

This page is mainly introduced the RA 333 chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of RA 333, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Data Table for Grades Stainless Steels RA 333

| RA 333 Standard Number: |                      |                                                                                                                                             |
|-------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM                    | Standard Number      | Descriptions                                                                                                                                |
| 1                       | SAE AMS 5717H (2008) | Nickel Alloy, Corrosion and Heat-Resistant, Bars, Forgings, and Rings 45.5Ni - 25.5Cr - 3.2Co - 3.2Mo - 3.2W - 18.5Fe Solution Heat Treated |

| RA 333 Chemical composition(mass fraction)(wt.%) |         |           |
|--------------------------------------------------|---------|-----------|
| Chemical                                         | Min.(%) | Max.(%)   |
| C                                                |         | 0.04      |
| Si                                               |         | 1.15      |
| Mn                                               |         | 1.00      |
| Cr                                               |         | 25.50     |
| Ni                                               |         | remaining |
| Mo                                               |         | 3.25      |
| Co                                               |         | 3.00      |
| W                                                |         | 3.25      |
| Al                                               |         |           |
| Cu                                               |         | 0.10      |
| Ti                                               |         |           |
| Fe                                               |         | 17.00     |

| RA 333 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      | -                        |

### RA 333 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      | -                        |

### RA 333 Heat Treatment Regime

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

### RA 333 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 Stainless Steels the specifications follows:**