SPRINGS - CARBON STEEL ASTM A229, CLASS 1 AISI 1050-1080

Rev	Reason of Change	Date	Made By	Reviewed By	Approved By	Status
0	---	22-01-2016	P.K	A.S	K.K.D	RELEASED

Summary: This specification covers oil-tempered carbon steel springs and wire forms.

MATERIAL SPECIFICATION FOR SPRINGS - CARBON STEEL ASTM A229, CLASS 1 AISI 1050-1080

1.0 SCOPE

1.1 This specification covers oil-tempered carbon steel springs and wire forms. This material shall be used for coil springs where the diameter is 5/8" diameter and smaller.

2.0 APPLICABLE SPECIFICATIONS

2.1 ASTM A229 Class 1

3.0 CHEMISTRY REQUIREMENTS

3.1 The chemical composition shall conform to one of the following limits:

	AISI 1050 – 1080	BS 2803 094A65
Carbon	0.55 - 0.85%	0.55 - 0.75%
Manganese	0.30 - 1.20%	0.60 - 1.20%
Phosphorus, max	0.040%	0.04%
Sulfur, max	0.050%	0.04%
Silicon	0.10 - 0.35%	0.00 - 0.30%

4.0 MECHANICAL PROPERTIES

4.1 The tensile strength of the springs shall conform to the requirements of ASTM A229 according to the diameter of the wire for Class 1.
Note: For design calculations the minimum tensile strength shall be 165,000 psi.

4.2 Rockwell Hardness 35-45 HRC

5.0 MARKINGS

5.1 A tag shall be attached to each batch of parts with the following information: heat number, ASTM specification and class number.

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