Liquid Vaporization Due to Fire PRV Sizing Information Sheet

MERCER VALVE CO., INC.®
AUTO SEAT TECHNOLOGY®

Contact Name: _____ **Phone:** _____

Company: _____ **Fax:** _____

Location: _____ **Email:** _____

Tag/PSV No.: _____ **Quantity:** _____

Please indicate the units used for each field.

1. Vessel Data

- Vessel Diameter: _____
- Vessel Length (seam to seam): _____
- Normal Fluid Level (height or %): _____
- Vessel Height Above Grade: _____
- Vessel Orientation:
  - ☐ Vertical ☐ Horizontal ☐ Sphere
- Is There Drainage and Fire Fighting Equipment?
  - ☐ Yes ☐ No
- Type of Ends:

End 1: ☐ Flat Head ☐ 2:1 Elliptical ☐ Hemispherical

End 2: ☐ Flat Head ☐ 2:1 Elliptical ☐ Hemispherical

- Environmental Factor *F*: _____
  (F=1 for bare vessel)
- Insulation *(If applicable)*:
  - Thickness: _____
  - Thermal Conductivity: _____

2. Requested Connection Size and Type

The requested may not be available since it depends on orifice/valve sizing result.

- Threaded: _____
  - ☐ MNPT x FNPT
  - ☐ FNPT x FNPT
- Flanged: _____
  - ☐ RF x RF
  - ☐ RTJ x RF
  - ☐ RTJ x RTJ
- Lift Lever? ☐ None ☐ Open Lever ☐ Closed Lever

3. Operating Data

- Operating Pressure: _____
- Set Pressure: _____
- Atmospheric Pressure: _____
- Back Pressures:
  - Constant Superimposed: _____
  - Built-up: _____
  - Variable Superimposed: _____
- Allowable Overpressure (up to 21% MAWP): _____
- Known Inlet Pressure Drop: _____
- Operating Temperature: _____

4. Fluid Data (Liquid being vaporized)

- Fluid Name: _____
- Molecular Weight: _____
- Saturation Temperature at Set Pressure: _____
- Latent Heat of Vaporization at Set Pressure: _____
- Does This Require Sour Service Trim?
  - ☐ Yes ☐ No ☐ NACE MR0175
- Ratio of Specific Heats: _____
- Compressibility Factor *Z*: _____
  (Z = 1.0 if value is unknown)

Mercer Valve Co., Inc.® AUTHORIZED BLUE TAG CENTER® "Auto Seat Technology"®

THINK...MERCER FIRST®

CORPORATE HEADQUARTERS: 9609 NW 4th St., Oklahoma City, OK 73127 • 1-800-833-6402 • Phone: (405) 495-6533 • Fax: (405) 495-8728 • sales@mercervalve.net • www.mercervalve.net