

CROSS® | VALVE & SAFETY RELIEF DEVICE INSPECTION

What is Cross's Valve & Safety Relief Device Inspection program?

Our VSRD Inspection is an in-depth review of all tank accessories on your site by a highly qualified Cross technical expert. We look at all aspects of your tank assembly, providing a comprehensive deep dive into the safety, maintenance, and operation of all your tank accessories.



Why participate in the program?

Reduce your risk by keeping your plant and people safe

- On site visual examination of tank(s) and individual tank record keeping to identify hazards or potential hazards with ancillary tank equipment
- Address tank risks before issues become critical - or worse – dangerous

Turn data into tangible value

- Reduce maintenance investment with equipment standardization
- Identify obsolescence before it causes downtime by creating a timeline and budget for systematic part replacement
- Make sure you're ready for the next safety audit by ensuring your records match the equipment actually operating on your site
- Develop preventative maintenance (PM) program for planning & scheduling
- Improve or showcase your batching capability by improving quality, reducing raw material usage and waste
- Comply with environmental regulations

What is involved in the program?

Our expert will spend multiple days on your site while staying out of the way of day-to-day operations. All of our experts have been through health and safety training for industrial manufacturing sites and will have the correct PPE, as well as an awareness of the hazards that exist. Expect them to get dirty, however, crawling under tanks or climbing to the top of assemblies in order to gather the data they need. An escort by one of your employees will be helpful to guide them around the facility and speed your review.

When the review is complete, you'll get a consolidated, hard copy report with a summary, recommendations and your tank data. All of the information about your facility's tank accessories will be at your fingertips.

CLIENT:			DATE:	
UNIT:			REVISION NO.	
LOCATION:			BY:	
EQUIPMENT	EQUIPMENT TYPE	MAWP/MAWT		/
	EQUIPMENT NO.	TAG NO.		
	CERTIFICATIONS	UD STAMPED [] CE MARKED [] CHINA QUALITY [] NACE [] OTHER []		
GENERAL DATA	RELIEF FUNCTION	SINGLE(PRIMARY) [] ADDITIONAL(DUAL) []		
	RELIEF VALVE ISOLATION	INLET [] OUTLET [] MFR/MODEL		
	EXIT TYPE	ATMOSPHERE [] HEADER [] FIXED PIPING []		
	MEDIA			
SERVICE CONDITIONS	FLUID STATE	GAS/VAPOR [] LIQUID [] STEAM []		
	OPERATING: PRESSURE	TEMPERATURE		
	OPERATING: VACUUM	BACKPRESSURE		
	PRESSURE CONDITIONS	STATIC [] PULSATING [] CYCLING []		
	MANUFACTURER	MODEL		
	SIZE:	MFG. NUMBER		
RUPTURE DISC	MATERIALS: DISC	VACUUM SUPPORT:		
	MATERIALS: RINGS	GASKET: INLET OUTLET		
	BURST PRESS/TEMP			
	MANUFACTURING RANGE	ZERO [] -5% [] -10% [] OTHER []		
	NON-FRAGMENTING	YES [] NO [] Krg [] Krl [] Krgl []		
	BURST DISC INDICATOR	YES [] NO [] MNFA []		
	MANUFACTURER	MODEL		
	TYPE	INSERT [] PRE-TORQUED [] FULL BOLTED [] UNION [] OTHER []		
HOLDER DATA	FLANGE RATING/FACINGS			
	MATERIALS:	INLET		
	OPTIONS:	J-HOOK [] COATING		
	OUTLET GAUGE TAP	1/4" FPT [] 3/8" FPT [] 1/2" FPT [] OTHER []		
	STUDS & NUTS	ALLOY STEEL [] 316SS [] OTHER []		
ACCESSORIES	NIPPLE/TEE/EFV SET	CS [] SS [] 150# [] 3000# []		
	PRESSURE GAUGE	BRZ/CS [] SS/SS [] SIZE: RANGE:		
	JACKSCREWS	ALLOY STEEL [] 316SS [] OTHER []		

Cross VSRD Inspection examples



> Safety and Plant Improvements

Our customer is an international chemical manufacturer with 950 staff, on-site engineering and multiple manufacturing locations. Cross Company spent two days reviewing the accessories on their 71 tanks to begin the program. We found only 13.5% of their tanks were physically in compliance with current safety standards and none of them met current EPA standards for pressure and vacuum protection data.

The customer initiated a plant safety program to address overpressurization or potentially damaging vacuum conditions for tank equipment systems. They also purchased correctly specified protection devices to:

- Increase safety
- Decrease plant operations costs
- Improve production
- Decrease batch rate
- Increase plant readiness for EPA inspections
- Secure reduced risk position for employees liability insurance

Observations:

- Collapsed tank
- Incorrect rupture disc or no disc installed at all
- Corrosion and leaking equipment
- Improper wiring in Class I Div 1 hazardous area
- Misaligned flanges



> Safety and Production Improvements

Another customer is a small batch chemical production facility with limited engineering and a staff of 42. After a four day review of the equipment on their 59 tanks we found that only 10% of their tanks were physically in compliance with current safety standards.

The customer purchased new protections for prioritized or dangerous tanks. Their safety manager required staff to review all of the data collected and to bring their tank equipment into compliance. This

site has increased critical safety aspects of the tank farm, and are now ready for EPA inspection audits. In addition, production up-time has significantly improved based on decreased lost batches.

Observations:

- Implosion of two tanks
- No PM site plan
- No safety stock for PRV's or SRV's or rupture discs
- Improper installation of rupture discs and holders
- Open outlet gauge taps

These examples clearly demonstrate customer benefit. An independent third party tank inspection provides a thorough, unbiased look into the safety aspects of plant applications and process tank performance. Contact Cross Company to apply.