**This page is mainly introduced the SHY 685 /SHY 70 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of SHY 685 /SHY 70,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 SHY 685 /SHY 70

## SHY 685 /SHY 70 Standard Number:

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

## SHY 685 /SHY 70 Chemical composition(mass fraction)(wt.%)

| Chemical | | | | Min.(%) | | | Max.(%) | | |
|---|---|---|---|---|---|---|---|---|---|
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| 0.18 | 0.55 | 1.50 | 0.035 | 0.035 | 1.20 | | 0.60 | 0.10 | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | 0.50 | | | 0.005 | | | | |

Welding structure with high yield strength steel grade of steel sheet

## SHY 685 /SHY 70 Physical Properties

| | | |
|---|---|---|
| Tensile strength | 115-234 | σb/MPa |
| Yield Strength | 23 | σ 0.2 ≥/MPa |
| Elongation | 65 | δ5≥ (%) |
| ψ | - | ψ≥ (%) |
| Akv | - | Akv≥/J |
| HBS | 123-321 | - |
| HRC | 30 | - |

| SHY 685 /SHY 70 Mechanical Properties | | |
|---|---|---|
| Tensile strength | 231-231 | σb/MPa |
| Yield Strength | 154 | σ 0.2 ≥/MPa |
| Elongation | 56 | δ5≥(%) |
| ψ | - | ψ≥(%) |
| Akv | - | Akv≥/J |
| HBS | 235-268 | - |
| HRC | 30 | - |

| SHY 685 /SHY 70 Heat Treatment Regime | | | | |
|---|---|---|---|---|
| **Annealing** | **Quenching** | **Tempering** | **Normalizing** | **Q & T** |
| √ | √ | √ | √ | √ |

| SHY 685 /SHY 70 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: