

# CROSS | TANK OPTIMIZATION PROGRAM



## What is a Tank Optimization Program (TO.P.)?

The Cross Company Tank Optimization Program is an in-depth review of every tank 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 tanks.



## Why participate in the program?

### Keep your plant and people safe

- On site visual examination of tank(s) and individual tank record keeping
- Identification of hazards or potential hazards with ancillary tank equipment
- Address tank risks before issues become critical - or worse - deadly.

### Act on your data

- Develop preventative maintenance (PM) program for planning & scheduling
- Inventory management and equipment standardization
- Showcase batching capability and capacity
- Create timeline for replacement parts/equipment

## 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.

## What does the plant get out of it?

In its simplest form, you'll get a consolidated, hard copy report with a summary, recommendations and your tank data. All of the information about your facility's tanks will be at your fingertips.

This powerful data can be used for many things, including:

- Equipment standardization
- Ensuring your records match the actual equipment operating on your site
- Creating a PM plan with priorities
- Creating a timeline and budget for systematic, proactive part replacement
- Ensuring you're ready for the next EPA or safety audit

CLIENT:				DATE:	
UNIT:				REVISION NO:	
LOCATION:				BY:	
EQUIPMENT:	EQUIPMENT TYPE			MAW9/MAWT	/
	EQUIPMENT NO.			TAG NO.	
	CERTIFICATIONS	UD STAMPED	ICE MARKED	CHINA QUALITY	NACE   OTHER
GENERAL DATA	RELIEF FUNCTION	SINGLE(PRIMARY)	ADDITIONAL(DUAL)		
	RELIEF VALVE ISOLATION	INLET	OUTLET	MPR/MODEL	
	DOT TYPE	ATMOSPHERE	HEADER	FIXED PIPING	
	MEDIA:				
	FLUID STATE	GAS/VAPOR	LIQUID	STEAM	
SERVICE CONDITIONS	OPERATING: PRESSURE			TEMPERATURE	
	OPERATING: VACUUM			BACKPRESSURE	
	PRESSURE CONDITIONS	STATIC	PULSATING	CYCLING	
RUPTURE DISC	MANUFACTURER			MODEL	
	SIZE:			MFG. NUMBER	
	MATERIALS: DISC			VACUUM SUPPORT:	
	MATERIALS: RINGS	INLET	OUTLET	GASKET: INLET	OUTLET
	BURST PRESS/TEMP				
	MANUFACTURING RANGE	ZERO	-5%   -10%   OTHER		
	NON-FRAGMENTING	YES	NO	Kg   Kgf   Kkg	
	BURST DISC INDICATOR	YES	NO	MMWA	
HOLDER DATA	MANUFACTURER			MODEL	
	TYPE	INSERT	PRE-TORQUED	FULL BOCKET	UNION   OTHER
	FLANGE RATING/RACINGS			HEIGHT	
	MATERIALS:			OUTLET	
	OPTIONS:	SHOOK	COATING		
	OUTLET GAUGE TAP	1/4" FPT	3/8" FPT	1/2" FPT	OTHER
ACCESSORIES	STUDS & NUTS	ALLOY STEEL	316SS	OTHER	
	RIFPLE/TEE/EPV SET	CS	SS	150#	300#
	PRESSURE GAUGE	INCHES	50/55	SIZE:	RANGE:
	JACKSCREWS	ALLOY STEEL	316SS	OTHER	

## Cross Tank Optimization Program 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 71 of their 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

#### T.O.P 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 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 T.O.P data and bring tanks 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.

#### T.O.P 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 benefits when the Cross Company Tank Optimization Program is in place. 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.