Before You Fix the Relief Valve Problem
Careful Considerations When Mitigating Inadequate Relief Systems Designs

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Abstract

In the oil and gas industry, there are changes constantly made to existing equipment and processes. These changes often require modifications to the relief systems design. There are many options that would appear to fix the concern, but there is one option that is cheaper than the others while still satisfying all safety requirements. Certain considerations tend to be overlooked when these relief systems modifications are made. The final result typically includes unnecessary capital costs, wasted engineering hours, or unsafe design. The intention of this paper is to cover a handful of cases where existing relief systems were inadequate, and there are insufficiencies with the more common mitigations. By thinking outside of the normal realm of process safety design, as well as having a proper understanding of the industry codes and standards, proper mitigation plans can be made that have a lower financial impact. The case studies will also cover the challenges that arise in the detailed design and construction phases while trying to implement mitigation plans, and why it is important to think ahead as to what possible challenges may be seen in those future phases of the project when the mitigation options are first developed.