

JIS

JAPANESE INDUSTRIAL STANDARD

Rerolled Steel Bars for Concrete Reinforcement

 JIS G 3117—1987

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Rerolled Steel Bars for Concrete
Reinforcement

G 3117-1987

1. Scope

This Japanese Industrial Standard specifies the rerolled steel bars, hereinafter referred to as the "steel bars", used for concrete reinforcement.

Remark: The units and numerical values given in { } in this Standard are in accordance with the International System of Units (SI), and are appended for reference.

Further, the tradiitonal units and numerical values in this Standard shall be converted to the SI units and numerical values on Jan. 1, 1991.

2. Classification and Symbols

The steel bars shall be divided into 5 classes and their symbols shall be as given in Table 1-1 or Table 1-2.

Table 1-1. Symbols of Classes
(applicable till the end of 1990)

Division	Symbols of classes
Rerolled plain steel bars	SRR 24
	SRR 30
Rerolled deformed steel bars	SDR 24
	SDR 30
	SDR 35

Applicable Standards:

JIS G 0303-General Rules for Inspection of Steel

JIS G 3191-Shape, Dimension, Weight and Tolerance for Hot Rolled Steel Bars and Bar-in-Coil

JIS Z 2201-Test Pieces for Tensile Test for Metallic Materials

JIS Z 2204-Bend Test Pieces for Metallic Materials

JIS Z 2241- Method of Tensile Test for Metallic Materials

JIS Z 2248-Method of Bend Test for Metallic Materials

Table 1-2. Symbols of Classes
(applicable on and after Jan. 1, 1991)

Division	Symbols of classes	
	SI unit	(Reference) Traditional unit
Rerolled plain steel bars	SRR 235	SRR 24
	SRR 295	SRR 30
Rerolled deformed steel bars	SDR 235	SDR 24
	SDR 295	SDR 30
	SDR 345	SDR 35

3. Mechanical Properties

The steel bars shall be tested in accordance with 7.1 and their yield point or 0.2 % of proof stress tensile strength, elongation, and bend shall be as given in Table 2-1 or Table 2-2.

Further, in the bending test, no cracks shall be generated on the outside.

Table 2-1. Mechanical Properties (applicable till the end of 1990)

Division	Symbol of class	Yield point or proof stress ⁽¹⁾ kgf/mm ² {N/mm ² }	Tensile strength kgf/mm ² {N/mm ² }	Tensile test piece	Elonga- tion %	Bend		
						Bending angle	Inner side radius	
Rerolled plain steel bar	SRR 24	24 {235} min.	39 to 60 {382 to 588}	No. 2	20 min.	180°	1.5 times nominal diameter	
	SRR 30	30 {294} min.	45 to 63 {441 to 618}					
Rerolled de- formed steel bar	SDR 24	24 {235} min.	39 to 60 {382 to 588}	Equivalent to No. 2	18 min.			
	SDR 30	30 {294} min.	45 to 63 {441 to 618}					
	SDR 35	35 {343} min.	50 to 70 {490 to 686}		16 min.			

Note (1) The proof stress shall be based on 0.2 % of permanent strain.

Table 2-2. Mechanical Properties (applicable on and after Jan. 1, 1991)

Division	Symbol of class	Yield point or proof stress(¹) N/mm ²	Tensile strength N/mm ²	Tensile test piece	Elonga- tion %	Bend		
						Bending angle	Inner side radius	
Rerolled plain steel bar	SRR 235	235 min.	380 to 590	No. 2	20 min.	180°	1.5 times nominal diameter	
	SRR 295	295 min.	440 to 620					
Rerolled de- formed steel bar	SDR 235	235 min.	380 to 590	Equivalent to No. 2	18 min.			
	SDR 295	295 min.	440 to 620					
	SDR 345	345 min.	490 to 690		16 min.			

Note (1) The proof stress shall be based on 0.2 % of permanent strain.