

Tank Floor Inspection Report



Husky Energy

Location: 07-27-51-19 W5
Tank Serial # 86779. Condensate Tank
Examined: Sep 12, 2011
Technician: Tom Dearden

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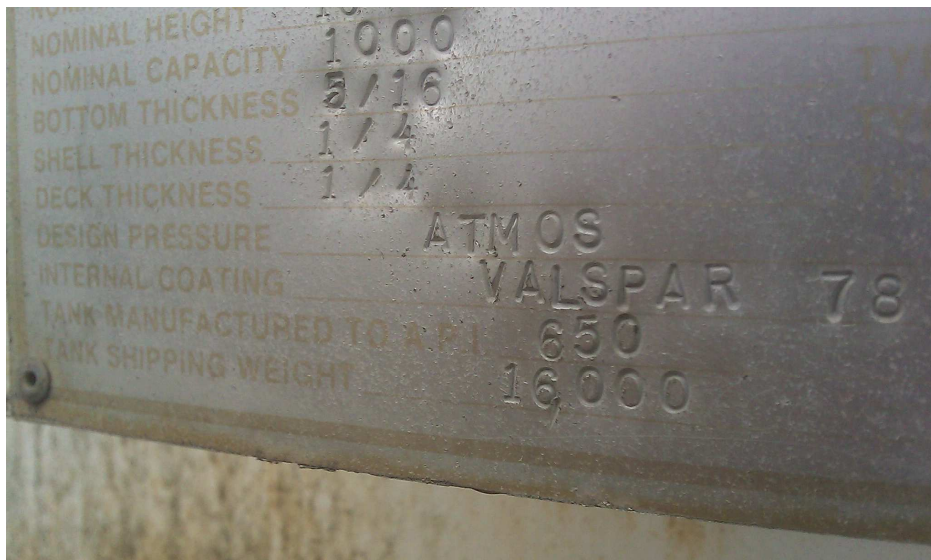
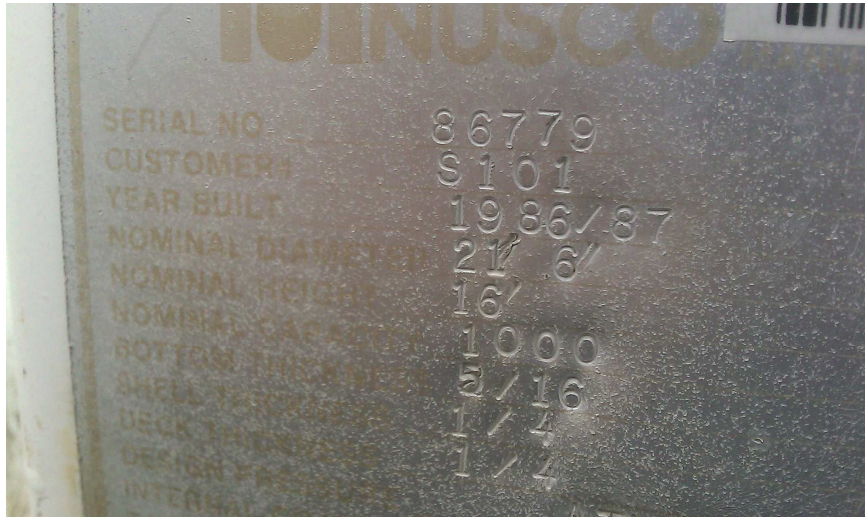
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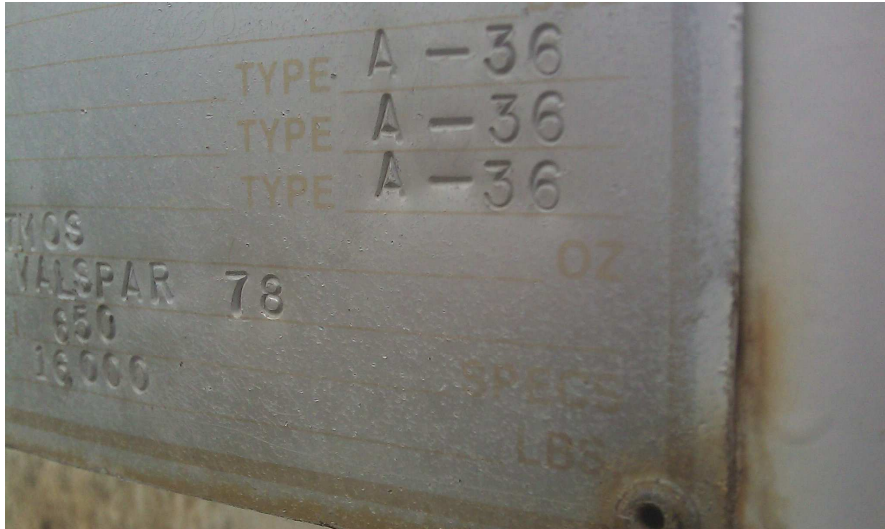
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1.0 Introduction

1.1 Nameplate Data





1.2 Static Tank Data

Tank Floor Thickness:	0.3125
Liner/Coating Thickness:	0.020
Annular/Sketch Thickness:	None
Internal Heating System:	None

1.3 Inspection Scope

On Sep 12, 2011, a magnetic flux leakage examination was conducted on the floor of Condensate Tank located at 07-27-51-19 W5 as requested by Bob Marchak, Husky Energy. The examination consisted of mapping all accessible floor plate areas to locate, position and quantify top and under side corrosion.

1.4 Inspection Summary

Based on the results of this examination the following conclusions can be made; three relevant indications were found (as illustrated following this report) and verified with ultrasonic examination.

Indication A; was found to have 0.218" thickness remaining with the coating. Ultrasonic examination was used to determine the thickness remaining with the coating.

Indication B; was found to have 0.244" thickness remaining with the coating. The indication found was 1/2" in size. Ultrasonic examination was used to determine the thickness remaining with the coating.

Indication C; was found to have 0.252" thickness remaining with the coating. The indication found was on the underside of a bulge in the floor that was 5" in diameter. Although unable to handscan the bulge, ultrasonic examination was used to determine the thickness remaining with the coating on the bulged area.

2.0 MFL Equipment

2.1 MFL Equipment

The Handscan developed by Silver Wing Ltd was utilized to examine inaccessible that the Floormap VS2 could not access.

Serial Number: 5660610E

Internal Calibration Due Date: Oct 15, 2011

2.2 MFL Equipment Limitations

Welds - at welds between adjacent plates the Floormap is able to scan to the edge of the upper plate, but in some instances it is not able to scan closer than 25mm to the weld of the lower plate.

Any areas on the plate surface which have been subjected to welding, grinding, or any other application that would cause a change in the material structure and permeability.

Patch Plates

FRP Liners – when scanning is performed over FRP liners, the unevenness of the liner may cause the sensor head to lift resulting in erroneous indications. Care should be taken to ensure that the resultant data is not a result of this.

Uneven Plates – when scanning over three plate lap weld intersections, the elevation change may cause the sensor head to become uneven, thus indicating wall loss. Areas of mechanical

damage (i.e. dents) can cause the unit to recognize wall loss due to the change in elevation at the area of impact. Care should be taken to ensure that the resultant data is not a result of any of these.

2.3 Calibration

Calibration Plates

The *Handscan* system was calibrated using a carbon steel calibration plate that contains four simulated corrosion pits as follows:

- 1) A 136° stepped conical pit penetrating 20% through the plate thickness from the bottom surface.
- 2) A 136° stepped conical pit penetrating 40% through the plate thickness from the bottom surface.
- 3) A 136° stepped conical pit penetrating 60% through the plate thickness from the bottom surface.
- 4) A 136° stepped conical pit penetrating 80% through the plate thickness from the bottom surface.

TEAM uses the following gauges of plates; 0.1875 in. for roof plate examinations, 0.250 inch, 0.3125 inch, 0.375 inch and 0.500 inch plates for floor plate examinations.

Coating Samples

TEAM uses coating samples ranging from 0.010 inches to 0.125 inches to simulate the floor being examined. Coating measurements are usually taken randomly around the tank to get an average thickness value. The applicable coating sample is then selected and placed between the calibration plate and the *Floormap* to simulate the tank floor being examined. TEAM can examine plates with a maximum coating thickness of 0.250 inches.

The calibration piece used for the MFL examination on the Tank Serial # 86779 was the 0.3125 plate with 0.020 coating sample.

3.0 Conclusions

3.1 Examination Conclusions

Based on the results of the inspection and of this report, the following conclusions can be made; Three indications were found as shown on the map following this report.

3.2 Recommendations

Based on the results of this examination, the following remedial action is recommended; monitor the three indications at the net service interval.

Submitted by,



Tom Dearden
CGSB # 13146

Reviewed by,



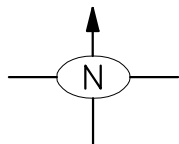
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CGSB #7719



Industrial Services

Inspection Services Canada

HUSKY ENERGY INC.
ANSELL T/A
LSD 07-27-051-19W5M
CONDENSATE TANK
S/N: 86779



- NOMINAL FLOOR THICKNESS: 0.3125"
- SHOWN BELOW ARE AREAS WHERE PLATE LOSS IS PRESENT. NUMBERS ARE SHOWN IN TOTAL THICKNESS OF THE PLATE REMAINING

AREA C:
0.252" REMAINING
WITH THE COATING

AREA A:
0.218" REMAINING
WITH THE COATING

