

This page is mainly introduced the SMn420H Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of SMn420H, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Structure Steel SMn420H

### SMn420H Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|--------------|
|------|-----------------|--------------|

### SMn420H Chemical composition (mass fraction) (wt.%)

| Chemical  |           |           | Min.(%)   |           |          |          | Max.(%) |    |       |
|-----------|-----------|-----------|-----------|-----------|----------|----------|---------|----|-------|
| C         | Si        | Mn        | P         | S         | Cr       | Ni       | Mo      | V  | Ta    |
| 0.16-0.23 | 0.15-0.35 | 1.15-1.55 | Max 0.030 | Max 0.030 | Max 0.35 | Max 0.25 | —       |    |       |
| W         | N         | Cu        | Co        | Pb        | B        | Nb       | Al      | Ti | Other |
|           |           |           |           |           |          |          |         |    |       |

### SMn420H

### SMn420H Physical Properties

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength   | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 65      | $\delta_5 \geq$ (%)      |
| $\psi$           | -       | $\psi \geq$ (%)          |
| Akv              | -       | $Akv \geq$ /J            |
| HBS              | 123-321 | -                        |
| HRC              | 30      | -                        |

### SMn420H Mechanical Properties

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength   | 154     | $\sigma_{0.2} \geq$ /MPa |

|            |         |                      |
|------------|---------|----------------------|
| Elongation | 56      | $\delta 5 \geq (\%)$ |
| $\psi$     | -       | $\psi \geq (\%)$     |
| Akv        | -       | $Akv \geq /J$        |
| HBS        | 235-268 | -                    |
| HRC        | 30      | -                    |

### SMn420H Heat Treatment Regime

| Annealing | Quenching | Tempering | Normalizing | Q & T |
|-----------|-----------|-----------|-------------|-------|
| √         | √         | √         | √           | √     |

### SMn420H Range of products

| Product type    | Products                                 | Dimension                  | Processes                                   | Deliver Status                                                |
|-----------------|------------------------------------------|----------------------------|---------------------------------------------|---------------------------------------------------------------|
| Plates / Sheets | Plates / Sheets                          | 0.08-200mm(T)*W*L          | Forging, hot rolling and cold rolling       | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Steel Bar       | Round Bar, Flat Bar, Square Bar          | Φ8-1200mm*L                | Forging, hot rolling and cold rolling, Cast | Black, Rough Turning, Shot Blasting,                          |
| Coil / Strip    | Steel Coil /Steel Strip                  | 0.03-16.0x1200mm           | Cold-Rolled & Hot-Rolled                    | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Pipes / Tubes   | Seamless Pipes/Tubes, Welded Pipes/Tubes | OD:6-219mm x WT:0.5-20.0mm | Hot extrusion, Cold Drawn, Welded           | Annealed, Solution and Aging, Q+T, ACID-WASHED                |

**We can produce Structure Steel the specifications follows:**