



# THOMPSON VACUUM-PRESSURE UNITS

## GENERAL INSPECTION INFORMATION

**DOCUMENTATION** - DOT REQUIRES THE OWNER TO HAVE COPIES IN HIS FILES. ALTHOUGH DOT DOES NOT SPECIFICALLY REQUIRE THE INSPECTOR TO HAVE THE DOCUMENTS, IT IS IMPOSSIBLE TO PERFORM COMPLETE AND ACCURATE INSPECTIONS AND RETESTS WITHOUT THEM.

### V - EXTERNAL VISUAL -

1. THE UPPER COUPLER SHOULD BE MARKED INSIDE TO VERIFY EACH TIME IT WAS REMOVED FOR INSPECTION.
2. ALL GRADE 8 BOLTS

### I - INTERNAL VISUAL -

1. THE CARGO TANK MUST BE EMPTY OF ALL HAZARDOUS MATERIAL.
2. TOXIC AND FLAMMABLE SERVICE TANKS MUST BE CLEANED AND PURGED.

### T - THICKNESS TEST - REQUIRED DOCUMENTATION

1. **OPERATOR QUALIFICATIONS**, DOT/ASME
2. **DEVICE CERTIFICATION** - MUST MEASURE MATERIAL THICKNESS ACCURATELY TO  $\pm 0.002$  INCHES
3. RECORD, IDENTIFY AND LOCATE ALL POINTS AS REQUIRED IN 180.407 (i) (4) ITEMS (I) THROUGH (X). MINIMUM THICKNESS OF SHELL, HEADS, ETC. - MUST BE DETERMINED BY THE MANUFACTURER OR A QUALIFIED DESIGN CERTIFYING ENGINEER, REGISTERED WITH DOT, 178.345-14 (11) (12) NOT THE INSPECTOR.
4. 180.407 (i) (5) "IN SERVICE MINIMUM THICKNESS" FOR MC-307/312 VACUUM LOADED CARGO TANKS ARE BASED ON 90 PERCENT OF THE MANUFACTURED THICKNESS, LESS CORROSION ALLOWANCE.

**CAUTION - DO NOT ACCEPT THICKNESS TEST RESULTS WITHOUT CERTIFICATES THAT VERIFY THE QUALIFICATIONS OF THE OPERATOR AND THE DEVICE**, INCLUDED IN THE DOCUMENTATION.

EXPERIENCE HAS SHOWN THAT T-THICKNESS TEST RESULTS FURNISHED WITHOUT THE REQUIRED DOCUMENTATION THAT VERIFY THE QUALIFICATIONS OF THE OPERATOR AND THE DEVICE ARE, IN MANY CASES, INACCURATE. SOME CARGO TANKS HAVE INCREASED IN THICKNESS AND OTHERS WERE REMOVED FROM SERVICE BECAUSE OF INCOMPETENT OPERATORS OR FAULTY DEVICES.

**P - PRESSURE TEST** - THE HYDROSTATIC TEST @ 1.5 x MAWP IS NOT A LEAK TEST. IT IS A TEST TO DETERMINE STRUCTURAL INTEGRITY. FAILURE IS INDICATED BY LEAKS, DISTORTION, PERMANENT EXPANSION, BULGING, ETC.



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1. 178.347-5 – DOT 407 40 PSI MINIMUM

## L - LINING INSPECTION - CAUTION

1. **SPARK TESTING IMPROPERLY PERFORMED CAN DAMAGE THE LINING.**
2. WALKING ON AGED, HARD OR BRITTLE LINING CAN DAMAGE THE LINING AND CAUSE A FAILURE IN THE NEAR FUTURE.

**178.345 STRUCTURAL INTEGRITY - THE MANUFACTURER IS REQUIRED TO PROVE COMPLIANCE WITH ACCURATE METHODS AND VERIFY THE RESULTS.**

WE RECOMMEND THAT YOU CONTACT THE ORIGINAL MANUFACTURER, OR A THIRD PARTY PROFESSIONAL ENGINEER, REGISTERED WITH THE DOT AS A DESIGN CERTIFYING ENGINEER, AND OBTAIN PROOF OF COMPLIANCE ON ANY COMPONENT OR DESIGN IN QUESTION AS REQUIRED BY DOT 178.320-(b)-(2). (SEE DESIGN CHECK OFF LIST)

**NOTE:** REFERENCES FOR A QUALIFIED PROFESSIONAL ENGINEER CAN BE FURNISHED ON REQUEST. (SEE PROFESSIONAL SERVICES)

COMPLAINTS CAN BE SENT TO:

U.S. DEPARTMENT OF TRANSPORTATION  
F.M.C.S.A.  
HAZARDOUS MATERIALS DIVISION  
400 7<sup>TH</sup> STREET S.W.  
WASHINGTON, DC 20040