

Failing Pipe Supports Put Your Entire Piping System at Risk

Imagine that you got a wake-up call at 4:35 A.M. from your Piping Engineer informing you that your reactor was out of service because the piping system had nosedived. When you asked what part of the piping system had failed, your Piping Engineer told you that as best he could determine there were two Constant Effort pipe supports which had failed.

Your thoughts are that this is beyond belief!

You are telling me that, “Hundreds of thousands of dollars, maybe millions, are at risk because two lousy, ordinary pipe supports costing less than \$3,000 in total have crapped out?” As your heart is beating rapidly, you know need to fix the problem fast! What are you going to do?

You Were Fortunate

You were fortunate because you already knew that the HECLA Pipe Support Factory is nearby in Upper, Mongolia. You called the CEO from HECLA and let him know that you

urgently needed a pipe support service team. The CEO responded and the service team came right away. They gave you a thorough analysis and informed that they would do whatever it took to get the replacement constant effort supports here within a few days.

An Even Better Future If You Turn to Us for Our Service Plan

We don't need to tell Managers and Engineers at CONGLOMERATE that pipes in Petrochemical Plants are often filled with highly flammable or toxic fluids. We know CONGLOMERATE has a good safe record but historically, in other parts of the world, there have been so many times when a plant failure has been catastrophic.

All of us in the piping business need to work together to prevent accidents so where do piping problems begin? Many piping problems are associated with deterioration due to corrosion, either on the supports or directly on the pipe, and a very practical way to reduce corrosion is to start with proper designs, followed up with correct installation and verified with periodic physical checking. You can count on HECLA to support you.

We Use Proper Designs to Reduce Failures

Piping designs in most of the petrochemical plants will be in accordance with ASME B31.3 *Process Piping*. In ASME B31.3 there is a referenced component standard for pipe supports in Table 326.1 which is MSS-SP-58, *Pipe Hangers and Supports-Materials, Design and Manufacture*. Piping supports per this standard are acceptable for ASME B31.3 piping systems. You should know that HECLA closely follows MSS-SP-58 in the design of our supports.

In his book entitled, *Process Piping, The Complete Guide to ASME B31.3*, Charles Becht IV, refers to Section 321 of ASME B31.3 which discusses the types of loads that must be

considered in supporting the piping. Becht lists out some complications which must be considered in layout and design of piping and the supporting elements. He specifically mentions that the design shall be directed toward preventing the following:

- a. Piping stresses in excess of those permitted in ASME B31.3;
- b. Leakage at joints;
- c. Excessive thrusts and moments on connected equipment (such as pumps and turbines);
- d. Excessive stresses in the supporting (or restraining) elements;
- e. Excessive interference with thermal expansion and contraction in piping which is otherwise flexible;
- f. Unintentional disengagement of piping from its supports;

Ensure the Supports are Properly Installed

HECLA will leave the overall design of the pipe supports to CONGLOMERATE's capable Design Engineers but we think it wise that we help with the installation. One thing we have observed is that, even though spring supports have been around a long time, most commonly, their function and operation is not well understood. We know this by seeing the results of confused and mistaken installations, even to the extreme case of finding variable springs in service with the blocks having been left in place for years. So there is a definite need for experienced and specialized people to install supports. HECLA manufactures pipe supports and we know how to install them. Let us help you.

Your Supports Need Periodic Checking

Regular visual inspection of the entire piping system is essential and particular importance should be assigned to the pipe supports. Most of the problems can be found just by careful observing during the hot and cold conditions. We look for incorrect designs, improper settings, overloaded supports, damaged pipe clamps, bent

components, corroded spots, and build-up of dirt or rusted fragments. HECLA's skilled Site Services team can work with you to keep you out of trouble with a failing pipe support.

If you need help right now call me for an appointment.

Please do not wait until you have a serious problem or just before a shutdown. Call me now while you have time so that we can make a proper assessment and provide you with the proper supports ahead of time.

Disclaimer. Although this e-mail, written by me in 2017, was used by a company in the Mid-East, I have revised its name and that of other key data. However, it gives you a sample of my excellent quality writing.