

NAVSEA  
STANDARD ITEM

**FY-28**

ITEM NO: 009-076  
DATE: 01 OCT 2024  
CATEGORY: II

1. SCOPE:

1.1 Title: Waveguide and Rigid Coaxial Lay-Up; accomplish

2. REFERENCES:

2.1 ***803-1385925, Mechanical Standard DWG Panel Control, Air Low Pressure***

3. REQUIREMENTS:

3.1 Disconnect each dry air pressure line at last mechanical joint as designated by the SUPERVISOR and connect temporary nitrogen or dry air lay-up control/monitor panels and associated equipment to ship's dry air panel.

3.1.1 Where lay-up conditions permit, ensure temporary nitrogen or dry air lay-up control/monitor panels are operational for continuous monitoring of temporary nitrogen or dry air in the equipment space(s).

3.1.1.1 Use of ship's dry air control/monitor panels may be an option, but only when lay-up conditions permit, and verified that equipment's dry air control/monitor panels are operational for continuous monitoring of temporary dry air in the equipment space(s).

3.2 Accomplish uninterrupted nitrogen or dry air lay-up for each waveguide and rigid coaxial cable in accordance with ***the requirements*** of 2.1.

3.2.1 Do not connect unregulated pressurized air to equipment sub-assemblies or components. Ensure that each temporary dry air pressure source is connected to prevent equipment damage due to over-pressurization. No pressurization must be supplied to waveguide in excess of the normal operating pressures specified for that equipment.

3.2.2 Ensure temporary dry air meets the requirements of 2.1, and the following: |

3.2.2.1 Dew Point: Minus 40 degrees Fahrenheit at 80 PSIG.

3.2.2.2 Quality of Air: Filtered to remove all particulate matter greater than one micrometer and filtered for a total amount of contamination (including oil contaminants) not to exceed one part per million by weight.

3.2.3 Pressurize each line as specified for that equipment.

**3.2.3.1 Accomplish purging and pressurization of the waveguide.**

***Pressurize the system to the required PSIG and maintain this pressure for 2 hours. Bleed the waveguide run very slowly through the gas escape valve at the end of the purge line, maintaining a constant pressure from the dry air or nitrogen source. Bleeding the line should continue for a minimum of 2 hours. Close the gas escape valve and check to ensure that the waveguide is pressurized to the required PSIG.***

3.2.3.2 Where specific lay-up instructions are not available, pressurize those lines to 3 PSIG.

3.2.3.3 Install relief valve ***lowest point*** of temporary source, setting relief pressure at 5 PSIG.

**3.2.4 Immediately upon completion of the transmission line installation a tightness test must be conducted to determine if leakage exists at any flange connections. The transmission line must be pressurized to its specified pressure. The compressed dry air or nitrogen must be allowed to stand in the transmission line until its temperature equalizes. The pressure drop, corrected for temperature changes, must not exceed five percent of the test pressure after a test period of six hours. If, after the expiration of the test period, the pressure drop exceeds the permissible five percent drop, the system must be examined and leaks eliminated, and the tightness test repeated.**

3.2.4.1 Identify leaks ***by applying a soapy solution to the flange connection, or suspected area. With pressure inside the waveguide, bubbles will appear where the compressed dry air or nitrogen is escaping.***

3.2.4.2 Submit one legible copy, in approved transferrable media, of a report listing results of the requirements of 3.2.4 ***and 3.2.4.1*** to the SUPERVISOR.

3.3 Remove temporary ***nitrogen or dry air lay-up control/monitor panels and associated equipment*** when directed by the SUPERVISOR. If any ship's dry air control/monitor panels were utilized, restore each and verify operational.

3.3.1 Connect each dry air pressure line disconnected in 3.1.

**3.3.2 Accomplish purging and pressurization of the waveguide. Pressurize the system to the required PSIG and maintain this pressure for 2 hours. Bleed the waveguide run very slowly through the gas escape valve at the end of the purge line, maintaining a constant pressure from the dry air or nitrogen source. Bleeding the line should continue for a minimum of 2 hours. Close the gas escape valve and check to ensure that the waveguide is pressurized to the required PSIG.**

4. NOTES:

4.1 None.