

U.S. Tape Co. Oil Tank Gauging Tape Product Information and F.A.Q.

1. What is an Outage Tape used for?

An outage tape is used to measure the distance from the top of a liquid in a tank to the top of the tank, or, the part of the tank NOT filled with liquid.

Because the exact top of the liquid is hard to find, the graduated 6" Outage plumb bob goes into the top of liquid. The graduations on the plumb bob start at the point where the bob is attached to the tape and get higher. The reading on the bob (marked by the liquid) is added to the reading on the tape, taken at the top of the tank, to get the total empty portion of the tank.

Knowing the total depth of the tank, you can subtract the space NOT filled, from the total tank depth to determine the depth of the liquid. Multiply the depth times the surface area to get the volume. This type of gauging tape is useful for thick or caustic liquids such as asphalt because the tape does not go into the liquid. An outage tape can also be used to measure standing water at the bottom of petroleum tank.

2. How is an Inage Tape used?

An inage tape is simply lowered into a tank until the tip of the plumb bob touches the bottom of the tank. When it is reeled up the depth of the liquid in the tank is read (like a dip stick in a car) where the tape is wet. Double duty tapes have a black stripe running the length of the tape to help see the mark on light colored liquids. Water finding paste or petroleum paste can also be used to show the mark in very thin liquids.

3. What coatings are on an Oil Gauge Tape, and what type of liquid can be gauged?

The plating on gauging tapes is a Chrome Nickel. They also have a double coating of two different types of lacquer. Plated gauging tapes are designed to be used with petroleum products. Rub tests are performed with a variety of petroleum products to assure a level of quality is maintained. Gasoline, crude oil, fuel oil, etc. should not remove the protective coating. However, exotic chemicals, acids, bases, or a mixture of chemicals may or may not affect the outer lacquer coating. Abrasives, such as sand and grit will also shorten the life of the coating / blade. Substances left on the blade for long periods of storage, or storage in a wet environment can also destroy the blade. Any questions about compatibility should be referred to the factory. Outage tapes (which do not come in direct contact with the liquid) are available as a safe alternative.

4. What is a Double Duty Tape used for?

The purpose of a double duty tape is to make reading both light and dark colored liquid easier. The entire tape has a black line along one edge so light colored fluid can be seen. The protective coating on a double duty tape is the same as a standard Plated Gauging Tape.

5. What is a Black Etched tape used for?

The coating on the black etched is similar to a standard plated blade. The advantage of the black etched is that the numbers and lines are etched into the steel so they are less likely to wear off due to abrasion, and the black background makes it easier to see light colored liquids.

6. What are the advantages of an etched Stainless Steel Tape and what material is it made from?

The etched stainless has no coating. The numbers and grad lines are etched into the blade and therefore less likely to be worn away by abrasive material. This material is more inert than the plated/coated blades, and will withstand a more caustic or wet environment however, this material is not as strong (tensile strength) as a carbon (plated) blade. The material is a 400 series stainless steel, heat-treated. This type of stainless does have a small amount of carbon and iron in it (for heat-treating) so it will tarnish or stain with water and it has a small attraction to a magnet.

7. What are the dimensions of the tape blade?

All blades are ½ inch wide. The steel thickness on all plated gauging blades, including double duty, is .011". With plating and lacquer coating it measures about .013 to .014" thick. The etched (both black and stainless) thickness is .007" to .008".

8. How accurate are Tank Gauging Tapes?

All gauging tapes made by the U.S. Tape Co., Inc. conform to both Mil Spec. # A-A-52216 and American Petroleum Institute Standard 2545. Both of these standards describe the method used to check the accuracy of a tank gauging tape and the acceptable deviation. They are very detailed and the methods are fairly complicated. It requires that the tapes be held and tensioned in specific ways. The tolerance is specific (in the case of API 2545) to the overall length. In general the accuracy is +/- 0.01% of the overall length or .125" on a 100' tape, BUT the measurements MUST be taken under the specific conditions described in each standard. Any questions regarding the accuracy of these tapes should be addressed to the factory.

10. What is the wire and clip used for?

Petroleum in a tank can accumulate static electricity. The Grounding Strap and Clamp are used to connect the tape to the steel tank so when the blade is lowered into the tank a spark does not cause an explosion.

GAUGING OF PETROLEUM PRODUCTS CAN BE DANGEROUS!

Only person's familiar with proper procedures and safety practices should use these products.