

Steam Express



Safety First! Risk Assessment

by Bayu Tri Subandono, SXS Indonesia

As in all industries, even in our daily lives, safety is always our main concern. In order to achieve a safe condition, a risk assessment process is mandatory.

What is a Risk Assessment?

Risk is a likelihood of a hazard which causes harm.

Risk Assessment is a process of evaluating potential hazards/risks in our work or activities, its aim is to provide precautions so as to prevent people from harm or become ill.

Step 1 – Identify the Hazards

Hazards can be physical, psychological, chemical, biological, or environmental; e.g. electric shock, slippery surfaces, working at height, etc.

Step 2 – Who may be harmed?

In this step, we identify groups of people e.g. staff, contractors, visitors, young and inexperienced worker, expectant mother or people with disabilities.

Step 3 – What are the risks?

We need to establish the likelihood (risk) of a person getting injured and what kind of injury and severity which can be expected. This is our assessment, which is largely based on the facts that we have and the type of risk we are assessing.

To help us on our assessments, we use the Hierarchy of Controls (ERICPD), a series of questions which allows us to evaluate the risks.

E - Eliminate - Can we remove the hazard completely?

R - Reduce - Can the hazard be substituted for something safer?

I - Isolation - Can we isolate the hazard from people or vice versa?

C - Control - Can the hazard be controlled through documentation and training?

P - Personal Protective Equipment - Mandatory

D - Discipline - Enforcement of an action system

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Meeting the challenges of delivering innovative solutions for both utility and clean steam systems

From vitamins to vaccines, the global pharmaceutical industry is fundamental to enhancing the world's health and well-being of the human population.

Steam is indispensable to a huge range of plant and high-purity applications within the pharmaceutical manufacturing industry, right from HVAC to sterilisation, which can account to a significant percentage of a facility's energy consumption.

As the world's leading authority on steam system engineering, our experience can help you comply with stringent industry legislation, health and safety. Adhering to the Current Good Manufacturing Practice (cGMP) regulations enforced by the FDA.

Our innovative solutions will ensure that the right quantity, quality and purity of steam reaching your processes at all times. This will benefit your organisation through increased productivity with minimal downtime, which ultimately reduce your operating costs and carbon emissions.

Our capability expands from plant steam utilities, to be-spoke solutions and right up to clean utilities.

From the strong support rendered by our global network of specialized engineers, we are able to use our knowledge of the steam and condensate loop to cater to your specific needs. We can assist on steam system concept design all the way through to operational energy management which will support your aim towards sustainable manufacturing.

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If you need someone who understands your processes and the exact standards which the pharmaceutical industry demands, who better to turn to for all your steam needs than Spirax Sarco?

Key Benefits:

- Expert advice on critical steam applications in the pharmaceutical industries
- Single source of supply for steam solutions from plant to high-purity process applications
- Engineered packages for seamless integration with ease of field installation
- Assurance of full supporting documentation
- Global presence with local service and support
- Support towards sustainable manufacturing, from conceptual system design to operational energy management.

Spirax Sarco is your first choice for all your steam engineering needs with a single point of supply where service and quality are guaranteed. We have developed a comprehensive range of steam and condensate solutions, providing benefits of improving heat transfer efficiency, reducing corrosion risks, recovering flash steam and providing effective condensate management solutions.

These are aimed at reducing fuel, water and effluent charges as well as energy losses, to achieved planned savings and improve your systems' performance.

Complete packaged solutions

We offer standard or bespoke engineered packages – from process heating to energy saving solutions. Packages are pre-assembled, sized and configured for optimum performance, seamlessly integrated, factory tested and inspected allowing faster field installation and incurring minimum downtime – all with single source responsibility for lower lifecycle costs.

High purity

Clean and pure steam has formed an important part of Spirax Sarco's business since we pioneered the first true hygienic steam trap in the 1980s and remains core to our high purity range.

Our products extend from generation to distribution, to provide pure, dry, endotoxin-free steam. Such is our steam supply expertise and advanced solutions that we can offer you technologies to suit every different steam application, including:

- Steam-in-place
- Sterilisation
- Humidification
- Sanitary heat transfer
- Steam distribution and condensate return
- Steam generation

Upcoming Webinars

Sterilisation, Steam Quality, Bioreactors & CIP/SIP in Pharma

- Understand the principles of sterilisation in Pharma
- Recognise the different types of steriliser used relative to the product/material to be sterilised
- Define steam quality & purity, and explain why it is so important to effective sterilisation
- Understand why steam quality testing is important to effective sterilisation
- Understand the biopharma process, and where to find bioreactors
- Give a simple overview of the Biopharma manufacturing process
- Understand the impact of steam quality management relating to Bioreactor CIP/SIP performance
- Understand the importance of steam trap selection for CIP/SIP applications
- Understand which steam system components are critical to steam quality

Date:

Wednesday, Aug 19, 2020 2:00 PM - 3:00 PM SGT

[**REGISTER HERE**](#)



Step 4 – Record Risk Assessment is part of Risk Management Process

Generating a Risk Assessment gives us an opportunity to read through our findings and correct any errors. It also encourages us to consider hazards and their associated risks in a logical and structured manner.

Step 5 – Review our Risk Assessment

The general rule of thumb is that we review our Risk Assessments annually, or whenever there has been some form of incident – in an interval suitable with the risk.

This practice is also important with the current global COVID-19 situation. Stay safe and healthy!



BT6B thermostatic steam trap

FDA approved
Fully certified



The Spirax Sarco BT6-B is a high specification sanitary balanced pressure thermostatic steam trap that has been developed specifically for use in hygienic environments such as the pharmaceutical, biotechnological and food processing industries to remove condensate with the minimum of condensate retention.

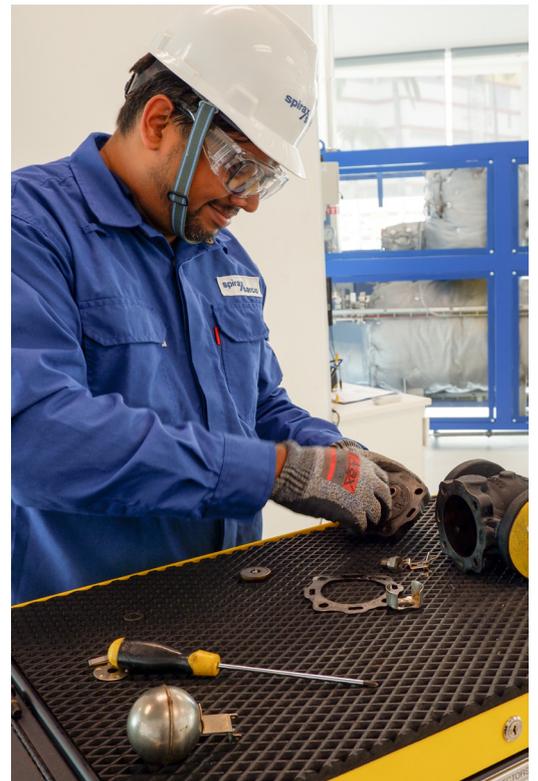
The standard element is extremely sensitive to changes in condensate temperature and is designed to open with a minimum of sub-cooling, typically less than 3.6°F (2°C) from steam saturation temperature at pressures below 36 psig (2.5 bar g). Its unique design, with enhanced features, ensures the BT6-B is effective and economical which exceeds the capabilities of other models currently available on the market.

Key Features:

- Stainless steel with high quality surface finish and FDA and USP class VI compliant seal
- High Capacity
- Improved "near-to-steam" performance
- Safety Clamp for body as standard
- Self-draining design incorporating steep 15° angle towards orifice which exceeds the current ASME BPE 2007 recommendations

Key Benefits:

1. Minimal risk of microbiological growth and high degree of corrosion resistance.
2. The BT6-BL is suitable for main drainage applications with low condensate loads. The BT6-BH is a high capacity trap with high condensate and cold water handling capacities. This ensures minimum back-up at start-up.
3. Superior capsule performance means that condensate is discharged at temperatures approaching steam saturation temperature. This means cooling legs can be kept to a minimum.
4. The trap cannot easily be disassembled by accident and this is an important safety feature to protect operators.
5. Ensures the product is fully self-draining which reduces the risk of microbiological growth.



CONTACT YOUR NEAREST SPIRAX SARCO TODAY!



STEAM AND CONDENSATE SYSTEM TRAINING

Who will benefit?

Designers, plant engineers, senior technicians and those involved in the day to day running of the steam & condensate services.

Objectives

To give a good understanding of the purpose and operation of steam & condensate systems and factors affecting their performance and plant output.

Participants will learn about

- The fundamentals of steam
- Steam Distribution
- Steam Trapping
- Steam trap sizing & selection
- Estimating steam load
- Effective condensate removal
- Condensate Recovery
- Pressure Reduction



Scan Me to view more about training

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