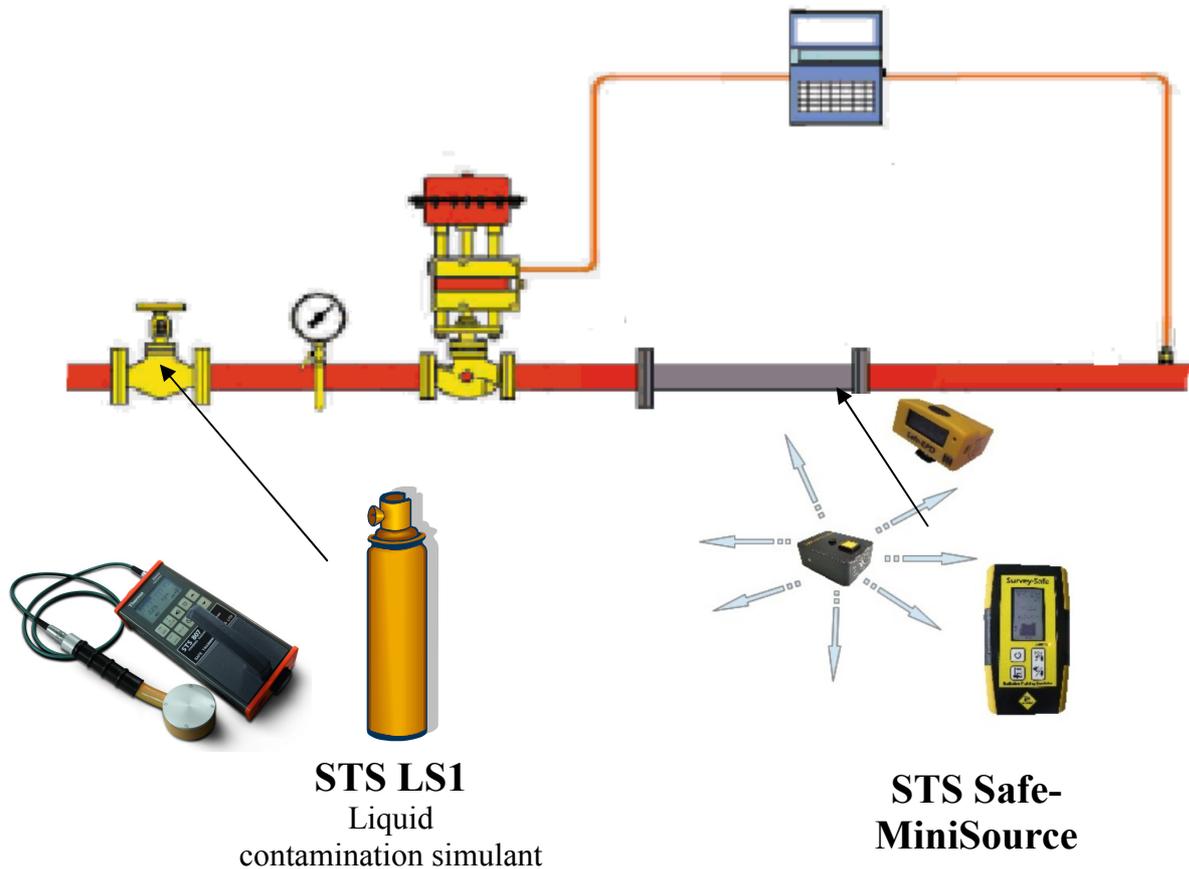


## Combined use of 800 & 900 series STS technology in pipe work mock up



This training scenario is designed to use both the STS contamination and radiation simulators in the identification of a leaking valve generating a radiation field and a subsequent contamination of the pipe work and surrounding area.

The STS Safe-MiniSource is designed to be hidden in a section of plastic pipe within a mock up of a typical plant installation. The source also lends itself to training for nuclear power plants operated on ships and submarines. The Source emits in an approximate spherical field so orientation of the source is not critical.

As the source is a radiofrequency device the mock up must be made from plastic pipe work or the signal from the source will not be seen by the detector. You may wish to set up a general radiation field using a Safe-Variable MiniSource source set on low to give the appearance of a general background field, with the Safe-MiniSource acting as a point source.

A survey team would therefore have to monitor carefully and methodically to identify the actual source of the radiation. These sources can also be used in conjunction with simulated Dosimeters which will accumulate dose and alarm at the set thresholds. The trainee can therefore be shown the affects of time, distance and shielding on their personal exposure and how they should go about mitigating that risk.

The STS LS1 spray is a perfect solution for training in the method of contamination monitoring and in the understanding of cross contamination. The spray is invisible to the naked eye and can be applied to any surface where it will remain for several hours. Trainees can then be shown a section of pipe work and asked to monitor it for any sign of leak or contamination.

The STS 800 series of instruments are specifically designed so that the candidate must monitor the area closely and slowly in order to detect the contaminant. Too fast or too far away will result in no reading.

Once a "leak" has been identified the trainee or a technician if appropriate can be requested to "fix" the valve and then to decontaminate the area.

The real value of training with the 800 series and LS1 spray comes when decontamination is undertaken, just as real radioactive contamination would be transferred and contaminate both its environment and the people clearing it up so does LS1. It can be removed using wipes or damp cloths, but these themselves will then become contaminated and can be monitored to show the transfer of material. Likewise the person decontaminating will inevitably come into contact with the LS1 and again this will be transferred to gloves, sleeves, face etc as the decontamination process is carried out.

LS1 is a liquid that evaporates to produce a gas, the rate of evaporation will be determined by the surface onto which it is applied and the environment in which it is placed. High temperatures will lead to faster evaporation of the liquid and you should bare this in mind when setting up training scenarios.

The spray will usually remain for up to 2 hours in "normal conditions" and will have completely evaporated in 24 hours meaning that there is no clearing up at the end of a training session !