



On-line Leak Sealing - Relieving the Pressure From You

TXY-TECH, INC.

Stop the Leak
Back to Safety
and Green 

Realizing NO-LEAK for Process Industries

With a combined 30 years of experience, the founders of TXY have brought their commercialized R/D and service experience to the United States which was accumulated from years of studies at professional institutions and field services by effectively integrating three attributes of On-line Leak Sealing (OLS) Technology; namely, Sealants, Clamps & Tools, and management of services to respond to a variety of inquiries.



TXY-Tech enjoys high prestige throughout the world, and its products are recognized world-widely in Malaysia, Singapore, Indonesia, the Philippines, Bahrain, Qatar, Saudi Arabia, Australia, Canada, Chile, Colombia etc. Meanwhile, the customer type ranges from transnational corporations such as Shell, Exxon Mobil and BASF to medium and small sized national companies.

Over 3,000 Certified Professionals have been trained and are continuously deploying TXY OLS Technology for Process Industries: Oil & Gas, Refinery, Chemical, Pharmaceutical, Power Plant, Food Processing, Metallurgy, etc., which enjoy their services of plant uptime maximization, environmental impact minimization, risk reduction and legal liability mitigation.



Chairman of TXY China and President of European Maintenance Association



Middle East Oil & Gas Trade Show

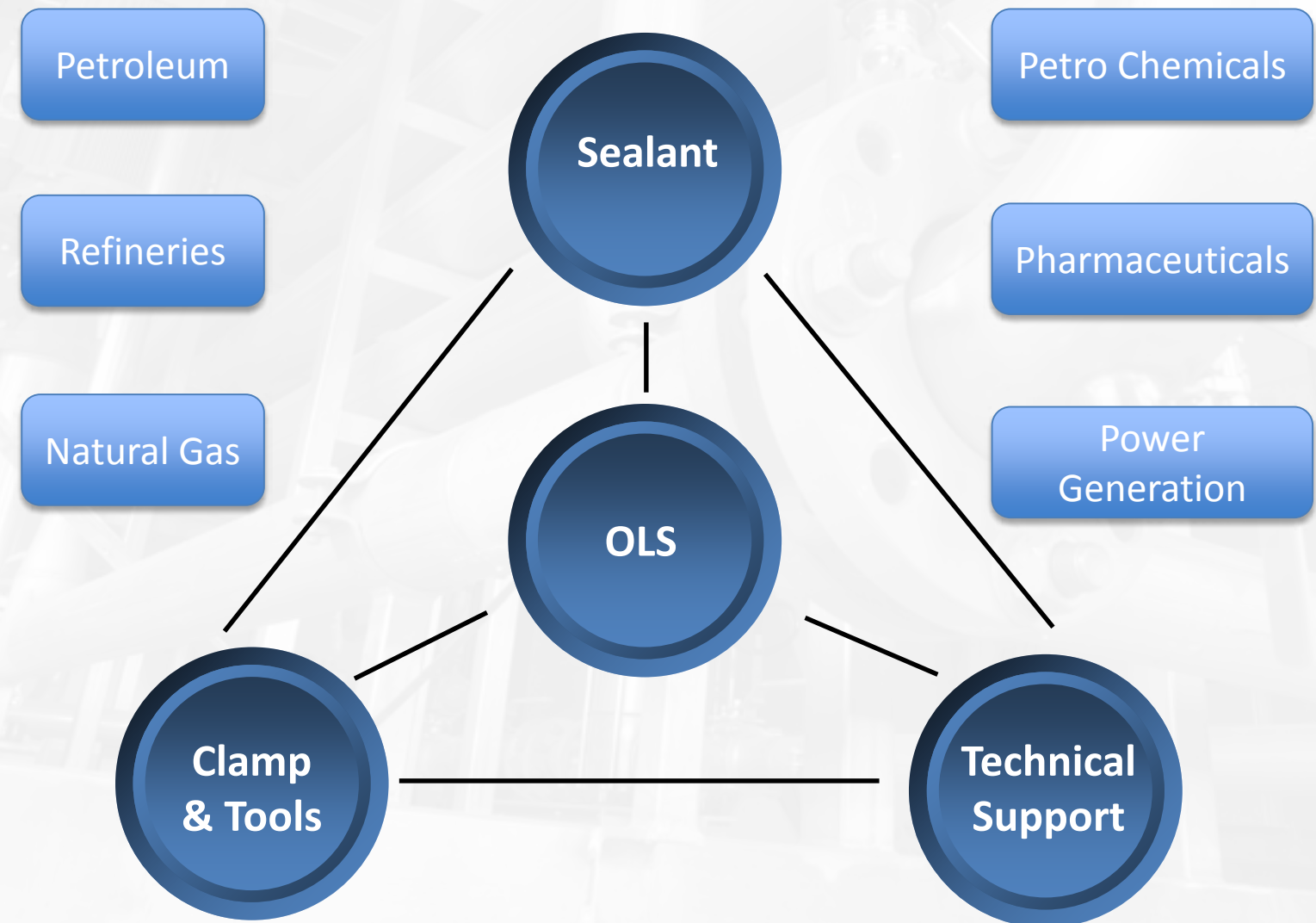
Our Strategy:

TXY recognizes our OLS Technology can be the much needed solution to Process Industries beyond Chinese borders. The uniqueness of our Integrated Solution is in our R/D commitment, supply chain integration, specialized product development and technology improvement that will guarantee a solid return to your investment. Therefore, we are here in the U.S. to share our experiences and success with potential customers and service partners for OLS Technology to achieve much greater problem solving together.

Our Technology -- Online Leak Sealing (OLS) Technology

On-line Leak Sealing (OLS) Technology is a modern maintenance technology that came into existence in 1920s. Through TXY's own research and development efforts during the past 30 years, OLS Technology has been structurally innovated and advanced to a new level of wide application and safety guarantee.

In principle, the OLS Technology consists of three attributes illustrated as below:





Sealant

Invented by TXY-Tech's founders, TXY serial sealants enjoy the quality of covering wide range of low/high temperature (from cryogenic to 1650°F), low/high pressure (from vacuum to 4641 psi) and wide process medium resistance. Recently, we further developed sealant products for moving parts (such as valve stem) application. As follows some of the main facts that confirm this statement:

Competitive Advantages of TXY Sealants:

- To be the first in the world delivering 100% Environmentally safe and friendly:
 1. Our sealants do not have fluorides, chlorides, silicone or silica in their formulation which may cause stud cracking or corrode your pipes, clamps or enclosures
 2. Our sealants will not degrade your system in any way
 3. Our sealants are non-toxic and non-corrosive
- We are also the first in the world to incorporate NANO technology into sealants:
 1. The organic NANO material will actively seek out the leaking source and extrusion point
 2. The organic NANO material will congregate at the leaking source and seal, helping with seal ability and bridge ability
- First in the world to break the Thermal Barrier on our rubber compounds:
 1. The highest temperature rating for rubber is 799°F, and then it starts to break down by either melting and cooking off or turning into powder
 2. Our sealant has a thermal threshold of over 1472°F even up to 1650°F
- Our rubbers are the only ones on the market right now with Memory Elastic technology:
 1. If the temperature and pressure drop for any reason our rubber will adapt to the new conditions by about 10% of its body volume
 2. As the temperature and pressure come back on line it will expand back to the memory of the clamp or enclosure it is still maintaining the seal and it will do this many times over many cycles
- Chemical Compatibility:
 1. Over 300 different compatibilities with mediums like Water, Steam, Gases, Chemicals, Acids, Oil & Gas derivatives, among others. (Please refer to TXY Sealant Chemical Compatibility Chart to review a complete diagram)



Field case using our sealants



UNIVERSAL Products

TXY-18 # (tube & flat)

TXY -18# sealant could be applied to almost any leaking condition.

Feature: Wide medium resistance with good flexibility and pliability; heat-curing; applicable for flanges, pumps, piping, boilers, heat exchangers etc. under high temperature and high pressure.

Temperature Range: TXY -18# :175°~1470° F



TXY-18A # (tube & flat)

As an upgraded version of TXY-18# sealant, TXY-18A# includes NANO material in its composition, which significantly improves its heat-resistibility and its sealing effect. Applicable for flanges, pumps, piping, boilers, heat exchangers etc. under high temperature and high pressure.

Temperature Range: TXY - 18A#: 300°~1650°F

SPECIALITY Products

Customized types of sealants tailored for special leaking condition.

TXY-8

Feature: Non-curing with strong chemical, oil and liquid resistance; applicable for all kinds of leaks on piping or equipment.

Temperature Range: -380°~500°F



TXY-16# (tube & flat)

Feature: Heat-curing with high flexibility and pliability; applicable for stuffing boxes, rotary pumps and flanges etc.

Temperature Range: <1260°F

TXY-B8

Feature: Thermal-expansion; non-curing; excellent pliability under high temperature, applicable for stuffing boxes, rotary pumps and rotating shafts etc.

Temperature Range: 32° ~ 1112°F



Clamp material selection and clamp structure design are critical for successful leak sealing operation. By taking leaking process physical conditions into account, stress analysis and calculation are rendered to ensure a pressure/temperature-resistible clamp structure. The TXY-Tech's unique clamp provides connections between an injection gun and the clamp cavity for the sealant to be optimally injected. Meanwhile, the shape (geometry) of a clamp varies depending on the location of leaking piping or equipment.

Clamp & Tools



Injection Tool Kit



Magnetic Sealer



G-clamps and Injection valves



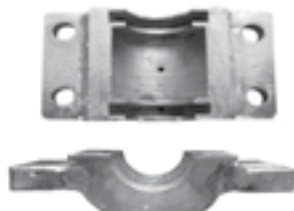
Flange Spreading & Alignment Tools



Injection Gun



Hydraulic Nut Splitting Tools



Parameter Seal Clamp



Piping Clamp

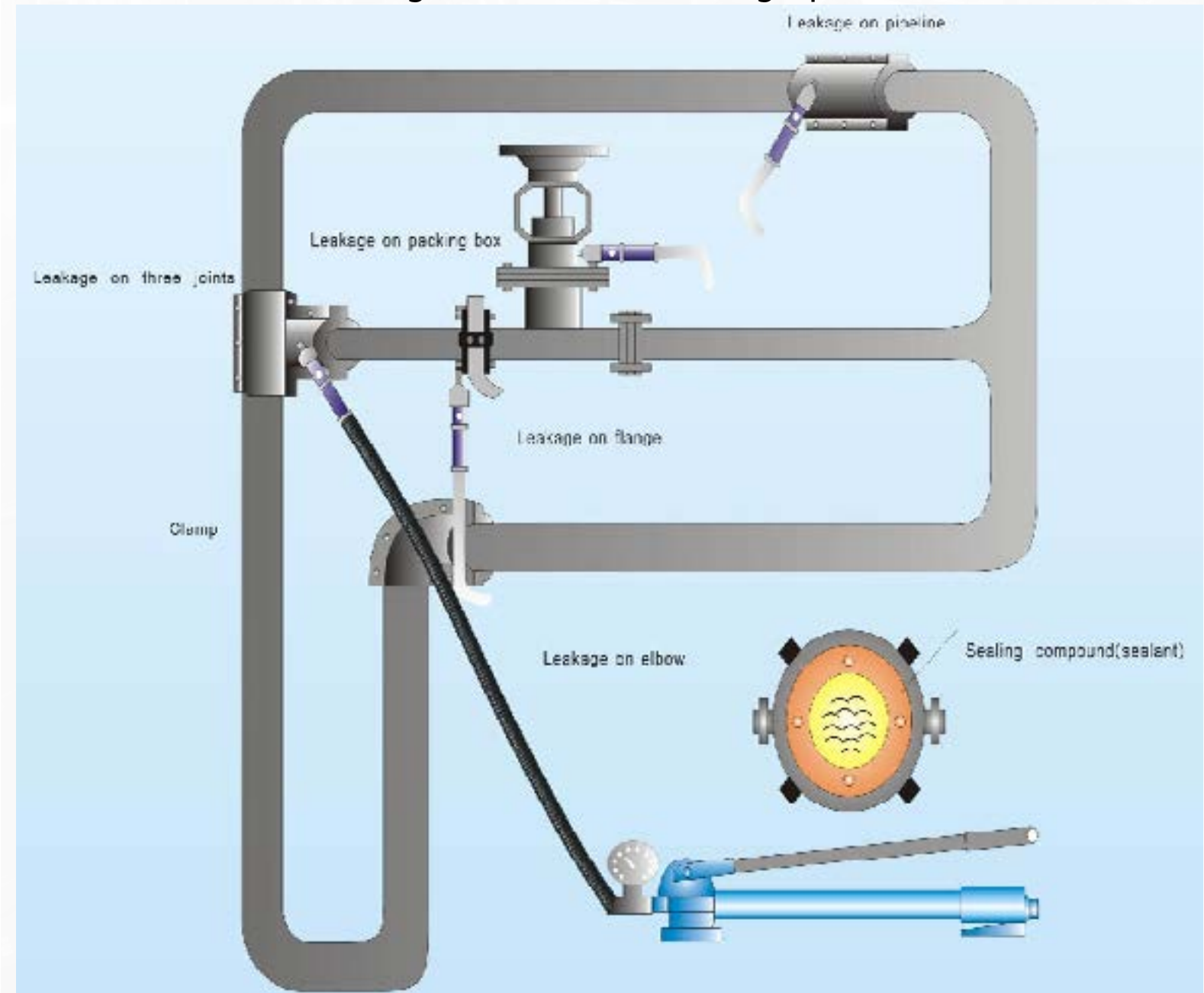


Tee Clamp

Technical Support

1. Training Service: TXY is able to customize your training needs for OLS service techniques either at your own facility or at TXY headquarter in China.
2. Clamp Design: In-house engineers of TXY will assist you with clamp design requirements.
3. Technical Consultation: Provide continual support of on-line leak sealing procedures and advice for special case requirements in line with our project management guidelines.
4. Emergency Call Service: Our designated third-party service providers respond to customers' emergency calls for site services.

Leakage Schemes and Sealing Operations





Training Service

Generally, the training program aims at equipping our trainees (site practitioners and management personnel) with technical knowledge, safety guidelines and practical operation capacity. Within the three-day training course, the following topics are clearly explained and thoroughly expended:

- The overview of On-line Leak Sealing Technology
- Leak Survey and Clamp Design
- The Special Tooling
- The Injectable Packing Compound
- The Operation Technique and the Sealing Method
- The Security Protection Information



Preparation for Training & Demonstration in U.S. office



Theoretical Training in U.S. office



On-site Training in China



On-site Training in China



Technical Consultation

Over years of field works and training experience, TXY-Tech has developed a set of Standard Operational Procedures (SOP) which has been approved as Chinese National Standard for Pressure Vessel Personnel Qualification. Along the lines of the SOP, TXY-Tech provides technical consultation on project management and quality control of online leak sealing tasks.

To illustrate the above mentioned SOP that TXY-Tech has initiated and developed, a representative case study from our third-party providers is presented below to help promote better understanding of TXY's OLS Technology and its advantages.

I. BASF Corporation in China: Vessel Head Flange Gasket Leakage

1. Leakage Location:



2. Physical Dimension:

Medium	System pressure	System temperature	Energy Saving
Steam	507.6psi	466°F	1204.74Btu/Lb

3. Standard Operational Procedures:

- a. Survey the leaking location and surrounding environment;
- b. Select sealing method (Clamp/Steel Strap/Threading);
- c. Order clamp, as required in this case;
- d. Install the clamp to establish the sealing cavity;
- e. Inject sealants;
 - ① The first Injection hole should be opposite to the original leaking point;
 - ② Inject sealants in an order that approaches the leaking point;
 - ③ Special technique: Inject by using the 90°

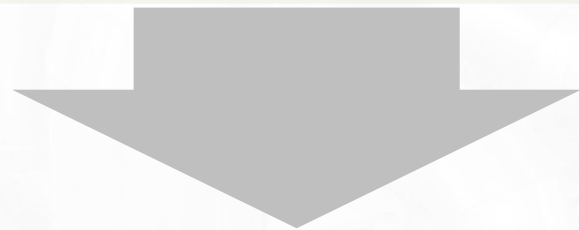


4. Sealing effects
 Repair the leaking, avoid the sound pollution, and save 793,133 Btu/d amount of energy.



Our Mission: Realizing No Leak for Process Industries

What NO-LEAK Strategy Will Bring



Maximize plant uptime and production efficiency



Reduce safety risks and mitigate liability



Training development and Technical support



Minimize environmental pollution and contamination

TXY - Tech's Clients





9000 Southwest Fwy., Suite 330
Houston, Texas 77074
Tel: 281-822-8888
Fax: 281-822-9888
website: www.txy-tech.com