

# 1.7035

## 41Cr4 / 40H

STEEL FOR HEAT TREATMENT

### APPLICATION

Heat-treatable steel with strength of 700 – 950 N/mm<sup>2</sup> for crankshaft bearings, front axes, steering parts, gear wheels, levers, connecting rods, components of bodies and tool grips, connecting elements, grinding wheels. After surface hardening for shafts, mandrels.

### CHEMICAL COMPOSITION

Chemical composition (in weight %)

| Element | C    | Si   | Mn   | P     | S     | Cr    | Cu   |
|---------|------|------|------|-------|-------|-------|------|
| min     | 0.38 | 0.10 | 0.60 | max.  | max.  | max.  | max. |
| max.    | 0.45 | 0.40 | 0.90 | 0.025 | 0.035 | 0.035 | 0.40 |

### TREATMENT

|           |                                                        |
|-----------|--------------------------------------------------------|
| Hardening | 820 - 860 °C at least 30 min. (approx.) / oil or water |
| Tempering | 540 - 680 °C at least 60 min. (approx.)                |

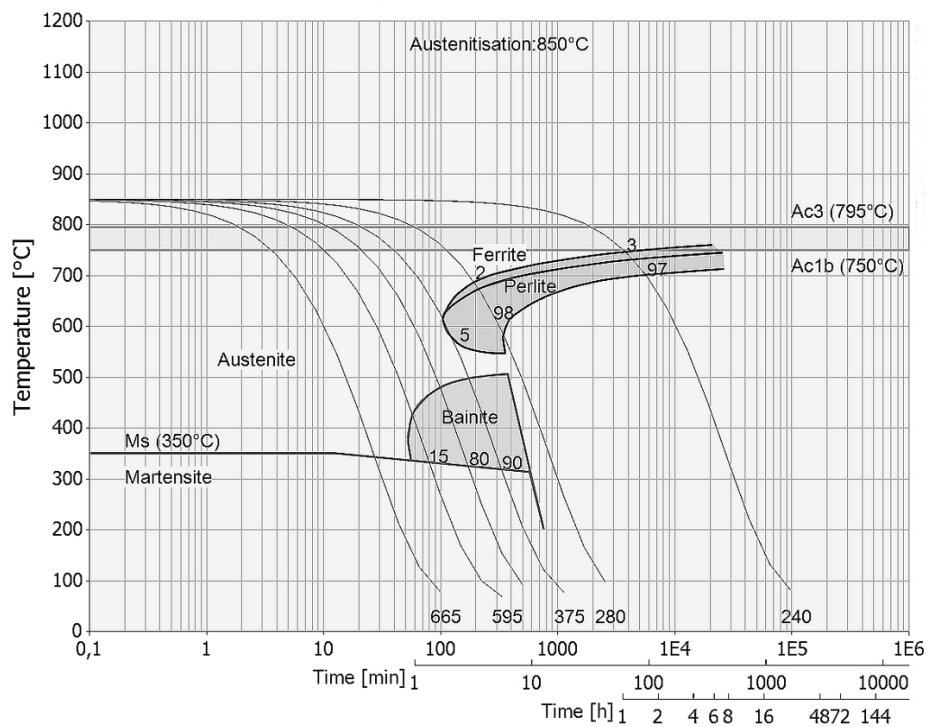
### ADDITIONAL HEAT TREATMENT

|                |              |
|----------------|--------------|
| Normalising    | 840 - 880 °C |
| Soft annealing | 680 - 720 °C |

### MECHANICAL PROPERTIES

|               |                                  |                                                                       |
|---------------|----------------------------------|-----------------------------------------------------------------------|
| Condition     | Quenched and tempered (+QT)      | Quenched & tempered and surface hardened, relaxed at 150 - 180°C (1h) |
| Hardness [HB] | Depend on diameter and thickness | max. 53                                                               |

## CONTINUOUS COOLING TRANSFORMATION (CCT) DIAGRAM



## TEMPERING DIAGRAM

