

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N737828715

FACILITY: Tip-Top Screw Manufacturing Inc		SRN / ID: N7378
LOCATION: 4183 FORREST STREET, OSCODA		DISTRICT: Saginaw Bay
CITY: OSCODA		COUNTY: IOSCO
CONTACT: Mark Lee , Safety and Training Manager		ACTIVITY DATE: 01/29/2015
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: compliance inspection for minor source.		
RESOLVED COMPLAINTS:		

On Thursday, January 29, 2015, a scheduled, site inspection was conducted by AQD District Staff at the Tip-Top Screw Manufacturing, Inc. Facility (SRN N7378). The referenced facility is located at 4183 Forrest, Oscoda, Iosco County, Michigan. The facility was in operation upon arrival, and District Staff met with Bob Stewart, Plant Manager and Mark D. Lee, Safety Director, who provided a tour and answered questions regarding facility operations.

One active Permit 289-06A is associated with the facility, and was approved on February 4, 2008. The initial permit 289-06 was approved on October 17, 2006. The application for modification was received on December 18, 2007. The referenced permit is for a metal screw manufacturing process and anhydrous ammonia storage tank. In addition to permit 289-06, one additional voided permit is of record for the facility 176-04.

Site inspection activities were conducted with the intent of confirming the operational status of the permitted equipment and that monitoring/reporting activities were being conducted per the referenced permit and applicable exemptions.

FACILITY DESCRIPTION

The Tip-Top Screw Manufacturing, Inc. was established in April 1999 by John R. Burt, and produces screws, fasteners, racks, Gripulls (used for stretching roofing material) and other metal fabricated products for the commercial roofing and construction industry. Tip-Top produces multiple screw lengths, and heads, Associated facilities include Duro-Last Inc. (525 Morley St, Saginaw, Michigan) and Oscoda Plastics (5585 N. Huron, Oscoda, Michigan).

The subject site is located in the Oscoda industrial park, located on the former U.S. Air Force Military Base near the intersection of Skeel Ave. and Forrest St. The company was started initially in what was formerly the base's bowling alley, and has been expanded twice to allow the facility to provide additional in-house services such as e-coating and "tempering".

Screw fabrication begins with coils of malleable steel wire. The wire is straightened, headed, threaded and the points formed on individual machines. Depending on the type of screw in production, the various machines are reported to have a throughput of approximately 325-350 parts per minute. The "bits" of metal created during the production is reported to be collected and sold to metal recyclers.

After the screws are "made", they are hardened in a heat treatment process using an AFC. The system is reported to be a two chambered furnace, which runs in an oxygen free environment created by the endothermic generator. The vestibule of the furnace burns off any oxygen, from there the screws are transported to the furnace where they stay at about 1550 degrees for approximately 45 minutes.

The natural gas endothermic generator is permitted under the present active permit and replaced a blast furnace system that utilized ammonia, methanol and natural gas. The endothermic generator is reported to be constructed with a nickel impregnated catalyst. Some ammonia is still reported to be used, but not the volumes associated with the previous system. The existing ammonia tank (EU-AmmoniaTK, 289-06A) is smaller than the previously permitted tank (176-04). Ammonia is provided by Tanner Industries, Inc. The facility conducts the required visual inspections monthly. It should be noted that in the permit EU-AmmoniaTK is described as a 1,500-gallon capacity tank, however, the existing tanks has a capacity of 1,000-gallons.

The methanol tank (5,500-gallon horizontal storage tank listed under EU-HeatTreat) and the cryogenic nitrogen tank have both been removed from site. Nitrogen use is reported to be only as the emergency purge for the furnace, and is stored in cylinders onsite.

Upon removal the parts are cooled quickly in a 3,000-gallon oil quench bath/tank with heat exchanger. The oil is reported to be preheated, and is recirculated so that it maintains a constant quench temperature. After cooling the parts are allowed to drain, and then transferred to the parts washer and into another tempering furnace for 45 minutes. The steam generated during this stage is captured by a smog hog, and is vented out the building. With the exception of the smog hog, vents and stacks associated with the process equipment are reported to be passive exhausts. It should be noted that the piping/duct work for the smog hog has been modified since the last visit for better capture. At the time of the inspection, the smog hog was not in operation.

An oil skimmer is used to capture oil, which is sold to a recycler. The separated waters are disposed of through a licensed contractor.

Following the completion of the tempering process, the facility may coat the product using an electrodeposit coating process. The present system is an inline, 12 stage system with 56 stations/tanks which pretreat, clean and electrodeposit coating onto the parts. The coating is not a powder coating, and the process is described as a variation on electro-dipping. The coating is reported not to contain any HAPs, and the company has changed coatings to lower volatile compounds than previously used. All tanks are reported to be dedicated, with fresh product being re-introduced as needed. This line was not in operation at the time of inspection.

At the time of the initial permitting (2006) VOC emissions were estimated to be less than 366 lbs/month based on a maximum of 800 gallons per month. In 2007, 2012 and 2014, the VOC emissions estimated were less than 190, 95 and 150 lbs per month, respectively.

The facility has a treatment area, where they monitor the Ph and make adjustments before disposing of liquids through the city sewer. All tanks and equipment appeared to be well maintained, and labeled appropriately. Equipment maintenance for the facility is conducted via maintenance plans and work orders.

COMPLIANCE HISTORY

To date the facility has not been required to report annual air emissions. A review of area source MACTs did not identify any potential Federal regulations that might apply to the facility.

A review of District Files indicates that there are no complaints of record since the July 10, 2012, site inspection. In addition, the facility was found to be in general compliance with its permit at the time of the July 10, 2012, site inspection.

COMPLIANCE EVALUATION

Facility status has been determined based on Permit requirements outlined in Permit No. 289-06A. Evaluation of the various metal part production processes, prior to hardening, tempering and e-coating appears to indicate that these activities are exempt under Rule 285(l)(i). The endothermic atmosphere generator may be exempt from permitting under Rule 285(l)(iv).

At the time of permitting, the plasticizer in the coating used in the e-coating process met the definition of non-carcinogenic VOC. Based on a maximum use of 800 gallons per month, and a plasticizer content of 5% by weight the maximum emission rate was 366 lbs VOC/month. The MSDS information provided by the facility for their present coating indicates a VOC content of less than 0.6% lbs/gallon.

Operational Status – During the facility tour the facility was open with most phases of process activities ongoing. The e-coat line and smog hog were not operating at the time of inspections. As noted during the previous inspection, the facility may operate these units about twice per week, dependent on demand.

Material Usage Rates – The permit identifies all equipment with the exception of the endothermic generator as being fueled by natural gas. The endothermic generator is reported to be operated using either natural gas or methanol. No fuel or material specific limits were incorporated into the existing permit.

Emission Points/Limits - The permit application identifies multiple stacks and vents. However, only the stack for the smog-hog (SVS Smoghog) has visible emission restrictions. It is an unobstructed horizontal stack, consistent with the permit description.

Permit No. 289-06A S.C. 1.2 restricts visible emissions from the tempering furnace portion of EU-HeatTreat to a not to exceed 6-minute average of 10 percent. The smog hog is reported to be the control device for the tempering furnace. At the time of the site inspection, the furnace was not operating and there were no emissions visible. Should the furnace have been operating, the cold temps would have resulted in at minimum steam being generated.

Operational Parameters – Operational parameters for the facility are limited to operation of the tempering furnace, the hardening furnace and the oil quench bath. Operational restriction SC 1.3 restricts the operation of the tempering furnace portion of EU-HeatTreat, unless the smog-hog air is installed, maintained and operated in a satisfactory manner. The Smog-hog was not operating at the time of arrival and could not be evaluated for compliance. Facility staff reported that the equipment is on a scheduled maintenance plan and inspections.

SC 1.4 limits the operation of the hardening furnace and the oil quench bath portion of EU-HeatTreat unless the effluent burner and the inlet flame curtain are both installed, maintained and operated in a satisfactory manner. Both were reported to have been installed and are on an inspection and maintenance schedule to insure proper operation. No visible signs of improper operation were noted.

Operational conditions for EU-AmmoniaTk (permit 289-06A) include the following:

- Implementation of the inspection and maintenance plan specified in Appendix A of the permit (SC 2.2),
- Installation of a remotely operated positive shut-off valve for emergency shut-off of the flow from the stationary tank (SC 2.3), and
- Performance of all transfers and transport of anhydrous ammonia by a reliable and trained person (SC 2.4).

Facility staff reported that the onsite anhydrous ammonia tank is filled by Tanner Industries, Inc. and that the existing equipment was installed to meet the permit requirements. Tanner Industries' trained staff handles the transfer and delivery of the material, and conducts an inspection at every fill, which does not occur more than once per quarter or less than once per year.

At the time of the inspection, the facility was conducting daily inspections of line pressure for EU-AmmoniaTk to confirm that no leaks have occurred, and monthly inspections using the Appendix A inspection sheet.

Equipment Maintenance – No special conditions exist for equipment maintenance for EU-HeatTreat, other than the previously referenced SC 1.3 and 1.4. Equipment and maintenance requirements for EU-AmmoniaTk includes:

- Installation of safety relief valves, that are replaced, retested or recertified every 5-years. (SC 2.5)
- Bulkhead, anchorage or equivalent system is used at each transfer point (SC 2.6), liquid lines in rail and transfer areas are equipped with back pressure check valves on the container side of the predictable break point at the bulkhead (SC 2.7)

- Replacement of all hoses for anhydrous ammonia 5 years after date of manufacture or upon signs of damage or deterioration (SC 2.8), and
- Vapor or liquid lines requiring venting shall be vented thru a minimum 55 gallon water trap (SC 2.9).

District Staff had discussed the above referenced requirements with Mr. J. Selby, Tanner industries, who indicated that the tank is a hard piped system, with no remote fill piping associated with the tank that would require a predictable break point at the bulkhead, or hoses that would require replacement. In addition the lines are reported to be vapor lines, and equipped with back pressure check valves. The transfer tank has a 5-gallon bleed out on the trucks used to deliver product. Venting is not conducted except during fills.

Facility staff confirmed that the safety relief valve in place was replaced on September 17, 2012, and will not require replacement until 2017.

Monitoring and Testing – Monitoring and testing requirements are limited to PM and PM-10 for EU-HeatTreat (SC 1.1a and 1.1b). No request for testing was found in District Files. No additional monitoring and testing requirements other than inspection requirements found in Appendix A have been identified for EU-AmmoniaTk.

Record Keeping and Reporting – No recordkeeping or reporting requirements are associated with EU-HeatTreat.

Recordkeeping and reporting requirements associated with EU-AmmoniaTk include maintenance records of all inspection activities and corrective actions completed for any deficiencies (SC 2.1) as well as records of the anhydrous ammonia container relief valve replacement or retesting. As previously reported, Appendix A inspections are conducted once per month by facility staff. Inspections conducted by Tanner Industries Staff at the time of filling are not as detailed, however, the facility requests a copy for their records. Equipment associated with the facility are on maintenance schedules, and appropriate records of corrective actions are maintained in general compliance with the permit.

SUMMARY

On Thursday, January 29, 2015, a scheduled, site inspection was conducted by AQD District Staff at the Tip-Top Screw Manufacturing, Inc. Facility (SRN N7378). The referenced facility is located at 4183 Forrest, Oscoda, Iosco County, Michigan. The facility was in operation upon arrival, and District Staff met with Bob Stewart, Plant Manager and Mark D. Lee, Safety Director, who provided a tour and answered questions regarding facility operations.

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Site inspection activities were conducted with the intent of confirming the operational status of the permitted equipment and that monitoring/reporting activities were being conducted per the referenced permit and applicable exemptions. Based on information reviewed as part of the inspection, it appears that the facility is in general compliance with their permit.

NAME



DATE



SUPERVISOR



LeBlanc, Sharon (DEQ)

From: LeBlanc, Sharon (DEQ)
Sent: Friday, February 20, 2015 2:00 PM
To: 'bstewart@tip-topscrew.com'; 'mlee@oscodaplastics.com'
Subject: January 29th inspection

Gentlemen,

It has taken me longer to get back to writing your report than I had planned, and I do have a question, but I wanted to get back with you regarding the ammonia tank inspections. Careful review of the permit says that the appendix A inspection sheet must be completed at a minimum prior to every delivery. You presently doing this monthly. Which more than meets the permit requirements. You do not have to check the pressure on the tank lines daily, you can drop that back to whatever you feel is appropriate for your situation. Having said that if you are checking the pressure on the tank lines daily to meet MIOSHA requirements then you will need to continue that program.

On to my question- I was wondering what your maximum monthly use of the Powercron coatings has been for the past year so I can figure out if your still meeting the Rule 290 exemptions for VOCs. I am guessing you are. But need to make sure. I hope to have the rough draft of your report to you for review this next week.

Sharon G. LeBlanc
AQD, Saginaw Bay District Office
989-894-6212



Application Data

Product Name	POWERCRON® 460-453A
Description	Black Cationic Epoxy Electrocoat
Substrates	Properly cleaned and treated steel, aluminum and zinc alloys.
Gloss (60°)	Medium
Film Thickness	0.6 – 0.8 Mils
Coating Voltage	150 - 350 Volts
Electrical Efficiency	2.5 amps per ft. ² per minute per mil
Bake Cycle	20 minutes at 350°F (177°C) metal temperature or equivalent
VOC	0.5 pounds per blended gallon minus water (as supplied)*
Theoretical Coverage	554 ft. ² per gallon of feed per mil at <u>100%</u> efficiency
Heavy Metal Content	None

*Ref. EPA Test Method 24

Tank Control

1,000 GALLON FORMULA

	Weight	Volume	Adjusted for Your System
Resin, PPG CR460	3,105 lbs.	354 gals.	_____ gals.
Paste, PPG CP453A	836 lbs.	80 gals.	_____ gals.
Deionized Water	4,715 lbs.	566 gals.	_____ gals.
Totals @ 18% Solids	8,656 lbs.	1,000 gals.	_____ gals.

TYPICAL TEST RESULTS

Solids	18.0 % (110°C)	Bath Temperature	85°F (29°C)
P/B Ratio	0.18 (Correction Factor = 1.13)	Anolyte Conductivity	3,800 µS/cm max
pH	6.1	Deionized Water Conductivity	10 µS/cm max
Conductivity	1,500 µS/cm	Pre-Rinse Conductivity	50 µS/cm max
Solvent: Butyl CELLOSOLVE™	0.2%		

NOTE: Bath solids, conductivity, solvent and temperature parameters are set according to film thickness and throwpower requirements.

TANK ADJUSTMENTS

	1,000 Gallons Bath		Adjusted for Your System
Replenishment	23.6	gallons of feed will raise solids <u>1.0 %</u> .	_____ gals.
Paste	5.3	gallons of CP453A will raise P/B ratio <u>0.01 Units</u>	_____ gals.
Resin	24.3	gallons of CR460 will lower P/B ratio <u>0.01 Units</u>	_____ gals.
Acid	3.0	pounds of EDADDSA will lower pH <u>0.1 Units</u> .	_____ lbs.
Solvent	3.0	gallons of NA101 will raise Butyl CELLOSOLVE™ level by <u>0.25%</u> .	_____ gals.



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ecoatinfo@ppg.com

The data presented in this bulletin is believed by PPG to be currently accurate. However, no warranty of accuracy, comprehensiveness, or performance is given or implied. Continuous improvements in coatings technology may cause future technical data to vary from what is in this bulletin. Contact your PPG representative for the most up-to-date information



Replenishment Data

Blend Ratio (Vol.)	3.5	1.0
Weight Per Gallon	8.8 ± 0.2 lbs.	10.4 ± 0.3 lbs.
Solids (Wt.)	36.0 ± 1.5 %	52.6 ± 2.0 % ³
Solids (Vol.)	33.0 ± 1.5 %	40.0 ± 2.0 %
Solvent (Wt.)	1.2 ± 0.1 %	4.5 ± 0.5 %
Solvent (Vol.)	0.9 ± 0.1 %	6.2 ± 0.5 %
Water (Wt.)	62.8 ± 1.0 %	42.9 ± 1.0 %
Water (Vol.)	66.1 ± 1.0 %	53.8 ± 1.0 %
VOC ¹ (minus water)	0.31 lbs./gal. ✓	1.03 lbs./gal. ✓
#VOC/Gallon	0.10 lbs./gal.	0.47 lbs./gal.
#HAPs/Gallon ²	---	---
Viscosity	100 cps max.	5,000 cps max.
Color	Milky	Black
Shipping/Storage Temperature	60 - 90°F (16-32°C)	60 - 90°F (16-32°C)
Recommended Product Rotation	Six Months	Six Months
Premix Required	No	Yes
Shipping Container	Open-head drum, tankwagon, recyclable tote	Open-head drum or recyclable tote

¹ The VOC number is calculated as pounds per gallon minus water. Be sure to use the # VOC/gallon figure to calculate total solvent emissions from consumed gallons. (Ref: EPA Test Method 24)

² Hazardous Air Pollutants - Clean Air Act Amendments of 1990

³ CP453A Paste Feed: 28.4 % Pigment Solids
24.2 % Resin Solids



Control Additives

Resin	CR460	No premixing required; add slowly.
Paste	CP453A	Agitate container before use; add slowly
Acid	PPG EDADDSA Sulfamic Acid	Do not add as a powder. Must be premixed with D.I. water (1 lb./3gal.); never add water to acid.
Solvent	PPG NA101 Butyl CELLOSOLVE™ (Ethylene Glycol Monobutyl Ether)	No premixing required; add slowly. <ul style="list-style-type: none"> • Wt./gallon: 7.52# ± 0.2# • Solids By Weight: 0 % • Solvent By Weight: 100.0 % • VOC: 7.52 #/gallon • HAPs: N/A

Bacterial Prevention Please contact your technical service representative for information on the POWERx program. POWERx is a process of steps and procedures intended to prevent and eliminate microbial contamination in PPG's Industrial Electrocoat systems.

Touch-Ups Please contact your sales/technical service representative or e-mail occustomerservice@ppg.com for information on PPG's touch-up solutions. Performance of touch-up material is dependent on application conditions and substrate preparation. Touch-ups should be tested prior to use to ensure compliance to specifications for color, gloss, corrosion resistance and other properties.

NOTES: *All additives should be added to the electrocoat system via the pump well. DO NOT MIX with the replenishment drums and DO NOT ADD via the resin and paste feed lines.
If test results indicate a large addition (more than your normal add) of any of the above materials is required, please contact your technical service representative before making the addition.*



TECHNICAL BULLETIN

Highlights

POWERCRON XP is PPG's high edge coverage sixth generation cationic epoxy technology optimized specifically for fasteners. Its advantages include:

- Wide operating window
- Built-in torque control
- Non-sticking formulation
 - Dry to touch
- No recess fill issues
- No thread fill
- State-of-the-art corrosion resistance
- Sharp edge coverage
- Environmentally friendly, heavy metal-free formulation
 - Lead-free film
 - Lead-free effluent
 - Chrome-free system
- Lower applied cost
 - Reduced film shrinkage
 - Reduced cure temperature
 - Reduced oven maintenance
- Reduced emissions
 - Low solvent content
 - VOC less than 0.6 lbs/gal
 - Non-HAP coating

Technical Properties

Property	Test Method	Performance
Color	---	Any other than white
Film Thickness	---	0.5 - 1.2 Mils
Gloss - 60 Degree	ASTM D523	25 - 55
Pencil Hardness	ASTM D3363	2H Minimum
Crosshatch Adhesion	ASTM D3359	4B - 5B
Salt Spray	ASTM B117	1000 Hours Minimum
Humidity	ASTM D1735	1000 Hours Minimum
Water Immersion	ASTM D870	240 Hours Minimum
Gravelometer	GM9508P	6 Minimum
Rust Spot	GM9632P	Zero (Avg.)
Throwpower	GM9535P	12 - 15 inches

Cold Rolled Steel Lab Panels, Zinc Phosphate Pretreatment.
0.8 mils Average Film Thickness, Cure 20 Minutes @ 350°F

Property	Substrate / Pretreatment	Salt Spray* 1000 Hours	20 Cycle** Scab
Corrosion Resistance	CRS/Zinc Phos/Non-Chrome	< 1 mm	2 - 3 mm
	CRS/Iron Phos/Non-Chrome	2 - 4 mm	3 - 5 mm

Cold Rolled Steel Lab Panels
(Average Total Scribe Creep), * Salt Spray - ASTM B117
**Actual fastener testing uses 40 cyclic corrosion - GM9540
0.8 mils Average Film Thickness, Cure 20 Minutes @ 350°F

Commercial Uses

- Automotive Fasteners
- Construction Fasteners
- Fasteners Requiring Torque Properties

Application Data

Standard Bake: 20 Minutes at 350°F Metal Temperature, depending on desired performance properties. Higher temperatures may be required for specific properties.

VOC: < 0.6 lbs. per gallon minus water (as supplied)

HAPs: None

Heavy Metals: None

Note: Cationic epoxy technologies are not color stable.

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TANNER INDUSTRIES, INC.

Tank Inspection Checklist

Customer: TIP TOP SCREW	Cust. #: 174305-001	Date: 7-10-12
City: Oscoda	State: MI	N.B. #: can't read
Tank size: 99.5	Serial #: can't read	Tank OK: OK
Tank manufacturer: DeWilmington		
Date of manufacture: can't read		

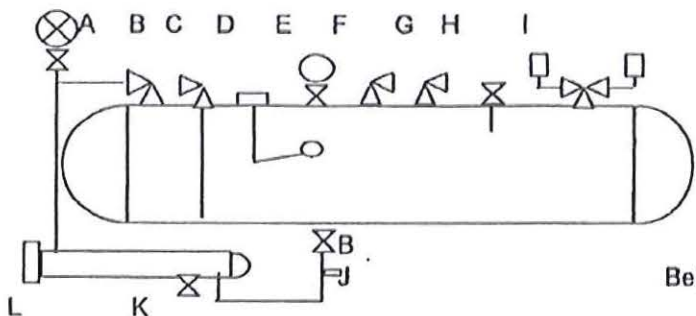


Diagram notes:

Below: Mark all problems with an "X" and explain. Mark "replaced" if part replaced at time of inspection.

	Problem	Replaced	Problem	Replaced
A. Pressure switch Type: Mercoid	<input type="checkbox"/>	<input type="checkbox"/>	H. 85% valve.	<input type="checkbox"/>
Isolating valve: Part #: 1/4" needle	<input type="checkbox"/>	<input type="checkbox"/>	If none, is opening available? opening size: yes 1/4"	<input type="checkbox"/>
B. Vaporizer isolating valves: Top Bottom Part#: A8017 D1H A7506 AP	<input type="checkbox"/>	<input type="checkbox"/>	I. Pressure relief valves	<input type="checkbox"/>
C. Liquid fill valve: Part #: 8016 DP	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date: 5-17 5-17	<input type="checkbox"/>
D. Float gauge: Top / side mount: Top Tank diameter: can't read Float dial only: reverse	<input type="checkbox"/>	<input type="checkbox"/>	Man. Date: 5-10 5-10	<input type="checkbox"/>
E. Pressure gauge: PSI range: 130/400	<input type="checkbox"/>	<input type="checkbox"/>	Part #: AA31304A256	<input type="checkbox"/>
* Isolating valve Part #: 1/4" needle	<input type="checkbox"/>	<input type="checkbox"/>	Three way valve: Part #: shank 844	<input type="checkbox"/>
F. Vapor fill valve: Part #: 8016 DP	<input type="checkbox"/>	<input type="checkbox"/>	J. Hydrostatic relief valve:	<input type="checkbox"/>
G. Customer supply valve: Part #: A7505 AP	<input type="checkbox"/>	<input type="checkbox"/>	Part #: 3580125	<input type="checkbox"/>
** Perform evaporation test if pump out required**			Exp. Date: 8-15	<input type="checkbox"/>
			Man. Date: 8-10	<input type="checkbox"/>
			K. Vaporizer drain valve:	<input type="checkbox"/>
			Part #: A7506 AP	<input type="checkbox"/>
			L. Vaporizer heating element	<input type="checkbox"/>
			KW / Volts: 7.5 / 440	<input type="checkbox"/>
			Type: chromalox	<input type="checkbox"/>
			M. Anhydrous ammonia decals	<input type="checkbox"/>
			N. Hazard warning decals	<input type="checkbox"/>
			O. Acme valve caps	<input type="checkbox"/>
			P. Safety relief valve caps	<input type="checkbox"/>

Is data plate intact? yes	Is it legible? NO	Condition of paint Good
Any excessive corrosion, dents, pitting, etc.? NO		
Condition of vaporizer assembly (shell and piping) Good		
Inspected by: Jon Bowen		
Service agreement: <input type="checkbox"/>	Computer update: <input type="checkbox"/>	S/O entered: <input type="checkbox"/>

TANNER INDUSTRIES, INC.

Tank Inspection Checklist

Customer: Top Top Scales
 City: Duncan
 Tank size: 995
 Tank manufacturer: Downington Iron Works
 Date of manufacture: 1957

Cust. # 194305-001
 State: MI
 Serial # NOS 11158

Date: 9-24-14
 N.B. #: NOS 11158
 Tank OK: LK

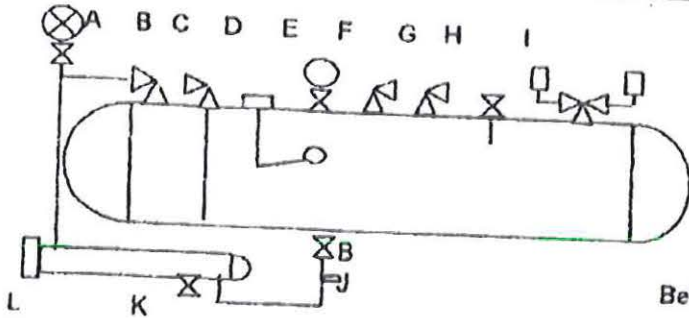


Diagram notes:
 [Empty box for notes]

Below: Mark all problems with an "X" and explain. Mark "replaced" if part replaced at time of inspection.

	Problem	Replaced		Problem	Replaced				
A. Pressure switch			H. 85% valve.						
Type: <u>Mercoid</u>	<input type="checkbox"/>	<input type="checkbox"/>	if none, is opening available?						
Isolating valve:			opening size: <u>1/4"</u>						
Part #: <u>1/4" needle</u>	<input type="checkbox"/>	<input type="checkbox"/>	I. Pressure relief valves						
B. Vaporizer isolating valves:			Exp. Date: <u>5-17 5-17</u>	<input type="checkbox"/>	<input type="checkbox"/>				
Part# <table border="1"><tr><td>Top</td><td>Bottom</td></tr><tr><td><u>A801DIP</u></td><td><u>A750GAP</u></td></tr></table>	Top	Bottom	<u>A801DIP</u>	<u>A750GAP</u>	<input type="checkbox"/>	<input type="checkbox"/>	Man. Date: <u>5-12 5-12</u>		
Top	Bottom								
<u>A801DIP</u>	<u>A750GAP</u>								
C. Liquid fill valve:			Part #: <u>AA31304A250</u>						
Part #: <u>A8016DP</u>	<input type="checkbox"/>	<input type="checkbox"/>	Three way valve:						
D. Float gauge:			Part #: <u>Shank 844</u>	<input type="checkbox"/>	<input type="checkbox"/>				
Top / side mount: <u>Top</u>	<input type="checkbox"/>	<input type="checkbox"/>	J. Hydrostatic relief valve:						
Tank diameter: <u>41</u>	<input type="checkbox"/>	<input type="checkbox"/>	Part # <u>3580210</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Float dial only: <u>Rochester</u>	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date: <u>8-18</u>						
E. Pressure gauge:			Man. Date: <u>8-13</u>						
PSI range: <u>-30/400</u>	<input type="checkbox"/>	<input type="checkbox"/>	K. Vaporizer drain valve:						
* Isolating valve			Part #: <u>A750GAP</u>	<input type="checkbox"/>	<input type="checkbox"/>				
Part #: <u>1/4" needle</u>	<input type="checkbox"/>	<input type="checkbox"/>	L. Vaporizer heating element						
F. Vapor fill valve:			KW/Volts <u>715/480</u>	<input type="checkbox"/>	<input type="checkbox"/>				
Part #: <u>A8016DP</u>	<input type="checkbox"/>	<input type="checkbox"/>	Type: <u>Chromalox</u>						
G. Customer supply valve:			M. Anhydrous ammonia decals	<input type="checkbox"/>	<input type="checkbox"/>				
Part #: <u>A7505AP</u>	<input type="checkbox"/>	<input type="checkbox"/>	N. Hazard warning decals	<input type="checkbox"/>	<input type="checkbox"/>				
** Perform evaporation test if pump out required**			O. Acme valve caps	<input type="checkbox"/>	<input type="checkbox"/>				
			P. Safety relief valve caps	<input type="checkbox"/>	<input type="checkbox"/>				

Is data plate intact? yes Is it legible? Head to Condition of paint Good
 Any excessive corrosion, dents, pitting, etc.? No
 Condition of vaporizer assembly (shell and piping) Good
 Inspected by: Jon Gordon
 Service agreement: _____ Computer update: _____ S/O entered: _____

Tanner Industries, Inc.

Job Sheet

Origin: Lim9, Off

Date: 9-24-14

Customer Name: <u>Tip Top Screw nfg-</u>		Sales Order #:				
Tractor/Truck and Trailer No.: <u>11411 - 37740</u>						
Indicate Type of Work Performed:						
<input type="checkbox"/> Repair	<input type="checkbox"/> Trailer Drop/Pickup	<input type="checkbox"/> Pump Out	<input type="checkbox"/> Degas			
<input type="checkbox"/> Flush Tank	<input type="checkbox"/> Pickup of Tank	<input type="checkbox"/> Deliver Tank	<input checked="" type="checkbox"/> Check For Leaks			
<input type="checkbox"/> Evap Test	<input type="checkbox"/> Change Safety	<input checked="" type="checkbox"/> Change Hydrostat	<input type="checkbox"/> Other			
<input checked="" type="checkbox"/> Tank inspection *job sheet required when any work is performed on tank						
Explanation of Work (Use back of Form if more room is needed): <u>change hydrostat, check for leaks, + tank inspection</u>						
Parts Used (Use back of Form if more room is needed): <u>(1) 558015, 995019, Ammonia Test paper, WD-40</u>						
Complete next two lines for pump out Jobs ONLY; call ending PSI and level to your dispatcher.						
PSI of trailer at start of job:		Level Gauge % at start:				
PSI of trailer at job completion:		Level Gauge % at end:				
Travel Expenses: *When on job more than one day - break out expenses by day** Work Hrs do not include time for delivery. Work Hrs should only be the hours that work other than the delivery were completed**						
<u>9-24-14</u>	Pre/Post Hrs:	Travel Hrs:	Work Hrs: <u>1.5</u>	Break Hrs:	Meals(\$):	Hotel(\$):
Date:	Pre/Post Hrs:	Travel Hrs:	Work Hrs:	Break Hrs:	Meals(\$):	Hotel(\$):
Date:	Pre/Post Hrs:	Travel Hrs:	Work Hrs:	Break Hrs:	Meals(\$):	Hotel(\$):
Date:	Pre/Post Hrs:	Travel Hrs:	Work Hrs:	Break Hrs:	Meals(\$):	Hotel(\$):
Date:	Pre/Post Hrs:	Travel Hrs:	Work Hrs:	Break Hrs:	Meals(\$):	Hotel(\$):
Date:	Pre/Post Hrs:	Travel Hrs:	Work Hrs:	Break Hrs:	Meals(\$):	Hotel(\$):
Date:	Pre/Post Hrs:	Travel Hrs:	Work Hrs:	Break Hrs:	Meals(\$):	Hotel(\$):
Name(s) of Company Employees on Job:		<u>Jon Golden</u>				
Storage Tank Information:						