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WELDED WIRE FABRIC NUMBERING SYSTEM

In 1970 the American Society for Testing and Materials changed from the gage system to a numbering system designed to simplify use of wire fabrics in concrete design. The numbering system relates to the cross-sectional area of the wire and involves a letter-number combination. "W" designates smooth wire and "D" designates deformed wire. The number following the letter gives the cross-sectional area of the wire in hundredths of a square inch. For example, if a steel cross-sectional area of 0.15 square inch per lineal foot is needed, it can be met with W5.0 wires on 4-inch centers (3 wires per lineal foot, each with a cross-sectional area of 0.05 square inch.)

Welded wire fabric is designated by two numbers and two letter-number combinations. An example is 6 by 8 - W8.0 by W4.0. The first number gives the spacing in inches of the longitudinal wires, the second gives the spacing of the transverse wires. The first letter-number combination gives the type and size of the longitudinal wire, the second designates the transverse wire. Thus, in the example the longitudinal wires are 6 inches apart and the transverse wires are 8 inches apart. The wires are smooth and the cross-sectional areas are 0.08 square inch in the longitudinal direction and 0.04 square inch transversely.

Welded wire fabric is available with either deformed or smooth wires, as indicated earlier. Smooth welded wire fabric has a yield strength of 65,000 psi and deformed fabric has a yield of 70,000 psi. Smooth wire develops anchorage of the steel at the welded intersections. In the smooth fabric the smaller wire should have a cross-sectional area equal to at least 40 percent of the area of the larger wire. With deformed fabric, anchorage is developed by virtue of the deformations as well as at the welded intersection. In deformed fabric the smaller wire should have at least 35 percent of the cross-sectional area of the larger wire.

Fabric is available in both rolls and sheets. Lighter fabric is often supplied in rolls, while heavier fabric such as that used for pavement is generally supplied as flat sheets.

For maximum economy in the cost of fabric, the use of a minimum number of styles is suggested. Also, use of fewer styles reduces on-site costs since there are fewer pieces to inventory and handle and there is less chance for error.

Excerpted from Concrete Construction, October 1975.

See other side for Table of Common Stock Styles of Welded Wire Fabric.

COMMON STOCK STYLES OF WELDED WIRE FABRIC

STYLE DESIGNATION		Old Designation (By Steel Wire Gage)	Longitudinal	Transverse	sq. ft.	Steel Area Square Inches	per ft.	pounds per 100	Approximate Weight
New Designation (By W-number)	ROLLS								
6 x 6 - W1.4xW1.4		6 x 6 - 10 x 10	.028	.028	21				
6 x 6 - W2.0xW2.0		6 x 6 - 8 x 8	.040	.040	29				
6 x 6 - W2.9xW2.9		6 x 6 - 6 x 6	.058	.058	42				
6 x 6 - W4.0xW4.0		6 x 6 - 4 x 4	.080	.080	58				
4 x 4 - W1.4xW1.4		4 x 4 - 10 x 10	.042	.042	31				
4 x 4 - W2.0xW2.0		4 x 4 - 8 x 8	.060	.060	43				
4 x 4 - W2.9xW2.9		4 x 4 - 6 x 6	.087	.087	62				
4 x 4 - W4.0xW4.0		4 x 4 - 4 x 4	.120	.120	85				

SHEETS

6 x 6 - W2.9xW2.9	6 x 6 - 6 x 6	.058	.058	42
6 x 6 - W4.0xW4.0	6 x 6 - 4 x 4	.080	.080	58
6 x 6 - W5.5xW5.5	6 x 6 - 2 x 2	.110	.110	80
4 x 4 - W4.0xW4.0	4 x 4 - 4 x 4	.120	.120	85