

JIS

JAPANESE INDUSTRIAL STANDARD

Oil tempered wire for valve springs

JIS G 3561—1994

Translated and Published

by

Japanese Standards Association

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JAPANESE INDUSTRIAL STANDARD J I S

Oil tempered wire for valve springs G 3561-1994

1. Scope This Japanese Industrial Standard specifies the oil tempered wires (hereafter referred to as "wires") used for valve spring of the internal combustion engine or for other similar springs.

Remarks: The standards cited in this Standard are as follows:
JIS G 0558 Methods of measuring decarburized depth for steel
JIS G 3502 Piano wire rods
JIS K 1310 Hydrochloric acid
JIS Z 2241 Method of impact test for metallic materials

2. Types, symbols and applicable wire diameters Wires shall be classified into three types, and their symbols and applicable wire diameters shall be as given in Table 1.

Table 1. Types, symbols and applicable wire diameters

Type	Symbol	Applicable wire diameter
Oil tempered carbon steel wire for valve springs	SWO-V	2.00 mm or over up to and incl. 6.00 mm
Oil tempered chromium vanadium steel wire for valve springs	SWOCV-V	2.00 mm or over up to and incl. 10.0 mm
Oil tempered silicon chromium steel wire for valve springs	SWOSC-V	0.50 mm or over up to and incl. 8.00 mm

3. Chemical composition The chemical composition by the cast analysis of materials used for manufacture of wires shall be as given in Table 2.

Table 2. Chemical composition

								Unit: %
Symbol	C	Si	Mn	P	S	Cr	Cu	V
SWO-V	0.60 to 0.75	0.12 to 0.32	0.60 to 0.90	0.025 max.	0.025 max.	—	0.20 max.	—
SWOCV-V	0.45 to 0.55	0.15 to 0.35	0.65 to 0.95	0.025 max.	0.025 max.	0.80 to 1.10	0.20 max.	0.15 to 0.25
SWOSC-V	0.51 to 0.59	1.20 to 1.60	0.50 to 0.80	0.025 max.	0.025 max.	0.50 to 0.80	0.20 max.	—

4. Mechanical properties

4.1 Tensile strength Wires shall be subjected to the test specified in 9.2, and its tensile strength shall be as given in Table 3.