

-Metallurgy Reference Information-

JUNKYARD STEELS

The following list describes some potential types of steel used for common junkyard items. This information was compiled from several sources, Machinery's Handbook, Country

Blacksmith, Blacksmith's Journal and Carpenter Technology Corp.

Machinery's Handbook is an excellent source for heat treatment of these steels.

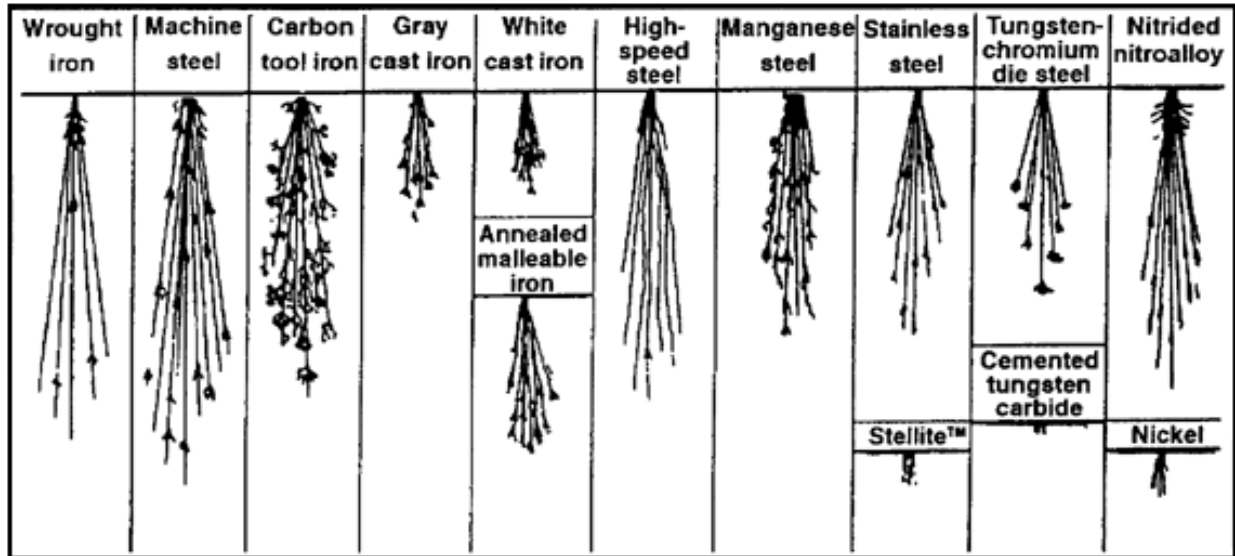
APPLICATION	Number	Letter	APPLICATION	Number	Letter
Agricultural steel	1080		Hay Rake Teeth	1095	
Axels	1040		Jackhammer Bits		S-5
Ball Bearing Balls	52100		Knives, machine		M2
Ball Bearing Races	52100		Knives, woodworking		O2
Band Saw Blades		L-6	Leaf Springs	1085, 5160	
Bits, Router		M2	Lock Washer	1060	
Bolts, anchor	1040		Mauls		L6, S2
Bolts, heat treated	2330		Mower knives	1085	
Bolts, heavy duty	4815		Music Wire	1085	
Brake Lever	1030		Nail Sets		L6
Cams		A6, S7	Plow Beams	1070	
Chisels		O2, O6, L6	Plow Disk	1080	
Clutch disk	1070		Plow Shares	1080	
Clutch Springs	1060		Pneumatic Tools		L6, A6, S7
Coil Springs, auto	4063		Punches-Cold		A2, O2
Coil Springs, truck	5160		Reamers		M2, O2, A2
Cold-rolled steel	1070		Roller Bearings	4815	
Connecting Rods	1040		Screw Drivers		L6, S2
Crankshafts	1045		Snap Rings	1060	
Cutters, Bolt		S2, S7	Spring Clips	1060	
Drifts		L6, S2, S7	Spring Steel, clock	1095	
Drills		M2	Steering Arm Bolts	3130	
End Mills		M2	Steering Arms	4042	
Fan Blades	1020		Taps		M2, O2
Files		W-2	Transmission Shafts	4140	
Gear shift levers	1030		Tubing	1040	
Gears, transmission	3115		Universal Joints	1145	
Hammers		L6	Valve Springs	1060	
Harrow Disk	1080		Wrenches		L6, S2

This information was compiled by the North Texas Blacksmiths Association. ABANA chapters may freely use it in their publications. Please credit NTBA, <http://www.flash.net/~dwwilson/ntba>

Fahrenheit	The Color of the Steel
2000°	Bright Yellow
1900°	Dark Yellow
1800°	Orange Yellow
1700°	Orange
1600°	Orange Red
1500°	Bright Red
1400°	Red
1300°	Medium Red
1200°	Dull Red
1100°	Slight Red
1000°	Very Slightly Red, Mostly Grey
800°	Dark Grey
575°	Blue
540°	Dark Purple
520°	Purple
500°	Brown/Purple
480°	Brown
465°	Dark Straw
445°	Light Straw
390°	Faint Straw

1Xxx	Carbon Steels
13xx	Carbon-Manganese Steels
2Xxx	Nickel Steels
3Xxx	Nickel-Chromium Steels
4Xxx	Molybdenum Steels
41xx	Chromium-Molybdenum Steels
43xx	Nickel-Chromium-Molybde- num Steels
4340	Nickel-Chromium-Molybde- num Steel With 0.40 Percent Carbon
5Xxx	Chromium Steels
6Xxx	Chromium-Vanadium Steels
7Xxx	Tungsten-Chromium Steels
86xx	Nickel-Chromium-Molybde- num Steels (Less Nickel than 43xx)
9Xxx	Silicon-Manganese Steels

Steel Grade	C	Mn	Si	Cr	W	Mo	V	Other
O1	0.94	1.20	0.30	0.50	0.50			
O6	1.45	1.00	0.90			0.25		
L6	0.70	0.60	0.25	0.70				1.40 Ni
A2	1.00	0.75	0.30	5.00		1.00	0.25	
A8	0.55	0.30	0.95	5.00	1.25	1.25		
A9	0.55	0.35	1.05	5.15		1.55	1.00	1.50 Ni
A10	1.35	1.80	1.20	0.20		1.50		1.85 Ni
D2	1.50	0.30	0.30	12.00		0.75	0.90	
D3	2.15	0.40	0.40	12.25			0.25	
D7	2.30	0.40	0.40	12.50		1.10	4.00	
LSS™ Vertex	1.00	0.50	1.00	8.25		2.25	0.40	
Lescowear™	1.13	0.30	1.20	7.75	1.10	1.55	2.40	
S1	0.53	0.25	0.25	1.35	2.00		0.25	
S7	0.50	0.75	0.25	3.25		1.40		
H13	0.40	0.40	1.00	5.25		1.35	1.00	
Viscount 44	0.40	0.80	1.00	5.25		1.35	1.00	0.12 S
M2	0.85	0.28	0.30	4.15	6.15	5.00	1.85	
CPM 1V	0.55	0.40	0.50	4.00		4.25	1.00	0.50 Ni
CPM 3V	0.85	0.30	1.00	5.00		1.35	2.75	
CPM M4	1.45	0.25	0.25	4.50	5.50	5.20	3.85	
CPM 9V	1.80	0.50	0.90	5.25		1.35	9.00	
CPM 10V/A11	2.45	0.50	0.90	5.25		1.35	9.80	



Resources;

-Steel Supply-reference

McMaster-Carr- www.mcmaster.com

New Jersey Steel Baron – www.newjerseysteelbaron.com

Burgon Tool Steel Co. Portsmouth NH – www.hudsonsteel.com

-Blacksmith Supply

Pieh Tool Co- www.piehtoolco.com

Blacksmith's Depot – www.blacksmithsdepot.com

-Blacksmith/metalworking References

Artist Blacksmith Association of North America

www.abana.org

New England Blacksmiths – www.newenglandblacksmiths.org

New England School of Metalwork, Auburn ME

www.newenglandchoolofmetalwork.com