetru Engineering Services
Albion Dockside Works
Bristol,
BS1 6UT
England

Tel: +44 (0)117 930 6148
Fax: +44 (0)117 927 6874
Email: ses@seetru.com

If you are enquiring about services in the north of England & Scotland you can contact your local refurbishment centre located at:

Seetru Engineering Services
Unit 4, Navigator Court,
Preston Farm Business Park,
Stockton-on-Tees, TS18 3TQ
England

Tel: +44 (0)7772 160 491
Fax: +44 (0)117 927 6874
Email: ses@seetru.com



Seetru Limited are internationally renowned manufacturers of pressure relief valves and liquid level gauges for a variety of industries, from compressors to ship building and power stations.

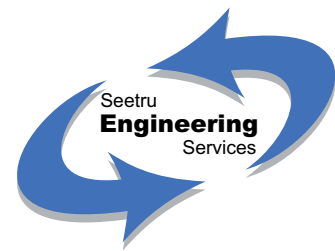
Founded in 1949 with the aim of producing the finest liquid level gauges so that customers could see the *true* level even under the most severe conditions.

This philosophy of making the finest through innovation continued with the inception of the Seetru range of pressure relief devices, circa 1950; the Seetru Tutchtite® sealing system revolutionized the safety valve market with valves that do not leak even after repeated popping and for high pressures.

Today, Seetru strives to produce the very best safety relief valves that can be made at a price that our customers can easily afford. Seetru valves are, for instance, used very widely in the compressor industry for their quality, low cost, low life cycle cost, durability and pressure tightness.

We haven't stopped there either, with a policy of continual innovation and development we look at opportunities where we can add our distinct inventiveness to other areas and expand our business, so we now operate four additional business units:-

Seetru Engineering Services (SES) – A complete problem solving service for pressure relief valve inventories and engineering maintenance services, backed by all the resources and expertise of Seetru. SES provides on-site and off-site calibration, test, overhaul and maintenance services including site surveys and inventory management as well as maintenance planning and management. Seetru Tru-test® technology provides state-of-the-art in-situ safety valve testing and calibration capabilities. The patented Seetru Condition Rating® technology provides for in-situ safety valve health monitoring and Risk Based Inspection management of safety valves as well as calibration.



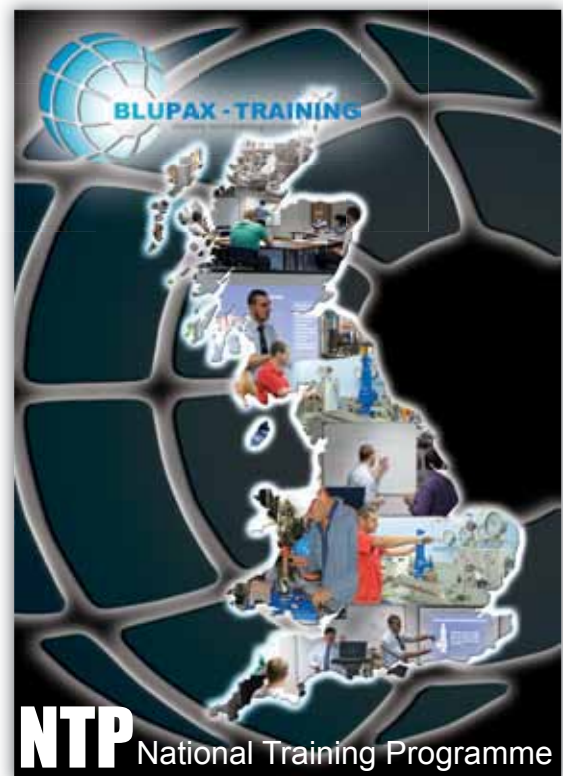
Leser UK – Europe's largest manufacturer of safety valves, the Leser range of safety valves goes up to 16" (400mm) and includes all styles and types of safety valve, designed and manufactured to all the leading international standards including; DIN, ASME and API526. Leser valves carry comprehensive worldwide approvals and can be manufactured in a comprehensive range of standard and special materials as well as to special design criteria. The standard ranges of valves are available on very short lead times, often ex-stock

Blupax – Is a web based source and supply business offering a single source supply service for a wide range of engineering products; from safety valves to ball valves, check valves and gate valves to personal protective equipment. Blupax can supply products normally with 7/10 days or next day for items held in stock; it is also able to add new products to meet customers' requirements, and will source products and make them available for online purchase.

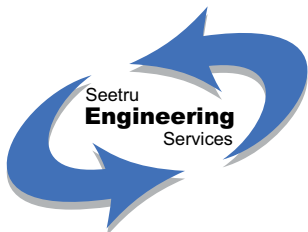


Blupax Training – Blupax Training provides a comprehensive range of training courses, from all aspects of safety valve technology to courses about safety and the environment, mechanical skills, mobile lifting equipment and management training skills. The courses are modular and adaptable and can be developed to incorporate customer specific requirements. Safety valve training course modules range from principles of safety valve design, sizing and selection to practice of in-situ safety valve testing, safety valve test and maintenance as well as best engineering practice for the management of safety valve inventories.

Other Products & Services from Seetru Limited



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Our Distributor

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