## *The UKL Pressure Reducing Station [PRS]:*

*The advantage of using Steam as a Heat Transfer Media in processes, apart from it being cheap and reusable, is that controlling of one Parameter allows all the other parameters to be controlled automatically.*

*Steam when heated, leads to an increase in its Temperature, corresponding increase in Pressure, its Sensible heat, and its Total heat, but a reduction in the Latent heat and its specific Volume.*

*Using this fact:*

*Steam should be distributed at high pressure as it has lower volume and impacts the inventory and its cost. At the same time Steam has higher Specific Volume at low pressure*

*Volume of steam at 1 kg/cm$^2$g* *0.902m$^3$/kg*

*Volume of steam at 7 kg/cm$^2$g* *0.24m$^3$/kg*

*376% more volume to be handled at 1 kg/cm$^2$g as compared to that at 7 kg/cm$^2$g.*

*Therefore it is always advisable to reduce steam pressure near the equipment and not in Boiler House.*

*Also Steam has high Latent Heat at low pressure.*

- *Latent Heat at 1 kg/cm2g* *526.2 Kcal/kg.*
- *Latent Heat at 7 kg/cm2g* *489.8 Kcal/kg.*

  *Latent Heat is 7.5% less at higher pressure*
  *OR*
  *7.5% more steam to be used at higher pressure*

- *Steam should be used at lowest possible pressure that depends on the process temperature to be achieved.*

*This reduction of Pressure is achieved by the assembly of various components such as Moisture Separator, Trap assemblies, Isolation and By Pass Valves, Pressure reducing Control Valves, Safety Valves, Gauges and associated Piping and hardware called the Pressure reducing Station. OR The UKL PRS.*

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*The UKL PRS Advantage includes:*

*All the components, Valves, Moisture Separators, its drain Trap modules, Strainer, piping elements etc are manufactured by UKL and provided as a complete PR Station, to give optimum results for effective steam utilization.*

*The UKL guarantee for the complete assembly as a unit*

*The choice, to use the Safety Valves and Control valves of reputed makes, among the top reputed brands. The choice to use Self Actuated & Pneumatically /externally assisted Control valves.*

*IBR / NIBR Assemblies.*

*The UKL independently developed unique software for the correct and accurate sizing of the PRS valves and components, giving the precise desired pressure reduction within the specified flow parameters.*

*The UKL Pressure Reducing Station is optimally sized to ensure a balanced techno-economic design.*

*Use of Klinger Piston Valves for isolation, will eliminate valve passing & leaking problems.*
*UKL Moisture Separator for efficient removal of moisture and UKL Traps for effective draining of Condensate.*

*Sizes range from 15 mm to 200 mm, in CI and CS MOC.*