

CREEP RESISTANT STEELS

Available Product Shapes

Open Die Forgings

Product Description

Highly stressed turbine blades and turbine discs , screws, shafts, bolts, pins and rings.

Properties

Creep resisting, corrosion resistance hardened and tempered steel, with good toughness and good creep rupture strength. Usual upper temperature limit for continuous operating at 560°C.

| Material designation | | Standards | |
|----------------------|-----------------|-----------|------|
| 1.4933 | SEL | A484 | ASTM |
| 1.4938 | | A959 | |
| 1.4939 | | A565 | |
| S41428 | A982 | AMS | |
| S64152 | A1021 | | |
| | A1028 | | |
| X12CrNiMo12 | EN | 5718D | AMS |
| X12CrNiMoV12-2 | | 5719D | |
| Z12CNDV12 | | S151 | BS |
| XM-32 | AISI | | |
| XM-32 | | | |
| Jethete M152 | Market grade | | |

Chemical composition

| C | Si | Mn | Cr | Mo | Ni | V | N |
|------|------|------|-------|------|------|------|------|
| 0.12 | 0.20 | 0.80 | 11.70 | 1.70 | 2.70 | 0.30 | 0.04 |

Thermal Expansions

| Temperature (°C / °F) | 100 / 212 | 200 / 392 | 300 / 572 | 400 / 752 | 500 / 932 | 600 / 1112 |
|---|--------------|------------|--------------|------------|--------------|--------------|
| Thermal expansion (10 ⁻⁶ m/(m.K) / 10 ⁻⁶ inch/(inch.F)) | 10.5 / 5.833 | 11 / 6.111 | 11.5 / 6.389 | 12 / 6.667 | 12.3 / 6.833 | 12.5 / 6.944 |

For more information see www.voestalpine.com/boehler-edelstahl

voestalpine BÖHLER Edelstahl GmbH & Co KG

Mariazeller Straße 25

8605 Kapfenberg, AT

T. +43/50304/20-0

E. info@boehler-edelstahl.at

www.voestalpine.com/boehler-edelstahl

voestalpine

ONE STEP AHEAD.