

LEC Protection for Petroleum Storage Tanks

April 20, 2020

LEC has protected over a thousand petroleum storage tanks all over the world. These tanks range from large steel tanks that you may see in a refinery or terminal to small steel or non-metal tanks that you may find at a production site. Below is a summary of the protection equipment (not including grounding) that LEC has installed on these structures:

| | <u>Figure</u> | <u>RGA's</u> | <u>IPE's</u> |
|--|---------------|--------------|--------------|
| A. Large steel tanks | | | |
| a. External floating roof tanks | 2 | Yes | NA |
| b. Internal floating roof tanks with dome roof | 4 | Yes | NA |
| c. Cone roof tanks with an internal floating roof | 1 | Yes | NA |
| d. Cone roof tanks without an internal floating roof | 1 | NA | NA |
| e. Flat roof tanks with an internal floating roof | 3 or 6 | Yes | NA |
| f. Flat roof tanks without an internal floating roof | 3 or 6 | NA | NA |
| B. Small steel tanks | | | |
| a. Standalone vertical tanks with flat or domed top | 1, 6 or 8 | NA | NA |
| b. Vertical tank batteries | 5 or 7 | NA | NA |
| c. Horizontal bullet tanks | 10 | NA | NA |
| C. Small non-metal tanks | | | |
| a. Standalone vertical tanks with flat or domed top | 6 or 8 | NA | Yes |
| b. Vertical tank batteries | 5 or 7 | NA | Yes |
| c. Wine box tanks | 9 | NA | Yes |

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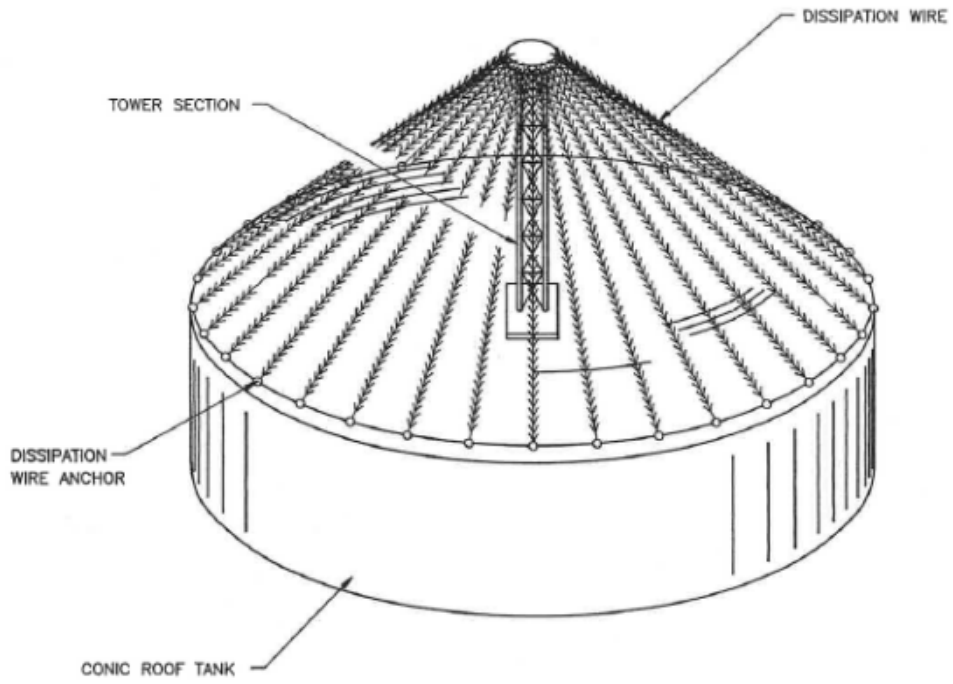


Figure 1: DAS Conic Arrays on Cone Roof Tank

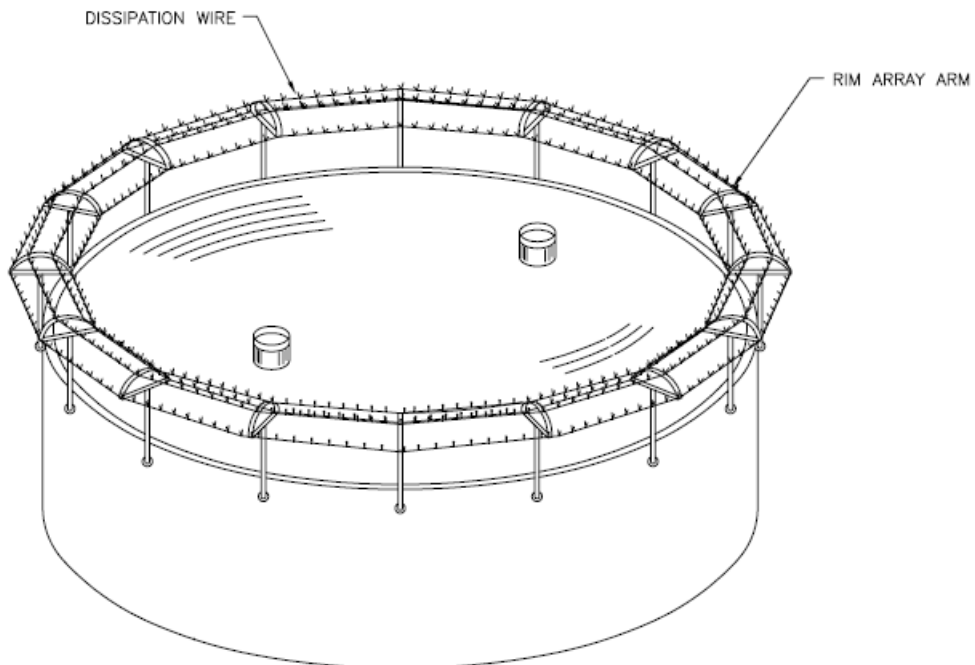


Figure 2: DAS Rim Array on External Floating Roof Tank

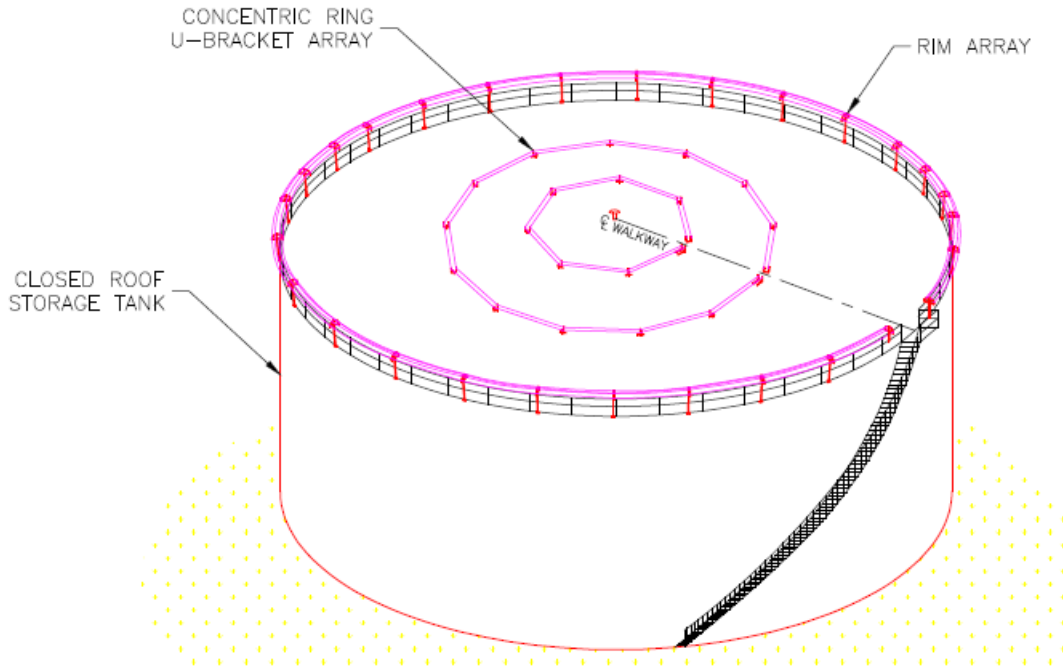


Figure 3: DAS Rim Array with Internal Concentric Rings on Large Flat Roof Tank

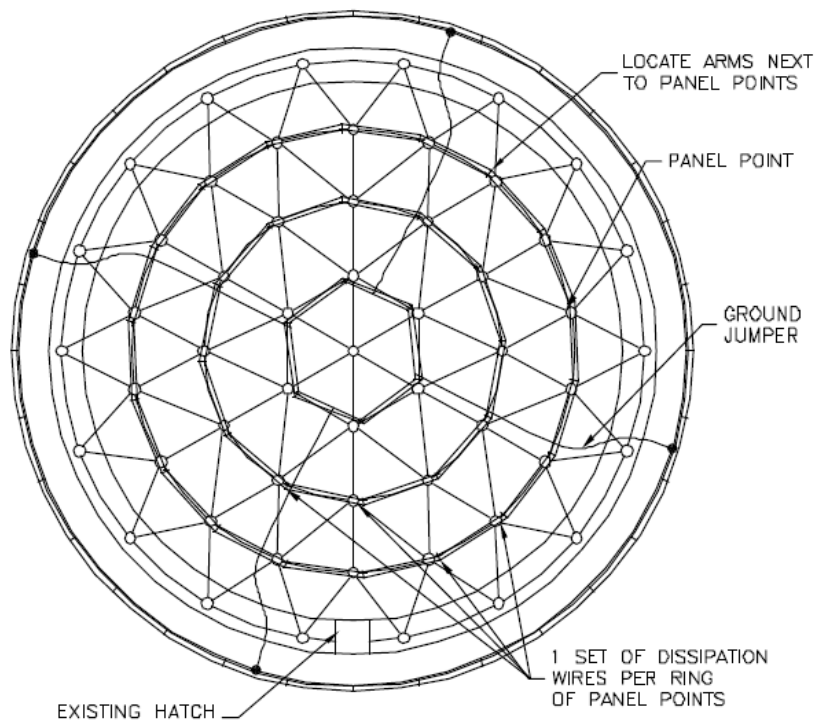


Figure 4: DAS Dome Roof Array on Dome Roof Tank

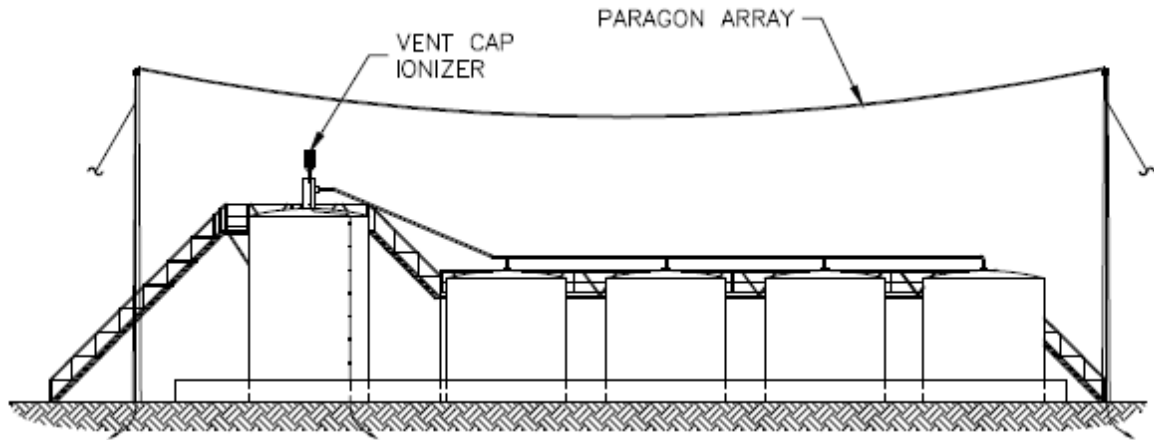


Figure 5: DAS Paragon Array strung over Tank Battery

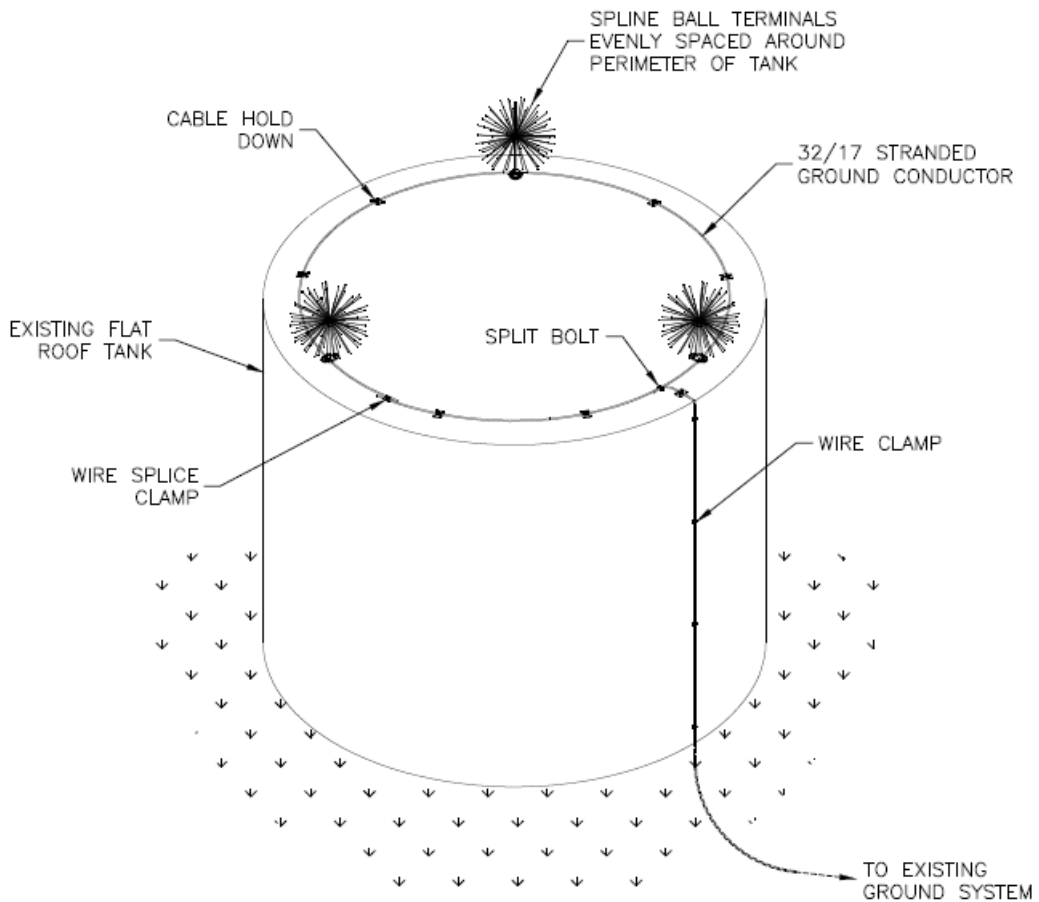


Figure 6: SBT Array with 3 SBT's on Tank

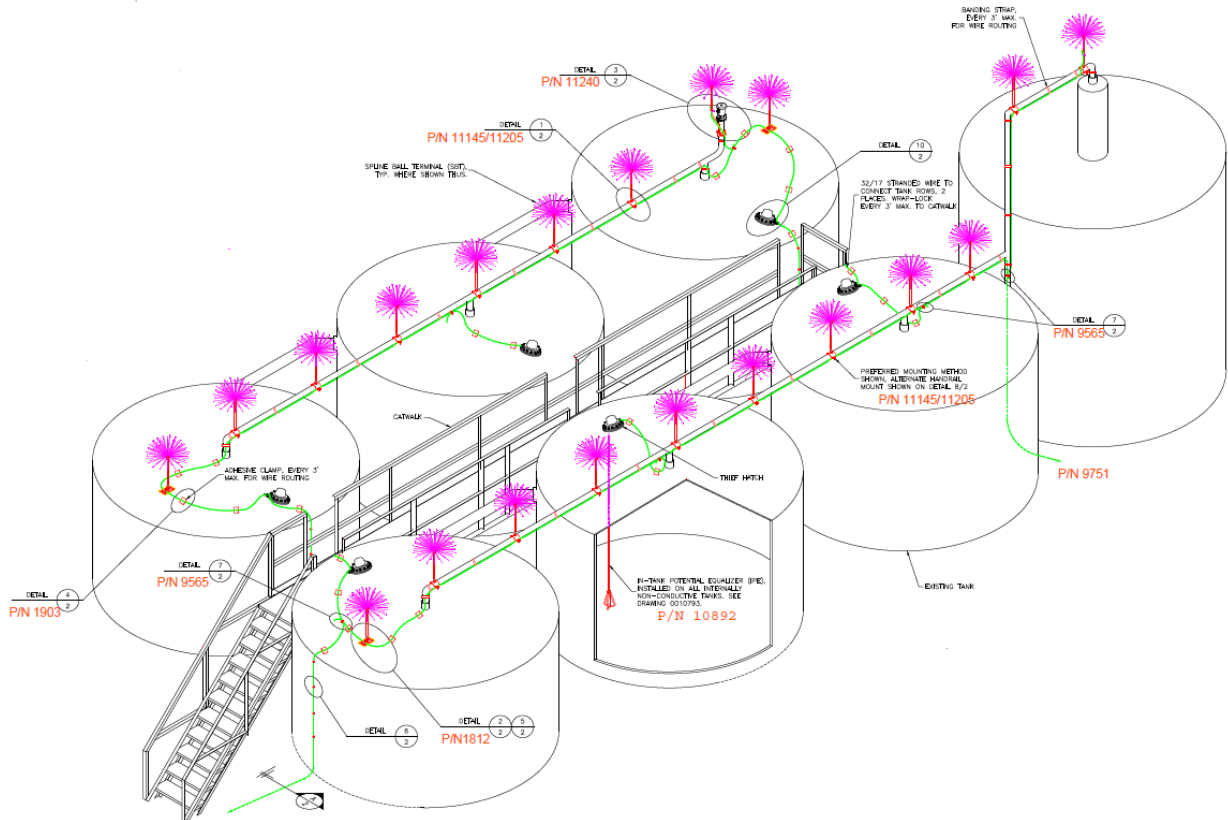


Figure 7: SBT Array on Tank Battery

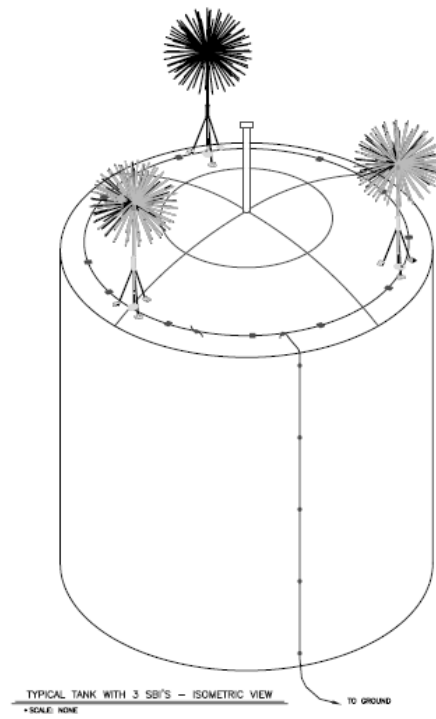


Figure 8: SBI Array with 3 SBI's and Tripods on Tank

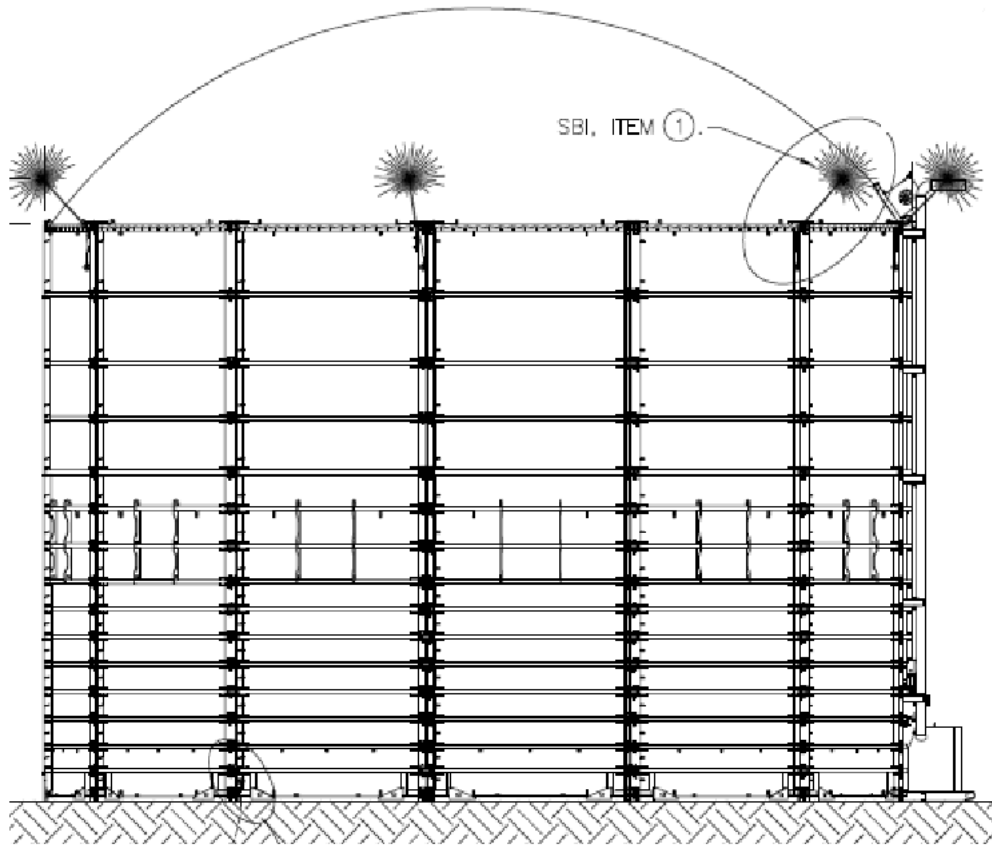


Figure 9: SBI Array on "Wine Box" Tank

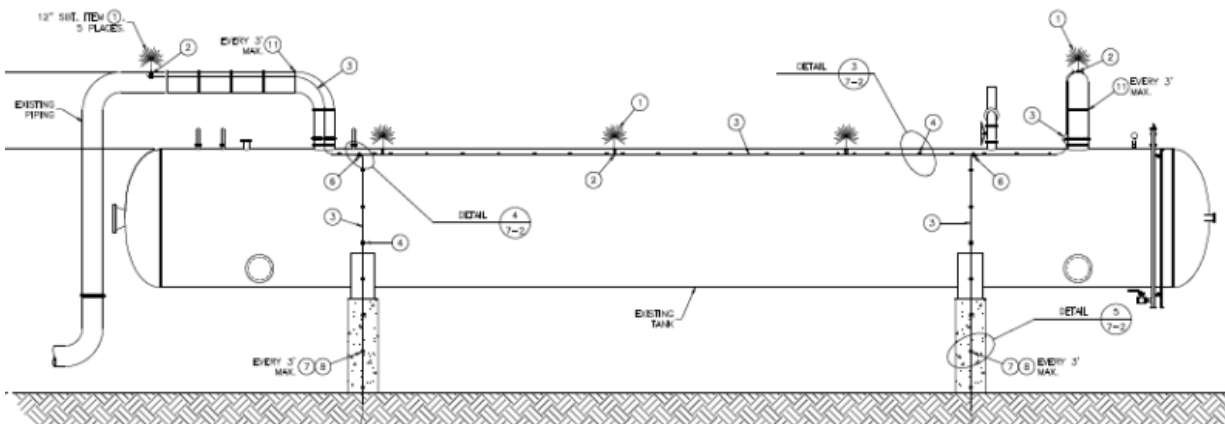


Figure 10: SBT Array on Horizontal Bullet Tank