HEAT-RESISTING STEELS

Available Product Variants

Plates

Product Description

Heat treatment shops:
Boxes and pots, muffles, retorts, crucibles and pans for all kinds of heat treatment processes. Heating cartridges and plates.

Furnace and boiler construction:
Grates and grate segments, fittings, conveyor components, supporting and walking beams, rams, rails, rollers, doors, gates and traps, housings, recuperators, fans, superheater suspensions, tube clamps, soot blower pipes.

Glass, porcelain, enamel, cement and ceramic industries:
Burner tips, rings, segments and components for rotary and lepol kilns.

Mechanical engineering:
Grid bars, valves and spindles, stirrer arms and teeth, sheath tubes for thermocouples, fittings, drums, bolts, nuts, rivets.

Petroleum industry:
Tubes und tubular components.

Process Melting

VID

Properties

Heat resisting austenitic steel. Superior high temperature strength and excellent toughness. Heat resistance in air up to 1150°C. Good resistance in oxydizing, nitrogenous and low oxygen gases. Medium resistance in sulphurous, oxidizing gases but sensitive to the action of reducing sulphurous gases. Embrittlement only occours after prolonged exposure in the temperature range of 650 to 900°C. Therefore in the case continous working temperatures more than 950°C are recommended.

Applications

- Components for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- Rolls
- Mechanical Engineering
- Tubular Products, Flanges, Fittings
- Other Oil and Gas + CPI components

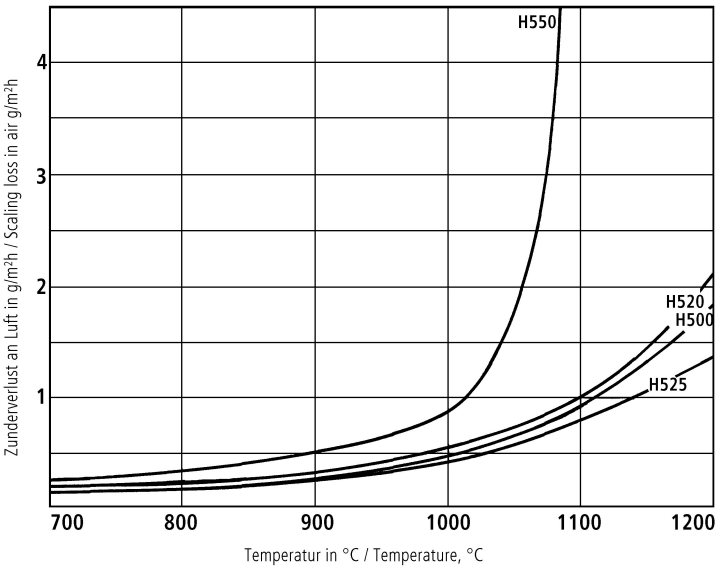
Technical data

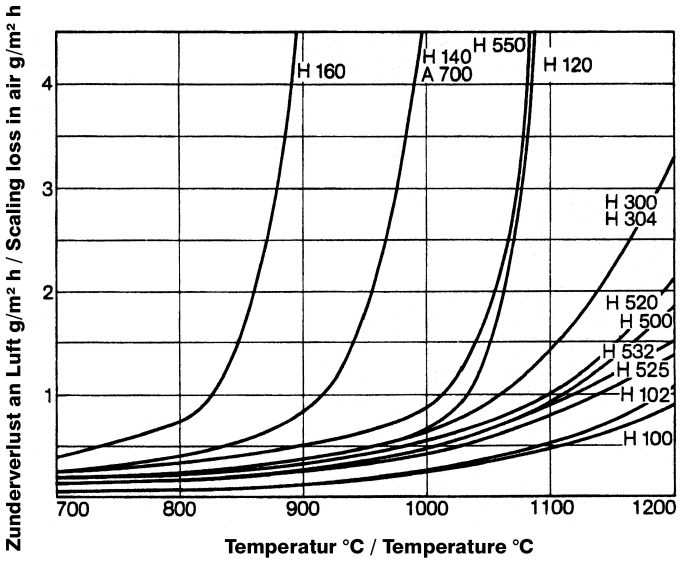
Material designation	
1.4841	SEL
X15CrNiSi25-20	EN
S31400	UNS
314	AISI
310S31	bs

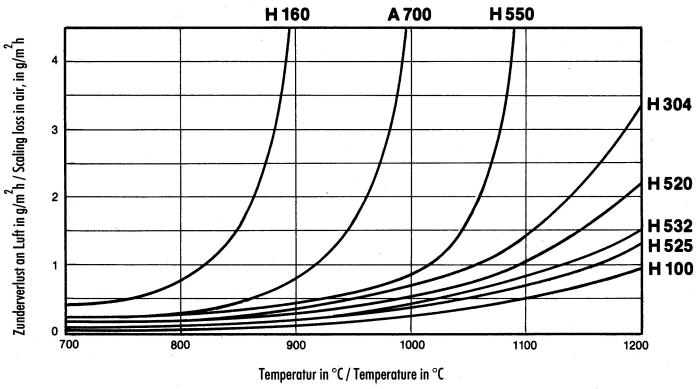
Standards	
~310S24	BS
STN: 17 255	STN

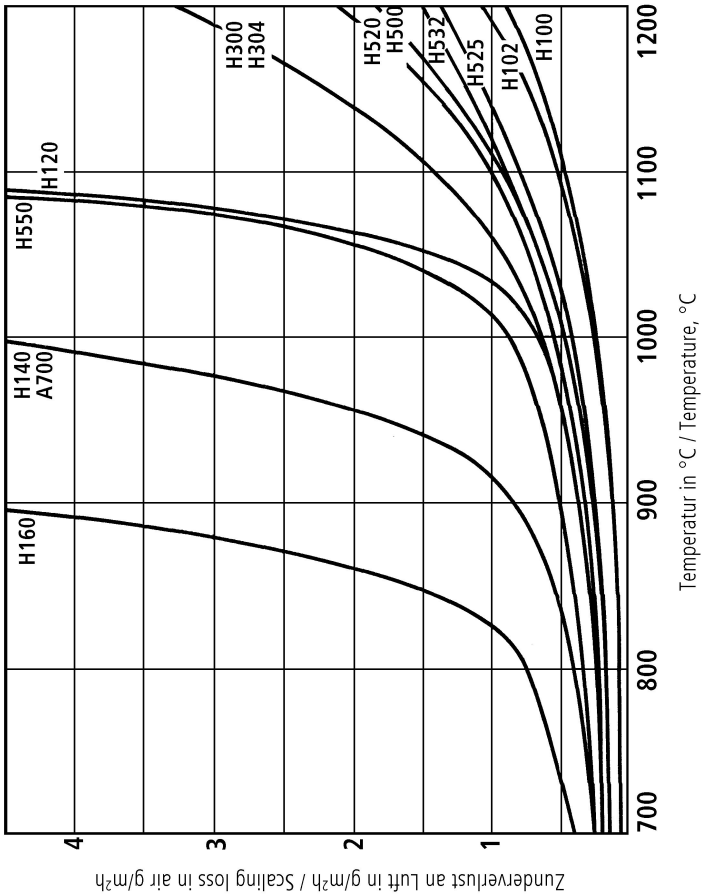
Chemical composition (wt. %)

C	Si	Mn	Cr	Ni
0.08	1.7	1.2	24.8	19.8






H 160
A 700
H 550
H 304
H 520
H 532
H 525
H 100
Zunderverlust an Luft in g/m²h / Scaling loss in air, in g/m²h
0
1
2
3
4
700
800
900
1000
1100
1200
Temperatur in °C / Temperature in °C


H300
H304
H520
H500
H532
H525
H102
H100
H120
H550
H140
A700
H160
1200
1100
1000
900
800
700
4
3
2
1
Temperatur in °C / Temperature, °C
Zunderverlust an Luft in g/m²h / Scaling loss in air g/m²h

Physical Properties

Density	7.9	[kg/dm^3]
Thermal conductivity	15	[W/(m.K)]
Specific heat	500	[kJ/kg K]
Spec. electrical resistance	0.9	[Ohm.mm^2/m]
Modulus of elasticity	198	[10^{3}N/mm^2]

Thermal Expansions between 20°C | 68°F and ...

Temperature (°C)	**200**	**400**	**600**	**800**	**1,000**
Thermal expansion (10^{-6} m/(m.K))	15.5	17	17.5	18	19

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voestalpine
ONE STEP AHEAD.