

DE - Brand:

CP72

Special Steel

Chemical composition: (Typical analysis in %)

| | | | | | | | |
|------|------|------|------|------|--|--|--|
| C | Cr | Mo | V | W | | | |
| 1,10 | 7,50 | 1,50 | 2,10 | 1,10 | | | |

Steel properties:

Cold work steel, high vanadium and tungsten, very good secondary hardness, good toughness, minimal size changes.

Applications:

Cutting tools, bending tools, pressure- profile rolls, thread rolling dies, stamping tools.

Condition of delivery:

Soft annealed to max. 250 HB

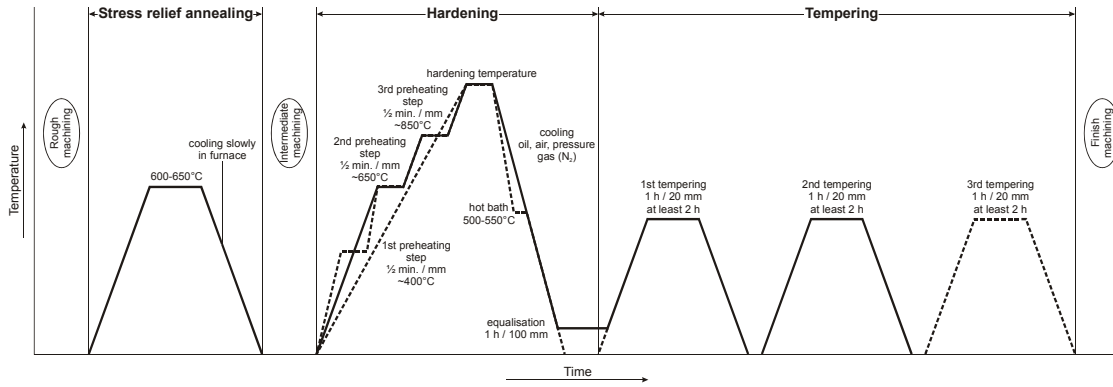
Physical properties:

| | | | | | |
|-------------------------------|---|----------|----------|----------|----------|
| Thermal expansion coefficient | $\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$ | 20-100°C | 20-200°C | 20-300°C | 20-400°C |
| | | 11,4 | 11,7 | 12,1 | 12,3 |
| Thermal conductivity | $\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$ | 20°C | | | |
| | | 24,8 | | | |

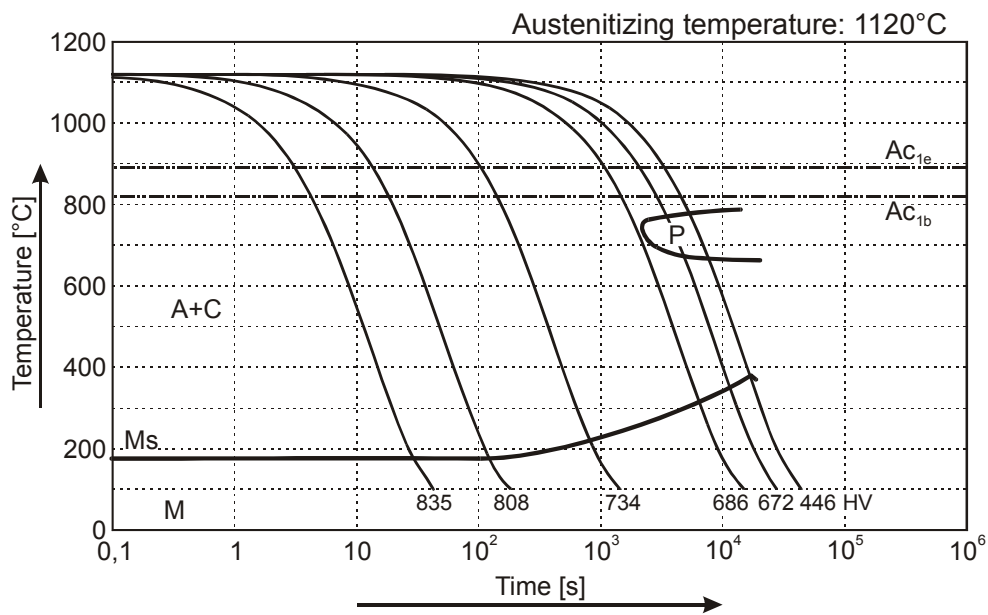
Heat treatment:

| | | | |
|-------------------------|--------------------|--|--------------------------|
| Soft annealing | Temperature | Cooling | Hardness |
| | 800 - 840°C | furnace | max. 250 HB |
| Stress relief annealing | Temperature | Cooling | |
| | 600 - 650°C | furnace | |
| Hardening | Temperature | Cooling | Tempering |
| | 1120 - 1140°C | oil, pressure gas (N ₂), air or hot bath 500 - 550°C | see tempering diagram |

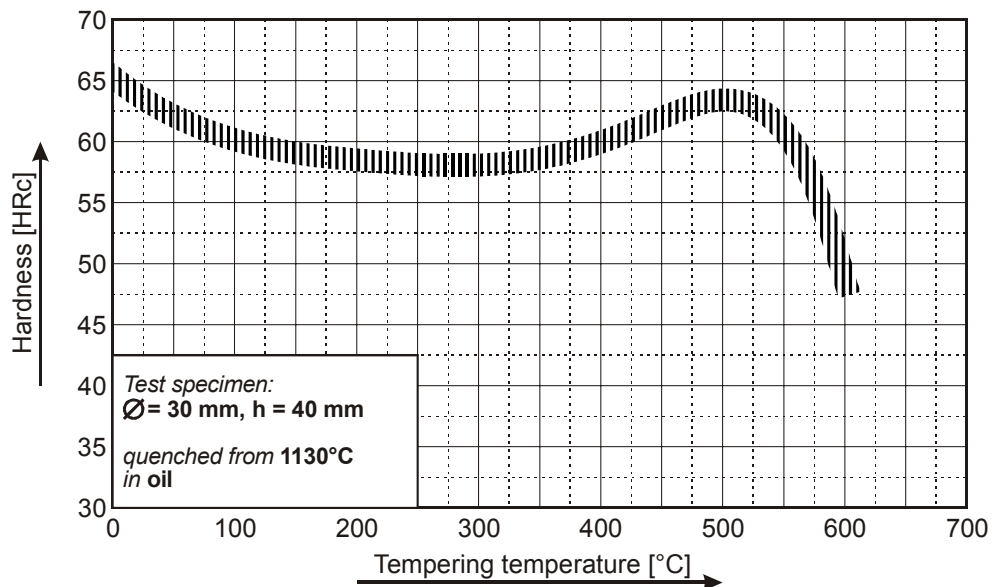
(CP72) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.