Material Family	Types	Specification	Usage
Carbon Steel	Music Wire Hard Drawn Oil Tempered 1095 Annealed	ASTM-A-227 ASTM-A-228 ASTM-A-229 AMS 5112 AMS 5121 AMS 5122	Most economical material. Rusts easily. Used commercially and in ambient conditions.
Alloy Steel	Chrome Silicon Chrome Vanadium	ASTM-A-401 ASTM-A-231 ASTM-A-232	Higher strength than carbon steel, improved fatigue life, plating not recommended. Can withstand temperatures to 350°F.
Stainless Steel - 300 series	301 302 304 316	AMS 5688 ASMT-A-313 AMS 5516 AMS 5517 AMS 5518 AMS 5519	Lower strength than carbon steel. High tensile with good corrosion resistance. Operating temperatures up to 350°F.
Stainless Steel - Precipitation Hardenable(PH)	17-7 PH 17-4 PH A286 12-9-2 Maraging	ASTM-A-313 AMS 5678 AMS 5528 AMS 5529	Higher strength after heat treat & better long-term stability than 300 series. Operating temperature up to 550°F. 17-7PH is most common spring alloy.
Cobalt-Based	Elgiloy MP-35N Rene 41	AMS5833 AMS5844	Used for its strength and toughness, good corrosion resistance in severe environments and ability to withstand high temperatures.
Nickel-Based	Inconel X750, 718, 600 Ni-Span-C Hastelloy Monel	ASTM-B-166 ASTM-B-197 AMS5698 AMS 5699 AMS7233	Extremely heat resistant, able to operate in temperatures from -300 to 1000°F. Some are sea water corrosion resistant. Good for cryogenic applicatons.
Copper-Based	Brass Phosphorous Bronze Beryllium Copper	ASTM-B-197 ASTM-B-159	Best conductivity of all alloys with medium tensile strength. Mostly used in electrical applications and electronics.
Titanium	13-11-3 38644 15-3-3-3 6-4 LCB	AMS 4957 AMS 4958 ASTM-F-136	Best strength-to-weight ratio. Very good corrosion resistance. Difficult to fabricate and costly. Mostly used in aersoace and in-body medical applications.

*** WE ARE NOT LIMITED TO THE ABOVE. PLEASE CONTACT PCS ENGINEERING FOR FURTHER INFO.