

Material Selection Guide

APPLICATION	MATERIAL	
IRON AND STEEL	Blast furnaces Stove dome Hot blast main	Silicon Carbide Inconel® 600
	Open Hearth Flues and Stack Waste heat Boiler	Inconel® 600, SS 446 Inconel® 600, SS 446
CEMENT	Exit Flue Gas Kilns, Heating Zone	Inconel® 600, SS 446 Inconel® 600
CERAMIC	Kilns Dryers	Ceramic and silicon carbide Silicon carbide
POWER	Coal-air mixtures Flue Gas Preheater Boiler Tube	Solid sintered tungsten carbide SS 446 SS 446 SS 304, SS 316, SS 310
	INCINERATOR	Up to 1050°C Over 1050°C
CHEMICAL	Acetic Acid 10 to 50% 20°C 50 % 100°C 99% 21 to 100°C	SS 304, Hastelloy® C, Monel® 400 SS 316, Hastelloy® C, Monel® 400 Hastelloy® C, Monel®
	Alcohol, Ethyl, Methyl 20 to 100°C	SS 304
	Ammonia All concentrations 20°C	SS 304, SS 316
	Ammonium Chloride All Concentration 100°C	SS 316, Monel® Monel® 400
	Brine	Tantalum, Monel® 400
	Bromine	Monel® 400
	Butyl Acetate	SS 304
	Calcium Hydroxide Upto 50% 100°C	SS 304, Hastelloy® C
	Chlorine Gas Moist - 7 to 100°C	Hastelloy® C, Tantalum
	Chromic Acid 10 to 50% 100°C	SS 316, Hastelloy® C (all concentrations)
	Ethyl Acetate	SS 304, Monel® 400
	Ethyl Chloride 20°C	SS 304, low carbon steel
	Ethyl Sulphate 20°C	Monel® 400
	Ferric Chloride 5% 20°C to boiling	Tantalum, Hastelloy® C
	Formaldehyde	SS 304, SS 316
	Formic Acid 5% 20 to 66°C	SS 316
	Hydrochloric Acid Upto 5% 20°C Upto 25% 100°C	Hastelloy® C Hastelloy® B
	Hydrofluoric Acid 60% 100°C	Hastelloy® C, Monel®
	Hydrogen peroxide	SS 304, SS 316
	Hydrogen Sulphide wet and dry	SS 316
	Phosphoric Acid Upto 10% 20°C 10% 100°C 30% to 85% 100°C	SS 316 Hastelloy® C Hastelloy® B
Sodium Hydroxide	Nickel 200	
Sulphuric Acid Upto 90% 20°C	Hastelloy® B	