

Seetru  
**Engineering**  
Services

**- Redefining Maintenance Standards -**



**LESER**  
AUTHORISED REPAIR CENTERS

**LESER UK** Bristol & Stockton-on-Tees



## 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 68 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, 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, lifespan and maximizing the availability and performance of processes and equipment in many of the world's most challenging environments".

Mark Reeve  
General Manager  
Seetru Engineering Services

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## Our Strengths

The refurbishment, testing and resetting of Safety Relief Valves is the backbone of our work here at Seetru Engineering Services. Our highly experienced, ASME approved, technicians will ensure that your Safety Relief Valves are thoroughly serviced and returned back to you good as new.

*"Our standard turnaround for this service is 3 days, next day, or even same day by arrangement"*

Our workshops are kitted out with a wide range of equipment so we are able to provide engineering solutions to any valve related problem.

## Standard Refurbishment

For valves which require a complete overhaul including internal cleaning we offer our Standard Refurbishment Service. The following is a breakdown of the steps carried out during the process:

- Pre-test
- Disassemble
- Inspection
- Internal & external cleaning Disk & seat lapping (when applicable)
- Assemble
- Test & reset
- Re-certify
- Tag & cap



### Test / Reset & Certify

For valves which require no cleaning or dis-assembling, but need re-certifying or resetting we offer our Test/Reset & Certify service. The following is a breakdown of the steps involved:

- Test & reset (if valve requires resetting)
- Re-certify
- Tag and cap
- Return to customer



### Part-Fitting, Test & Certify

For valves which require re-certifying or resetting, but also require a new part (for example, a new spring, seal or inlet) to be fitted we offer our Part-Fitting, Test & Certify Service. The following is a breakdown of the steps carried out during the process:

- Pre-test
- Disassemble
- Part-Fitting
- Assemble
- Test & reset
- Re-certify
- Tag & cap
- Return to customer



*Seetru Engineering Services have dedicated national workshops tailored to valve refurbishment that can offer a range of services to keep your valves operating effectively and efficiently.*

*Our highly skilled teams of technicians have experience working with a huge variety of valves and unique gauges from all manufacturers, and all models; they have access to bespoke tools and equipment to aide them in the refurbishing and testing of your valves.*





## Isolation & Control Valves

Seetru Engineering Services do not only provide safety valve maintenance services, our highly skilled technicians have the experience and knowledge to test and refurbish many types of valves and other plant equipment: From Isolation & Control Valves to Steam Traps and Pressure Reducing Valves, our technicians have the knowledge required to ensure they run as efficiently and effectively as they are intended.

### Isolation & Control Valve Maintenance

During their time in service, Isolation & Control Valves are subject to general wear and corrosion. It is therefore necessary to have regular inspections to ensure these valves are operating effectively. Through cleaning, machining and replacing parts we can restore your Isolation & Control Valves to perfect working order.

*“Gland Packing and Seals are the most common parts to degrade quickly - these should be replaced at regular intervals”*

The frequency of these inspections is dependent on the severity of service conditions. Depending on the location in which the valve is situated you may be interested in our Resurfacing and Painting services, valves that are situated outside are particularly susceptible to corrosion.



## Pressure Reducing Valve Maintenance

It is important for Pressure Reducing Valves to undergo regular maintenance while they are in service, keeping the valve and valve seat clean and in good condition is imperative to it working effectively. As part of our standard Pressure Reducing Valve refurbishment service we ensure these are kept clean along with other crucial parts of the valve, including; the strainer (or strainer screen), spring housing and bellows assembly.



## Steam Trap Maintenance

Routine maintenance of Steam Traps is vital to ensure defective traps cause minimal losses to a system. A major difficulty has always been the accurate and effective identification of faulty traps. Incorrect diagnosis can lead to faulty traps remaining in service (causing problems & expense) and also reliable, good condition traps being replaced unnecessarily. Accurate diagnosis is therefore a must for any maintenance program.



## Pressure Gauge Calibration

There are many reasons why Pressure Gauge Instruments can lose accuracy, but, though our periodic testing and calibration service we are able to highlight these causes and offer measures to prevent them recurring.

Calibration guarantees your gauge's ability to operate at peak performance. Gauges should be tested routinely and certification maintained to show this is happening.





### Surface Cleaning

Manual surface cleaning can be used for small to medium amounts of rust, substance buildup and dirt. Chemical cleaner, abrasive pads and air powered wire brush tools produce a clean metal finish. This method is mainly used on smaller components such as spindles, small springs and valve bodies that are fragile or require high accuracy, and therefore cannot be shot blasted.

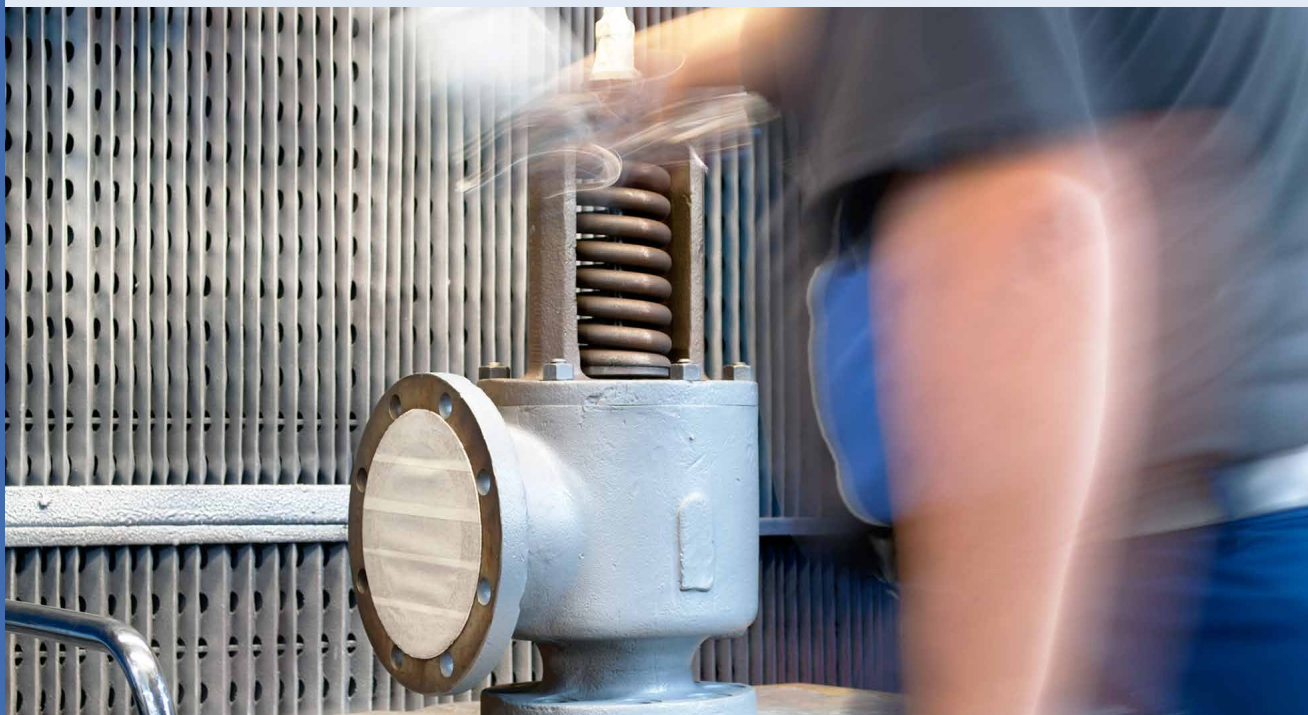
### Lapping

For valves with metal-to-metal sealing faces we offer lapping services, whether hand lapped or machine lapped we ensure the valve seals perfectly. We use different grades of paste which gradually get finer and finer to produce a polished flat surface. Using our optical flats and monochromatic light we can see the light bands across the surface which lets us measure the optical flatness of the metal with high accuracy.



### Shot Blasting

For large amounts of rust, substance build-up and dirt, valve parts and large components can be placed into our shot blasting machines which will completely strip away loose layers to leave a clean surface. This process is used on larger more robust components such as the body and bonnet as they can withstand the forces of the shot blasting and don't need to be to a precise tolerance.



### Painting

We offer painting as an option for all our re-furbishments and can supply a full range of colours and finishes. We have dedicated ventilated spray booths that allow us to paint valves immediately after refurbishment reducing turnaround times and costs. There are many reasons to get your valve painted, non-stainless-steel valves require at least a coat of paint to protect their surfaces from rust and exposure to the elements.



### Chemical Bath

For components that have large amounts of rust, substance build-up and dirt, but are not robust enough to be shot blasted, we use chemical baths. Components are left to soak, which gradually removes the layers of built up dirt and deposit. This is especially useful to clean more intricate components that are hard to clean with other methods, for example, Level Gauge Guard Tubes.



### Degreasing

For valves that are to be used in a hygienic environment or on a medium such as pure oxygen we provide a Degreasing service. This ensures that no grease is present internally or externally, which could lead to hazardous combustion. It is vital that grease is completely eliminated, we use UV light to indicate if any substance is still present.



*HACCP service can be provided*



# SITE SERVICES



**SES provide various on-site services. We have specialist ASME approved valve technicians who can be quickly mobilized to perform a range of engineering services.**

**Whether it be on-site valve refurbishment or in-situ testing®, we ensure that your plant's safety devices are 'Fit For Purpose' by being set correctly and that they will perform in an emergency as required and as the manufacturer intended.**

**We have specialized service vans fitted with valve testing rigs and refurbishment equipment that can be with you, providing on-site services, at very short notice.**

## **24/7 Emergency Call Out**

**Our engineers can be contacted 24 hours a day, 7 days a week.**

### Mobile Workshop

Seetru Engineering Services mobile workshops offer our customers total on-site valve servicing. Our mobile workshops are fully equipped with all the refurbishment and testing equipment needed to overhaul valves. Mobile workshops can be mobilized at short notice to respond to customers' refurbishment needs.

### No need to send your valves off-site!

Sending your valves off-site can be a stressful time for site engineers - adding time and uncertainty to the refurbishment process. Seetru can bring the facilities to you in the form of our fully equipped Mobile Workshops. In addition, during busy times (eg. shutdowns) we do not require any of your workshop space. Seetru can refurbish, test and certify your valves directly on the same day you remove them from service and present them back fully certified for return to service within a very short time frame.

### In-situ Valve Refurbishment

Do you have welded-in valves? very large valves? or perhaps valves which may take a lot of time, effort and cost to remove? - Simply leave them in-situ and let our ASME certified technicians pre-test, dismantle, inspect, refurbish, rebuild, set, test and certify your valves - all while they remain in position on your system. Set pressures will be certified using our in-situ Tru-Test®, thus providing certified proof of correct setting.

### Any Valve, Any Size, Anywhere!

Regardless of size, pressure or location, our experienced engineers will provide solutions tailored to your requirements.

### Same Day Certification

We can test, refurbish and set your valves and provide certification all on the same day (at your location if required).

### Additional Services Include:

- In-situ refurbishment, testing & certification
- Surveying and valve management
- Isolation valve in-situ lapping and polishing



MOBILE WORKSHOP

*What are the benefits of using the Seetru Tru-Test® System for In-situ Safety Valve Testing?*

Dismounting safety valves from their operational location can be time-consuming and expensive. The Seetru Tru-test® system provides the capability to test safety and relief valves in-situ, eliminating the need to remove the valve from the system or shut the system down. In-situ testing of this form is part of a carefully planned and monitored test and maintenance regime, which also includes periodic strip down, inspection & overhaul, and a highly cost effective means of managing safety valve and relief valve inventories.

The Seetru Tru-test® system offers the capacity to test in real operating conditions. This 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.

### Features of the Tru-Test® System

- Objective, accurate and reproducible evaluation of set pressure.
- Tests can be “hot”, i.e. in-situ with medium pressure acting on the safety valve, or “cold”, i.e. on or off site and in-situ with no medium pressure acting on the safety valve.
- Highly accurate transducers (0.1% accuracy) are used to measure force and lift.
- Fully automatic test and control of test, the test takes place without human operator intervention.
- Pre-programmed computer controlled test cycle.
- Pre-programmed safety limits are sensed and managed automatically during the test cycle in order to prevent damage and to provide fail-safe operation.
- An integrated pressure transducer can be used to provide the most accurate measurement of actual system pressure at the time of the test and as the test evolves.
- Seetru Tru-test® equipment is ATEX approved for operation in potentially explosive atmospheres.
- Lift limitation is pre-established and provided to minimise the risk of valve damage or a full lift safety valve popping open during test. The computer controlled pre-programmed test eliminates the chance that the inherent vagaries of a human operator manually controlling the lift might result in the safety valve lifting.
- Ability to provide power driven closure of safety valve, should the valve pop open during test.
- Equipment and procedures designed to enhance operational Health and Safety.
- The Seetru safety valve test method using the Tru-test® system is widely approved, for instance, by Lloyds Register of Shipping and the Insurance Industry.
- Both set pressure and full lift tests available.
- Fully reproducible and objective footprint/benchmark tests for valve health monitoring.



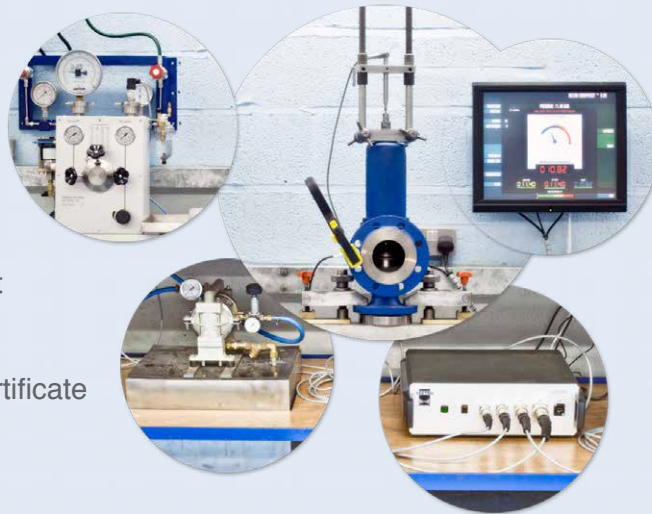
## Seetru Compu-Test™

- Accuracy & Consistency -

Seetru's Compu-Test™ system provides a highly accurate digital recording of a valve's leak, set and re-seat points. Using pressure transducers to measure these different points and displaying them on a computer screen, the Compu-Test™ removes the risk of human error which can occur with manual readouts. The Compu-Test™ system also makes calculations to see whether the test results meet industry safety standards and regulations.

### Benefits of the Seetru Compu-Test™

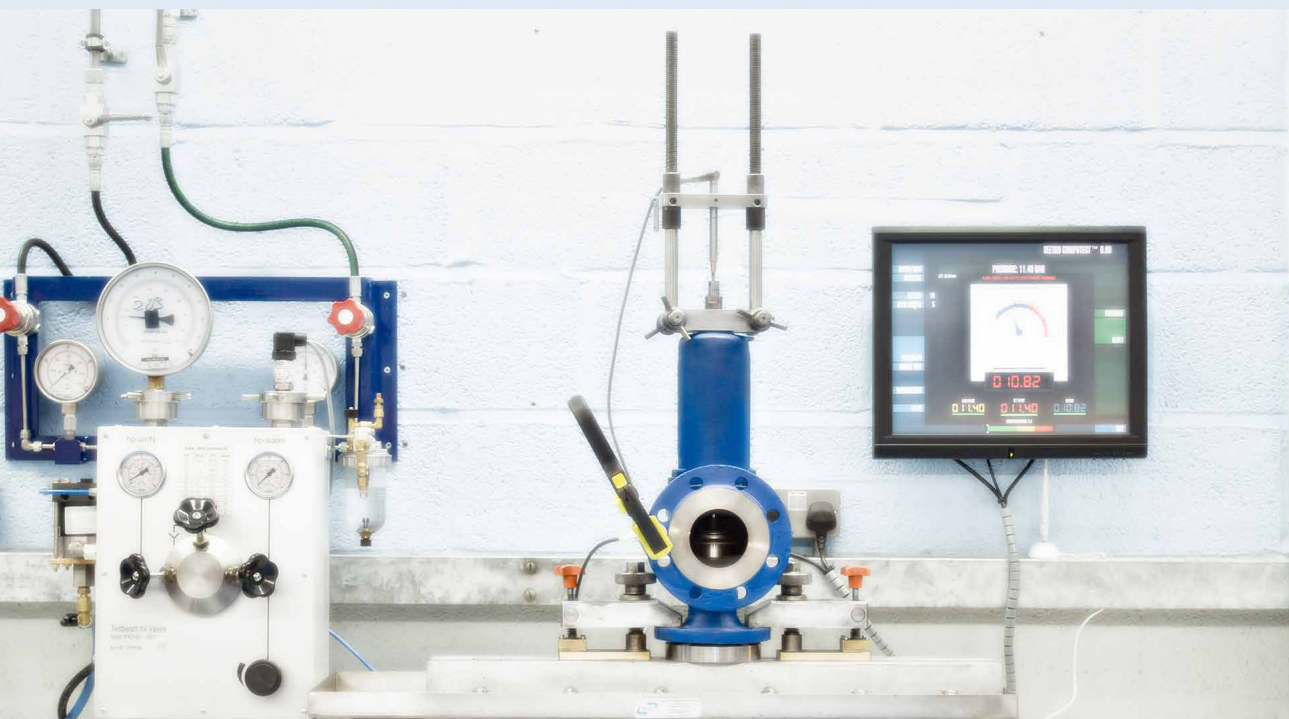
- Fully computerized
- Automated and objective
- Set pressure measurement
- Electronic bubble count leak rate test
- Condition Rating® measurement
- Detailed analysis of valve operation
- Computerized full test records for certificate
- Test results printout for certificate
- Patented worldwide



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.

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.

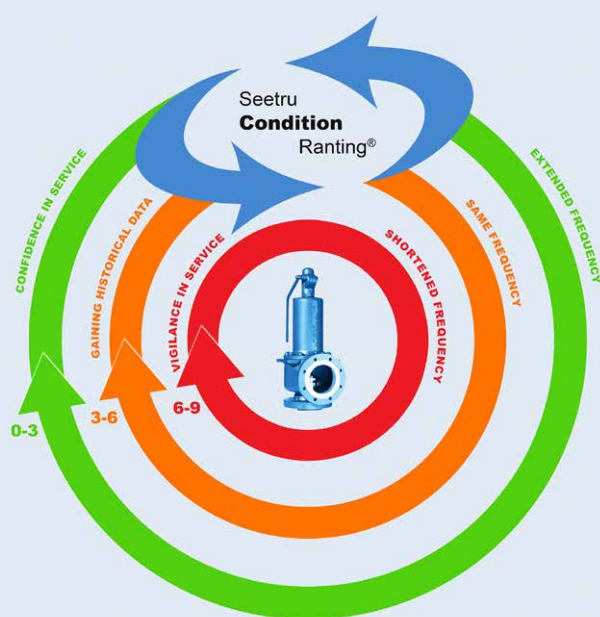
The electronic measurements are objective and are recorded directly into the system database for future use. The system will generate certification documentation recording all the diagnostic test data and the summary diagnostic results.



# SEETRU COMPU-TEST

The biggest challenge during safety valve planned maintenance programmes is to correctly determine maintenance frequencies. Maintaining a valve just because a period of time has passed is inefficient, ineffective, costly and potentially risky. Gaining assurance that your safety valves operate as the manufacturer intended and certified when necessary, requires far more detailed and additional information than a normal test and component condition report can provide.

Seetru Engineering Services have developed our own Seetru Condition Rating® technology that provides a measured and concise analysis of safety valves. Using our Compu-Test™ software we can measure and record all the important parameters and produce a simple to understand reading -



**0 - 3** = An “as new” condition and within the manufacturer’s design and build tolerances, very little or no deterioration.



**3 - 6** = A valve that will still protect the system but is starting to show signs of deterioration.



**6 - 9** = Absolute limit of acceptability and requires remedial work at the very first opportunity.



**10** = Valve will not protect the system as the manufacture and designers expect.

*Risk Based Inspection Made Possible*



## Expertise

As a result of years of practical experience of valve maintenance in the oil & gas industry, 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, whenever or wherever they may occur ...ensuring your safety devices are back in full working order in the shortest time possible.

- Seetru Ltd employees over 120 staff in locations nationwide and have a vast array of skills.
- Being a UK manufacturer and service provider, we must be competitive in all our tasks and implement the latest technologies.
- We develop rounded engineers through our apprenticeship intake scheme.
- We take pride in developing individuals by encouraging reflective learning techniques.
- We appraise and evaluate employer training needs and have been awarded 'Investors in People' status.
- We are extremely honored by our low staff turnover and take our Human Resources responsibility very seriously.
- All employees are aware of our quality systems and use continuous improvement programmes.

## Approvals

Seetru understands that you need underpinning support to place your trust in our support. Therefore we have invested heavily in approvals and support from the insurance industry.

- Safety Assessment Federation Ltd – SAFed – In-situ Safety Valve Testing
- ASME Trained Safety Valve Technicians
- Lloyds Register Approval for Seetru on-line lift assist valve testing method
- Royal Sun Alliance approval for Tru-Tester®
- Lloyds Register Approval for Seetru Single-Shot Condition Rating® Testing
- Zurich Acceptance for in-situ testing and refurbishment procedures.
- ISO 9001:2008 Quality Management
- Investors In People (As of January 2003, Seetru Limited was recognised as meeting the National Standard of effective Investment in People)
- First Point Assessment (FPAL) empowered by Achilles Certificate of Registration
- Utilities Vendor Database (UVDB) empowered by Achilles Certificate of Registration
- Safe Contractor Accreditation (Accreditation in recognition of reaching the SAFE contractor health and safety standards.



## CONTACT US



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# LESER

AUTHORISED REPAIR CENTERS

**LESER UK** Bristol & Stockton-on-Tees

### GLOBAL

SES are able to distribute our engineering solutions to you anywhere in the world.

We have provided services in the following regions:

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



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