

# Speciality Chemical Manufacturer Improves Bottom Line Utilizing Fisher® Type Y693 Regulators

## BENEFITS

- Reduced nitrogen expense
- Achieved lower set points allowing greater deadband
- Easy retrofit
- Fast local stock replacement

## APPLICATION

A speciality chemical manufacturer that utilizes nitrogen to store its liquid products. Nitrogen is used to blanket the storage tanks to protect the product. Blanketing the product with nitrogen fills the vapor space protecting it from air and moisture that can reduce the chemical quality.

## CHALLENGE

The company needed to reduce the supply pressure of nitrogen in the tanks since the pressure rating of the tanks reduced over the years. Since the tank pressure decreased the relief valve set points had to be reduced. The current regulators installed could not attain the low set points needed causing the relief valves to open frequently and nitrogen to be released to atmosphere. This in turn cost the company significantly in nitrogen costs.

## SOLUTION

The chemical plant upgraded its tank blanketing storage tanks with the Fisher Type Y693 tank blanketing regulator. The Y693 set points reach as low as 0.5-inches w.c. and has a balanced trim plug allowing accuracy classes equivalent to a pilot-operated valve.

Legacy product installed on the tanks could only achieve a 2.0-inches w.c. set point causing the relief valve to open frequently increasing the plant's usage of nitrogen. The company gained a net savings of \$126K per year by sizing and selecting a regulator to meet the tanks requirements.



## Tank Blanketing

*Major U.S.A. chemical manufacturer gained a net savings of \$126k per year in nitrogen costs by sizing and selecting a Fisher regulator for its tanks.*



*Fisher Type Y693 Tank Blanketing Regulator Installed at a Major U.S.A. Chemical Plant*



[www.fisherregulators.com](http://www.fisherregulators.com)

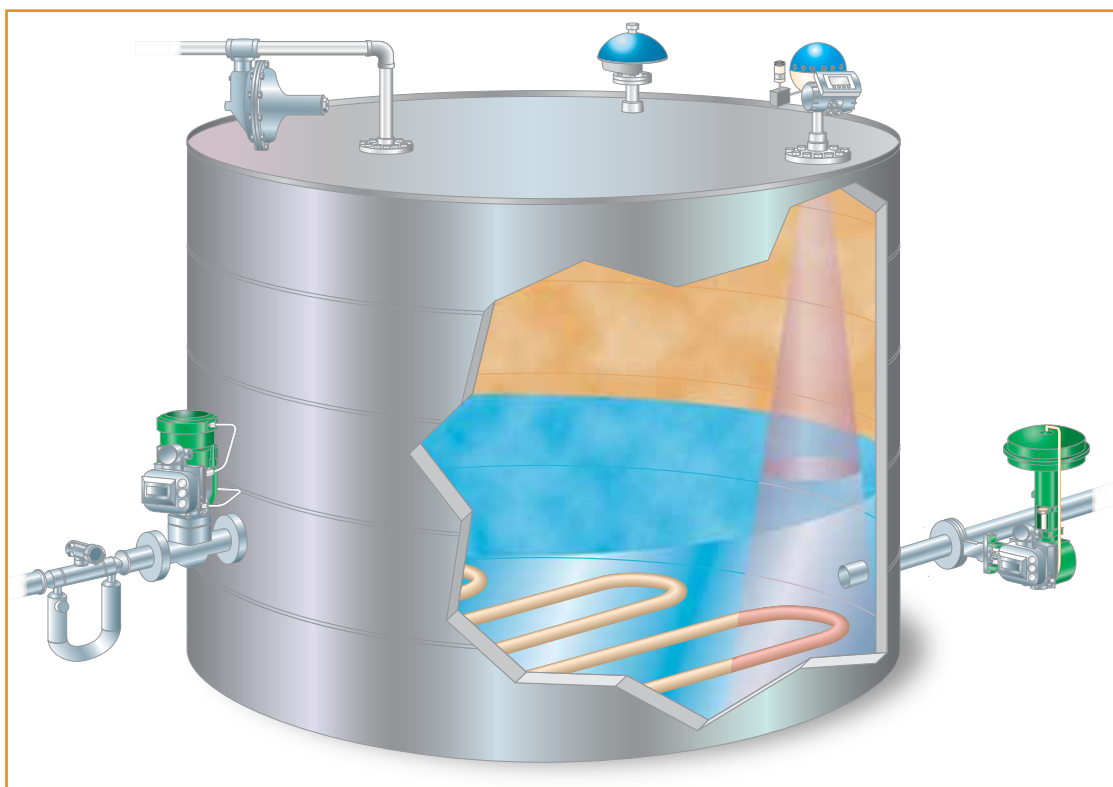


Many tank blanketing applications struggle with this challenge as tanks age because the tank pressure rating is reduced in the tank. As it ages the pressure relief valve set points have to be reduced. This can cause the pressure relief valve to be set too close to the tank blanketing regulator supply pressure causing the relief valves to open frequently and nitrogen to be released to atmosphere.

The Y693 was also preferred due to the face-to-face body dimensions were the same as the previous products it was replacing as well as the fast replacement of regulators that were available from

local stock. Similar operation and maintenance also translated to no training being required for maintenance personnel.

The company is in the process of upgrading 63 tanks and have 102 more tanks to upgraded in the future. The company has also started installing THUMs to DVCs to get stranded diagnosis and valve position information back to the DCS streamlining their tank blanketing maintenance further using wirelss technology. A general tank blanketing application is illustrated below.



*General Tank Blanketing Application featuring a Fisher® Y693 Pressure Regulator*

**Emerson Process Management Regulator Technologies, Inc.**

**Americas - Worldwide Headquarters**  
310 East University Drive  
McKinney, Texas 75069-1872 USA  
T: +1 800 558 5853  
T: +1 972 548 3574  
F: +1 972 542 6433  
[www.emersonprocess.com/regulators](http://www.emersonprocess.com/regulators)

**Europe**  
T: +39 051 4190606

**Asia Pacific**  
T: +65 6770 8337

**Middle East**  
T: +971 4811 8100

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