



**Client:** Thomas Swan & Co Ltd  
**Project:** Reactor Relief System

**Background**

Thomas Swan is a 4th generation family owned and run company, built on traditional family values including trust, respect, fairness and hard work. It is a trusted and progressive global chemical manufacturing company with a reputation for customer service excellence and outstanding quality.

**Requirement**

Thomas Swan required relief calculations to be produced for several reactors located at its Consett Site. It also required a study of the containment of the relief systems to be validated and any improvements to be undertaken.

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**A great collaborative effort between Thomas Swan and HFL in the difficult task of assimilating all the information required to perform the calculations.**”

Stuart Dow  
Technical Director  
Haden Freeman Limited

**Our Response**

HFL reviewed the potential relief cases and identified likely pressure relief scenarios for each of the four reactors and associated equipment. HFL then calculated relief rates for relevant cases that might have led to an incident. Having established the required relief capacity, HFL then checked the suitability of the existing relief devices and pipework to hand the worst case relief situation. A report was then prepared, summarising the findings and providing recommendations.

**Result**

Thomas Swan now has the confidence that the relief scenarios for their reactors R73, RV02, RV20 and RV90 have been subject to a professional and thorough relief study.

**“Working closely with HFL on the initial complex calculations, we built the confidence to perform any future calculations in-house”**

Howard Sutton  
Global Operations Improvement  
Manager  
Thomas Swan

