WDMA TM 7-23 Cycle-Slam Test
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Test Method for Determining the Physical Endurance of Wood Doors & Hardware Connections Under Accelerated Operating Conditions

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1. SCOPE

The purpose of this test method is to test the performance of a wood door as it swings in its opening. The test is designed to accelerate the actual operating conditions.

2. APPLICABLE DOCUMENTS

2.1. ANSI/BHMA A156.l-2021, American National Standard for Butts & Hinges

2.2. ANSI/BHMA A156.4-2019, American National Standard for Door Control – Closers

3. SIGNIFICANCE AND USE

This test method will not determine the useful life of doors in service as a result of the data obtained during this test. It will, however, indicate what the effects of hard impacts upon closing (slamming) and cycling will be on the door and door hardware connections. It will provide useful data for designers, specifiers, and manufacturers in making judgments on the ability of the door assembly to maintain serviceability under actual operating conditions.

4. APPARATUS

4.1. The main testing apparatus shall be constructed as shown in Figures 1 and 2. The test frame or buck must be constructed of steel I beams or steel channel or material of comparable rigidity. The test frame must be welded to the base and supported by two (2) or more steel members welded at the base and at the frame. The apparatus shall conform to the parts shown in Figures 1 and 2, except that the opening height and width may vary to allow the testing of various door sizes. The base shall be heavy enough to insure the stability of the testing structure. The apparatus shall be sufficiently rigid to prevent frame deflection during cycling.