HP Bubbly

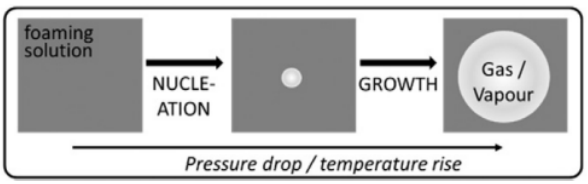
A Gas Leak Detection Liquid

Gas leakage monitoring is one of the crucial activity in plant and industry to avoid unreliable scenarios, which can lead to severe economic losses. Gas leaks can pose both direct and indirect risks which can impact health, environment and safety aspects. Methods and materials to detect the gas leak in cost effective way is important for easy monitoring and to mitigate the losses.

One of the easiest ways to detect any leak is by applying a surfactant solution in aqueous medium. These surfactants moieties interact with the gas, generating foam. The bubbles from the foamy layer can easily be detected visually.

Considering the above, HPGRDC has taken up a project for developing a liquid solution (HP Bubbly). This will replace the import dependence as well as bring down the cost of the product significantly.

The concept of bubble detection involved comes under physical category of generating bubbles by either variation of pressure & temperature.



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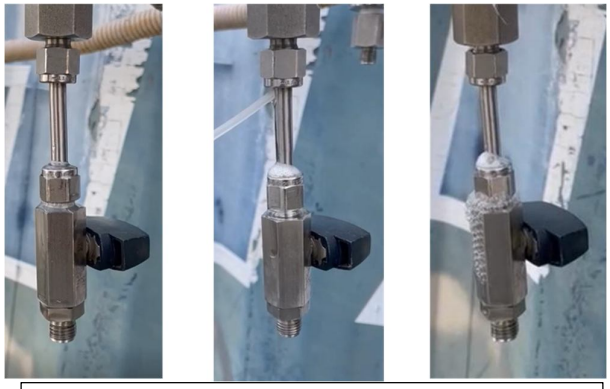
Performance evaluation of the formulations was carried out using ASTM D1173 to obtaining foaming property of the surfactant solution. The method consisted of monitoring foam height of the formulation. The foam height results are tabulated.

Height in (Cm)		
Time (min)	Bubbly	Benchmark
0	1.3	1.3
3	1.3	1.3
5	1.3	1.3

The results were comparable with benchmark. Evaluation of corrosion tendency revealed minimal corrosion.

Physical observation of leak detection for (a) soap (b) Benchmark (c) HP Bubbly are presented in the images below



(a) **(b)** **(c)**

HP Bubbly was scaled up and distributed to all users in R & D for their usage and feedback. Overall response has been positive and product is being used on regular basis for gas leak detection.

Product is scaled up and ready to be shipped to City Gas Distribution units (CGDs) and refineries for demonstration purpose.