MERCER VALVE CO., INC.

91 SERIES SAFETY RELIEF VALVES

INSTALLATION AND OPERATION INSTRUCTIONS

INSTALLATION

The safety relief valve should always be installed on a tank or piping run in a vertical position with the outlet pointing in a horizontal direction. When screwing the valve into the inlet piping, always use a wrench on the inlet connection hex, never wrench on the relief valve body.

One of the most common causes of early failure of relief valves is dirt trapped on the valve seat. Welding slag and/or piping teflon tape are among the more common items that cause difficulty. It is recommended that all piping and tank systems be cleaned prior to installation of the relief valve.

A relief valve mounted on a tank should be connected with the minimum amount of piping between the tank and the valve. Further, all piping used must be equal or larger than the inlet pipe size of the relief valve, never smaller. Any restriction of the inlet to a relief valve may cause unusual valve chatter or relief capacities below the design rating of the valve which could result in serious damage. Outlet piping from the relief valve should be less than four (4) feet in length and never of a pipe size smaller than the outlet pipe size of the relief valve. Long runs of small diameter pipe on the outlet size of a relief valve will create a serious hazard to life and property.

Extreme caution is required in the outlet piping if installed outdoors where the liquids, if present, could form an ice block in the piping of the relief valve body in below freezing weather. Discharge lines must be "weather capped" and provided with a drain hole to prevent any liquid collection in the relief valve body or outlet piping. If these precautions are not taken, serious damage and injury will result.

Additional, important installation factors are contained in paragraph UG-135, Section VIII of the ASME Code.

OPERATION

Best performance in process work is usually obtained by setting the safety relief valve to open at least 10% above the operating pressure where possible. A greater margin of 20-30% is desirable, however, this setting must not exceed the maximum working pressure of the vessel. All Mercer Safety Relief Valves are checked for bubble-tight seat closures at 90% of set pressure.

In addition to checking the set pressure vs. the maximum allowable working pressure of the vessel, also check to insure that back pressure and temperature limitations of the process are consistant with valve ratings. Note that the Mercer 91 Series Valve with a viton seat is suitable for the temperature range of -20° to +400°F. Service outside of these ranges will require special materials. Further, carefully check the process, fluid input capacities to insure that the relief valve, relieving capacity is greater than the process capability.

DO NOT BREAK THE SEAL WIRE. to do so invalidates the Manufacturer's warranty to repair or replace the valve. Should resetting be required in a field emergency situation, it should be performed by qualified personnel with calibrated instrumentation. Note that the ASME Section VIII code prohibits resetting a relief valve more than ±10% of the original setting up to 250 PSI set pressures and ±5% above 250 PSI set pressures. Consult the factory for additional resetting information.

WARRANTY

Mercer warrants the goods delivered hereunder to be free from defects in material and workmanship, under normal use and service, for a period of one year after date of shipment. Mercer's obligation under this warranty is limited to repair or replacement, at Mercer's sole option, of any defective item. Mercer's liability under this warranty is conditioned upon Purchaser giving Mercer immediate written notice of any such defect. Mercer shall have the option of requiring the return of the defective part, transportation prepaid, to establish the claim. Any repair or replacement of defective goods or parts will occur at Mercer's plant in Oklahoma City, Oklahoma and Purchaser shall bear all freight costs incurred in transporting defective goods or parts to and from Mercer's plant. Mercer shall not be held liable for damages caused by delay in repair or replacement of any defective items. The provisions in the Mercer literature and specifications are descriptive only, unless expressly stated as warranties. EXCEPT FOR THE FOREGOING, MERCER EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. MERCER'S liability to the Purchaser, arising out of the supplying of the said goods or their use, whether based upon warranty, contract or negligence, shall not in any case exceed the cost of correcting defects in, or replacing, the equipment as herein provided and upon the expiration of said one year all such liability shall terminate, Mercer shall not in any event be held liable for any special, indirect or consequential damages.

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