

LAMPIRAN 1

Table A-1

ASME B31.3-2002

TABLE A-1 (CONT'D)
BASIC ALLOWABLE STRESSES IN TENSION FOR METALS¹
 Numbers in Parentheses Refer to Notes for Appendix A Tables; Specifications Are ASTM Unless Otherwise Indicated

| Material | Spec. No. | P-No. or S-No. (5) | Grade | Notes | Min. Temp., °F (6) | Specified Min. Strength, ksi | | Min. Temp. | | |
|---------------------------------------|-----------|--------------------|--------|-------------|--------------------|------------------------------|-------|------------|------|------|
| | | | | | | Tensile | Yield | to 100 | 200 | 300 |
| Carbon Steel (Cont'd) | | | | | | | | | | |
| Plates and Sheets (Structural) | | | | | | | | | | |
| ... | A 283 | 1 | A | (8)(57) | A | 45 | 24 | 13.8 | 13.2 | 12.5 |
| ... | A 570 | 5-1 | 30 | (8)(57) | A | 49 | 30 | 15.0 | 15.0 | 15.0 |
| ... | A 283 | 1 | 3 | (8)(57) | A | 50 | 27 | 15.3 | 14.6 | 14.0 |
| ... | A 570 | 5-1 | 33 | (8)(57) | A | 52 | 33 | 15.9 | 15.6 | 15.9 |
| ... | A 570 | 5-1 | 36 | (8)(57) | A | 53 | 36 | 16.3 | 16.2 | 16.3 |
| ... | A 283 | 1 | C | (8)(57) | A | 55 | 30 | 16.9 | 16.1 | 15.3 |
| ... | A 570 | 5-1 | 40 | (8)(57) | A | 55 | 40 | 16.9 | 16.6 | 16.9 |
| ... | A 36 | 1 | ... | (8) | A | 56 | 36 | 17.8 | 16.6 | 16.9 |
| ... | A 283 | 1 | 3 | (8)(57) | A | 60 | 33 | 18.4 | 17.2 | 16.7 |
| ... | A 570 | 5-1 | 45 | (8)(57) | A | 60 | 45 | 18.4 | 18.4 | 18.4 |
| ... | A 570 | 5-1 | 50 | (8)(57) | A | 65 | 50 | 19.9 | 19.6 | 19.9 |
| Forgings and Fittings (2) | | | | | | | | | | |
| ... | A 350 | 1 | LF-1 | (9)(57)(59) | -20 | 60 | 30 | 20.0 | 18.2 | 17.7 |
| ... | A 181 | 1 | Cl. 60 | (9)(57)(59) | A | 60 | 30 | 20.0 | 18.2 | 17.7 |
| ... | A 420 | 1 | WPL-6 | (57) | -50 | 60 | 35 | 20.0 | 20.0 | 20.0 |
| ... | A 234 | 1 | WPE | (57)(59) | B | 60 | 35 | 20.0 | 20.0 | 20.0 |
| ... | A 350 | 1 | LF-2 | (9)(57) | -50 | 70 | 36 | 23.3 | 21.6 | 21.3 |
| ... | A 105 | 1 | ... | (9)(57)(59) | -20 | 70 | 36 | 23.3 | 21.6 | 21.3 |
| ... | A 181 | 1 | Cl. 70 | (9)(57)(59) | A | | | | | |
| ... | A 234 | 1 | WPC | (57)(59) | B | 70 | 40 | 23.3 | 23.3 | 23.3 |
| Castings (2) | | | | | | | | | | |
| ... | A 216 | 1 | WCA | (57) | -20 | 60 | 30 | 20.0 | 18.2 | 17.7 |
| ... | A 352 | 1 | LCB | (9)(57) | -50 | 65 | 35 | 21.7 | 21.2 | 20.7 |
| ... | A 216 | 1 | WCE | (9)(57) | -20 | 70 | 36 | 23.3 | 21.6 | 21.3 |
| ... | A 216 | 1 | WCC | (9)(57) | -20 | 70 | 40 | 23.3 | 23.3 | 23.3 |

(continued)

LAMPIRAN 2

2.1 Jalur PG-0105-D-10"

Site: PG-0105-D-10" (PG-105-D-8" TO MMF GAS LIFT)
 Station: CS

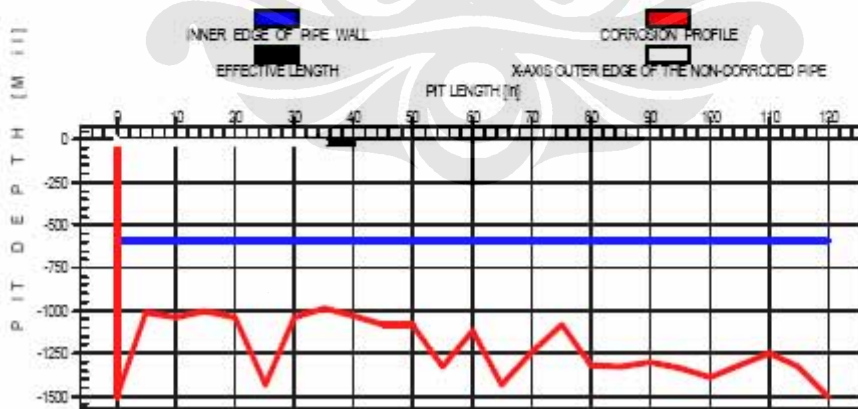
Date: 6/21/2016

| | | | |
|--|--------|----------------------------------|--------|
| P = 2StFT/D [psig] - Calculated Pressure | 2,766 | | |
| Established MAOP [psig] | 1,200 | | |
| Pipe Outside Diameter [in] | 10.75 | Effective Length [in] | 5.000 |
| Pipe Wall Thickness [mm] | 14.986 | Effective Area [in] ² | -2.105 |
| SMYS [psi] | 35,000 | Max. Pit Depth [mm] | 0.000 |
| Design Factor | 0.72 | Max. Depth/Wall Thickness | 0.00 |
| Total Length [in] | 120 | | |
| Effective Length: Start [in] | 35.00 | End [in] | 40.00 |

RESULTS OF ANALYSIS:

| METHOD | Max. Safe Pressure [psig] | Burst Pressure [psig] | Safety |
|--------------------------|---------------------------|-----------------------|--------|
| RSTRENG - Effective Area | 2766 | 6108 | 5.09 |
| RSTRENG - 0.85dL | 2766 | 4940 | 4.12 |
| ASME B31 G | 2766 | 4226 | 3.52 |

CORROSION PROFILE:



Prepared By: Purbadi Putranto

Approved By: john doe

2.2 Jalur PG-0123-D-2”

Site: PG-0123-D-2” (MM-R-40-01 to MM-R-40-01)
Station: CS

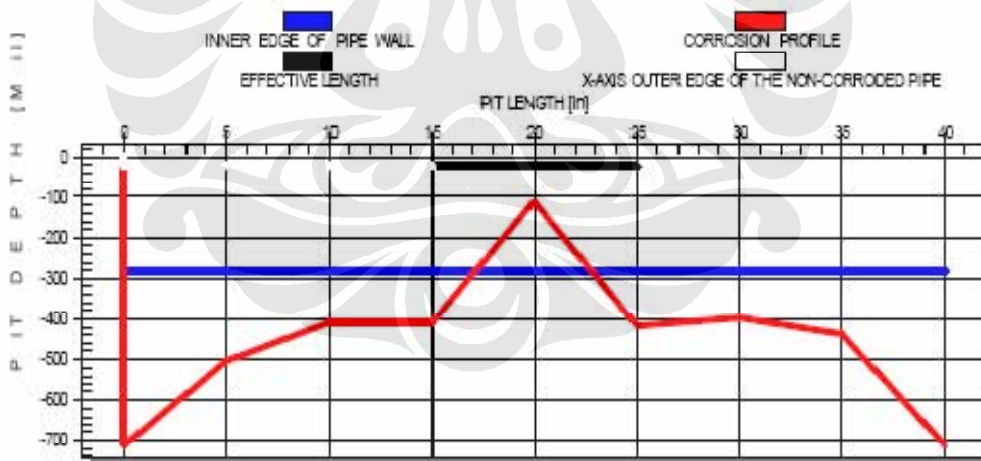
Date: 6/21/2008

| | | | |
|--|--------|---------------------------|--------|
| P = 2StFT/D [psig] - Calculated Pressure | 8,005 | | |
| Established MAOP [psig] | 1200 | | |
| Pipe Outside Diameter [in] | 2.35 | Effective Length [in] | 10.000 |
| Pipe Wall Thickness [mm] | 7.112 | Effective Area [in]² | 0.185 |
| SMYS [psi] | 35,000 | Max. Pit Depth [mm] | 0.170 |
| Design Factor | 0.72 | Max. Depth/Wall Thickness | 0.81 |
| Total Length [in] | 40 | | |
| Effective Length: Start [in] | 15.00 | End [in] | 25.00 |

RESULTS OF ANALYSIS:

| METHOD | Max. Safe Pressure [psig] | Burst Pressure [psig] | Safety Factor |
|--------------------------|---------------------------|-----------------------|---------------|
| RSTRENG - Effective Area | 8005 | 10097 | 8.41 |
| RSTRENG - 0.85dL | 3760 | 5223 | 4.35 |
| ASME B31 G | 2595 | 3604 | 3 |

CORROSION PROFILE:



Prepared By: Purbadi Putranto

Approved By: john doe

2.3 Jalur PG-0021-D-16"

Site: PG-0021-D-16" (10"-D-060-P-21 TO MMF-108-D-16)
 Station: FS

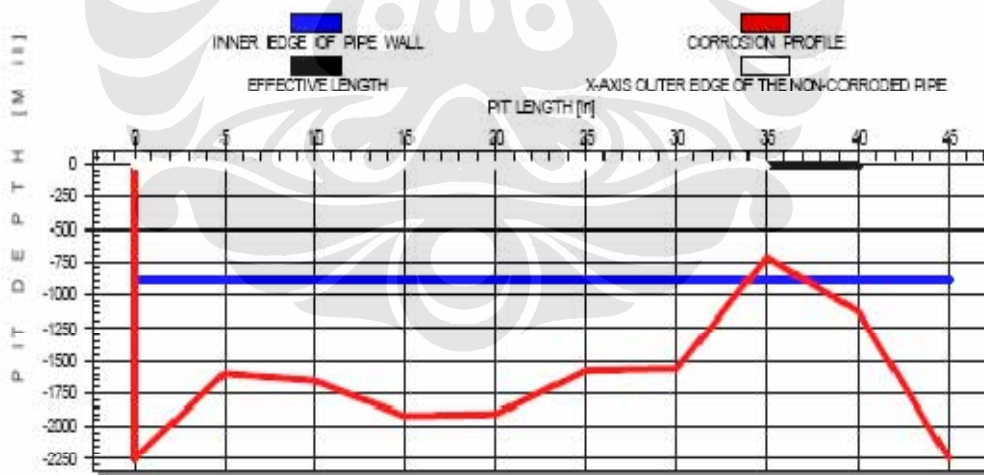
Date: 6/22/2008

| | | | |
|--|--------|----------------------------------|--------|
| P = 2StFT/D [psig] - Calculated Pressure | 2,772 | | |
| Established MAOP [psig] | 1,200 | | |
| Pipe Outside Diameter [in] | 18.00 | Effective Length [in] | 5.000 |
| Pipe Wall Thickness [mm] | 22.352 | Effective Area [in] ² | -0.238 |
| SMYS [psi] | 35,000 | Max. Pit Depth [mm] | 0.161 |
| Design Factor | 0.72 | Max. Depth/Wall Thickness | 0.18 |
| Total Length [in] | 45 | | |
| Effective Length: Start [in] | 35.00 | End [in] | 40.00 |

RESULTS OF ANALYSIS:

| METHOD | Max. Safe Pressure [psig] | Burst Pressure [psig] | Safety Factor |
|--------------------------|---------------------------|-----------------------|---------------|
| RSTRENG - Effective Area | 2772 | 6030 | 4.19 |
| RSTRENG - 0.85dL | 2772 | 4264 | 3.55 |
| ASME B31-G | 2491 | 3480 | 2.88 |

CORROSION PROFILE:



Prepared By: Purbadi Putranto

Approved By: john doe