

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 oxidizing, nitrogenous and low oxygen gases. Medium resistance in sulphurous, oxidizing gases but sensitive to the action of reducing sulphurous gases. Embrittlement only occurs after prolonged exposure in the temperature range of 650 to 900°C. Therefore in the case continuous working temperatures more than 950°C are recommended.

Applications

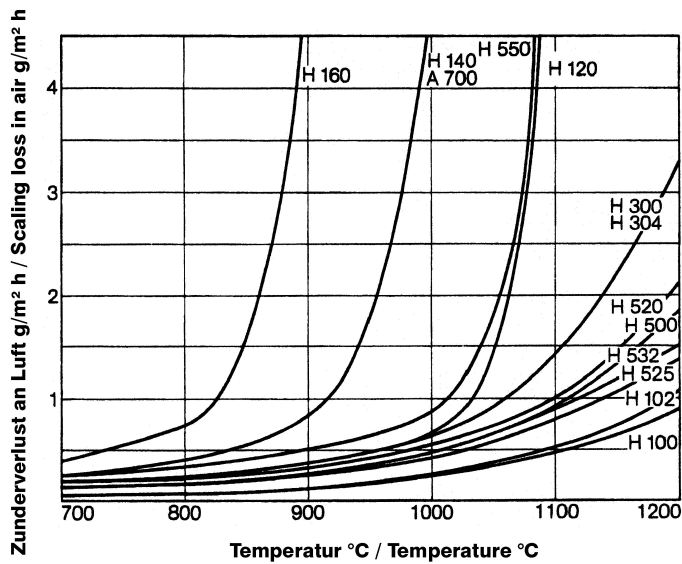
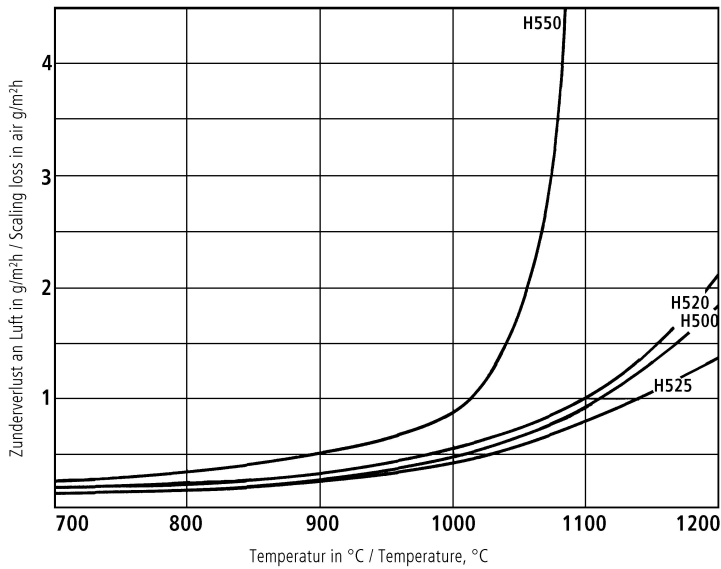
- > Comp. for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- > Mechanical Engineering
- > Other Oil and Gas + CPI comps.
- > Rolls
- > Tubular Products, Flanges, Fittings

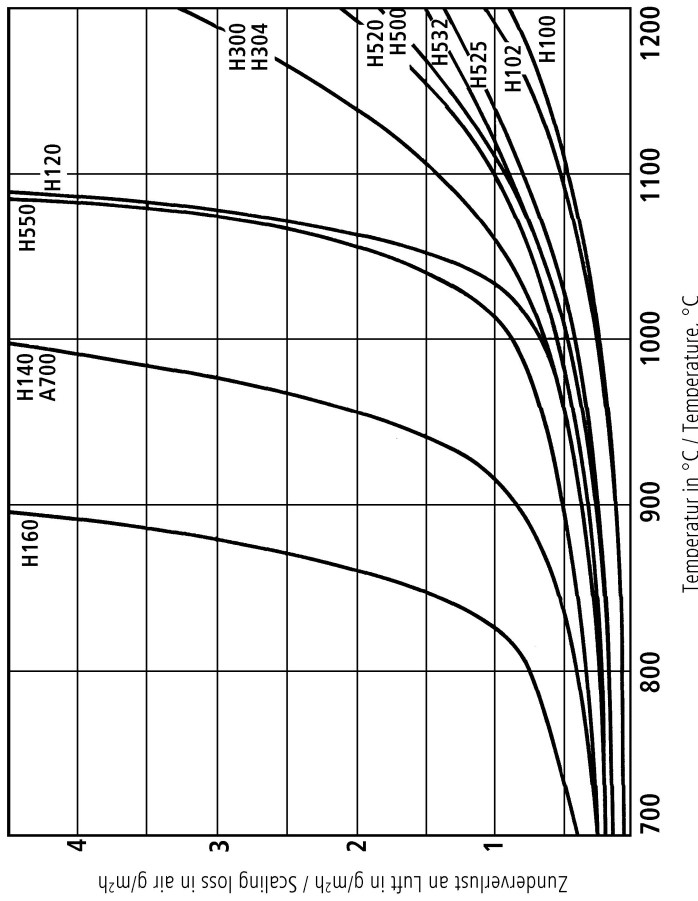
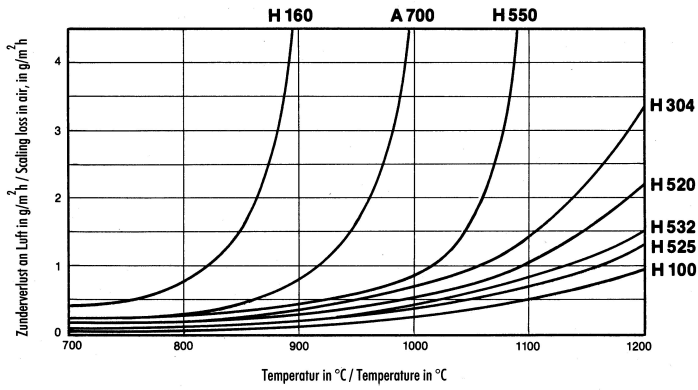
Technical data

Material designation		Standards	
1.4841	SEL	~310S24	BS
S31400	UNS	STN: 17 255	STN
X15CrNiSi25-20	EN		
314	AISI		
310S31	bs		

Chemical composition (wt. %)

C	Si	Mn	Cr	Ni
0.08	1.7	1.2	24.8	19.8





Physical Properties

Density	7.9 0.29	[kg/dm ³ lb/in ³]
Thermal conductivity	15 8.67	[W/(m.K) BTU/ft h °F]
Specific heat	500 119.423	[kJ/kg K BTU/lb °F]
Spec. electrical resistance	0.9 4.25	[Ohm.mm ² /m 10 ⁻⁴ Ohm.inch ² /ft]
Modulus of elasticity	198 28.72	[10 ³ N/mm ² 10 ³ ksi]

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

Temperature (°C °F)	200 392	400 752	600 1,112	800 1,472	1,000 1,832
Thermal expansion (10 ⁻⁶ m/(m.K) 10 ⁻⁶ inch/inch.°F)	15.5 8.6	17 9.4	17.5 9.7	18 10	19 10.6

The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.