

8620 CASE HARDENING STEEL

8620 is a low nickel – chromium – molybdenum case hardening steel. 8620 is generally supplied in the as rolled condition and is primarily carburised with surface hardness up to 62 HRC.

Used for light to medium stressed components where surface hardness and wear resistance is required, uses include: Arbors, bearings, bushings, cam shafts, pinions, gears, guide pins, splined shafts, ratchets sleeves etc.

Stocked Sizes - Rounds 14 mm – 230 mm Ø

Finishes - Hot Rolled, Peeled

Related Specifications

| | |
|----------------|--|
| Australia | AS1444-1996-8620/8620H |
| Germany | W. Nr 1.6523 – DIN 21NiCrMo2 |
| United Kingdom | BS970 Part 3 1991 - 805M20 BS 970 1955 – EN362 |
| Japan | JIS G4052 SNCM 220H |
| USA | SAE/AISI 8620 ASTM A29/A29M 1991 8620 UNS G86200 |

Chemical Composition

| | Min. % | Max % |
|-------------|--------|-------|
| Carbon | 0.17 | 0.23 |
| Silicon | 0.10 | 0.35 |
| Manganese | 0.60 | 0.95 |
| Nickel | 0.35 | 0.75 |
| Chromium | 0.35 | 0.65 |
| Molybdenum | 0.15 | 0.25 |
| Phosphorous | | 0.04 |
| Sulphur | | 0.04 |

Typical Mechanical Properties in the As Rolled Condition

| Mechanical Property Designation | | |
|---------------------------------|---------|-----|
| Tensile Strength Mpa | Approx. | 820 |
| 0.20% Proof Stress (Yield) Mpa | Approx. | 590 |
| Elongation on % | Approx. | 22 |
| Hardness Brinell HB | Approx. | 240 |

Annealing

Heat to 820-850 Deg C. Hold until temperature is uniform throughout the section and allow to cool in furnace.