

Bursting Disc and Safety/Relief Valve Combination

Overpressure Protection

Using Bursting Discs in Combination with Safety/Relief Valves.

Application

The ASME and other pressure vessel codes allow the use of bursting discs in series with safety valves thus providing a wide range of benefits.

Disc selection

Not all discs are suitable for installation below safety valves but modern disc technology allows a safe and versatile installation with useful side benefits.

It is important that any disc installed below a safety valve be a non-fragmenting design as fragments from a disc may:

- Damage the valve and/or seat
- Block the valve
- Damage other downstream equipment

Features and benefits

Bursting discs may be used in series with safety valves; the key benefits are:

Protection of the valve from corrosive or viscous product, which can allow a simpler or cheaper valve to be installed, and a minimal servicing/maintenance regime for the valve

Very good isolation of the process so it eliminates the reliance on a perfect valve seal to prevent fugitive emissions – increasingly important for environmental reasons

Isolates the valve (spring) from fluctuation/cycling process pressure conditions to assist in maintaining valve calibration

Reverse acting discs

Modern reverse acting discs can be manufactured as non-fragmenting designs and their wide burst pressure range, tolerance of high and cycling operating pressures and vacuum resistance make them ideal for installation in series with a safety valve for low and medium/high pressures. Installation of a reverse acting disc will allow in-situ check of calibration of the safety valve without disturbing the process side of the disc or other pipework. This can allow savings in dismantling of equipment and reduced plant downtime. All these features and benefits can be demonstrated on request using ZOOK's own portable Demonstration Rig at the customer's time and convenience.

Elmac expertise

Elmac has been manufacturing protection equipment since 1948 and bring enhanced levels of pressure, flame and explosion protection to a diverse range of applications.

Elmac offers considerable technical leadership and using test facilities along with CFD capabilities, employs research teams renowned for developing solutions for the most challenging of industrial applications.



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