

Metallurgical Study – AISI Steel Grades

Sample A

AISI 1020 steel

Carbon 0.33

Manganese 0.45

Quench at 820 C

Tempered 2.1 hr

520 MPa tensile strength.

Sample B

AISI 1045 steel

Carbon 0.45

Manganese 0.75

Quench at 860 C

Tempered 2.0 hr

670 MPa tensile strength.

Sample C

AISI 4140 steel

Carbon 0.40

Manganese 0.85

Quench at 900 C

Tempered 2.2 hr

850 MPa tensile strength.