

TECHNICAL BULLETIN

Wire Mesh Decking: How are working loads determined?

To determine the working load of a wire mesh deck, and to ensure consistency from deck to deck and the variations between the numerous configurations available, J&L has adopted the test method recognized and approved by the Rack Manufacturers Institute (RMI). The standard referred to by RMI is the American National Standard Institute's (ANSI) standard MH26.2, entitled "Design, Testing and Utilization of Welded-Wire Rack Decking".

This standard applies to uniformly loaded rack decking fabricated from welded-wire mesh with permanently attached reinforcements, for use in storage racks. There is no other approved test method recognized by RMI that rates a deck's load capacity. Only manufacturers that can prove conformance to this standard are certified by RMI with an R-Mark. Testing to this standard provides the rating capacity by the lesser of either deflection (of the rack & channels), or total deck collapse. Wire decking is placed on support beams that match the deck's depth. A load is then uniformly applied while measurements of deflection and load are taken. Typically, hydraulic cylinders provide along the surface of the the step-by-step procedure testing.

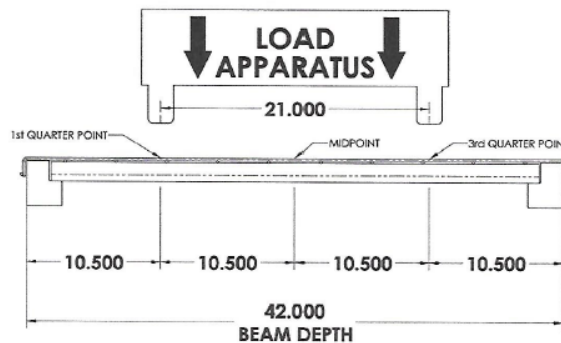


Diagram taken from ANSI MH26.2

Load is applied up to the point at which deflection of $D/165$ (D = deck depth) is achieved in a minimum of four increments. The load is then recorded as "W1". Test load is then increased to structural collapse (point at which the support channels continue to deflect without any additional loading) in a minimum of no less than four increments. This load divided by two (2) is then recorded as "W2". Remember, load capacity ratings are defined as the lesser of the two values (W1 or W2).

EXAMPLE

Deck Depth = 42" [Maximum allowed deflection = 0.25" ($D/165$)]

Applied Test load to deflection = 3,498 lbs. (W1)

Applied Test load to structural collapse = 7,500 lbs. ($7,500/2 = W2$)

W1 = 3,498 lbs.

W2 = 3,750 lbs.

RATED WORK LOAD CAPACITY = 3,498 lbs. (lesser of W1 and W2)



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