Heatproof, austenitic chromium-nickel steel with silicon and aluminium additives

1.4876

C ≤ 0,12 / Cr 19,0 – 23,0 / Ni 30,0 – 34,0 / Si ≤ 1 / Al 0,15 – 0,6 / Ti 0,15 – 0,60
1.4876 / X10 NiCrAlTi 32-21 / DIN EN 10095 / SEW 470
AISI B 163 / BS 3076 NA 15 H*

Applications

Chemical industry; power station; mechanical engeneering; environmental technology.

Processing techiques

Machining; open-die and drop forging.

up to 1100 °C

Scaling resistance ●●●●●

1.4876 is used at temperatures of up to 1100 °C. Limiting temperature in continuous operation: Oxidising atmosphere: 1075 °C; Oxidising sulphur-containing atmosphere: 1000 °C; Reducing carbon-containing atmosphere: 1075 °C; Reducing sulphur-containing atmosphere: 1000 °C.

Mechanical properties ●●○○○

This austenitic heatproof material, known as "Alloy 800", is extremely versatile, thanks to its corrosion resistance, scaling resistance and high heat resistance.

Forging ●●○○○

Heating without special precaution to 1150 °C followed by rapid cooling in water or air.

Welding ●●●●○

1.4876 can be welded without difficulty using all processes.

Machining ●○○○○

Owing to the austenitic microstructure, poorer machinability than heatproof, ferritic materials.

Note

Heat treatment is recommended after hot and severe cold forming.

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* See "international comparison of materials"