

Typical Glass Furnace Conditions By Zone

Refractory Zone	Hot Face T, °C	Aggressive Environment	Erosion-Abrasion	Thermal Stress
Melting Tank:				
Bottom, Walls	1400-1600	Glass	Moderate	Startup
Metal Line	1400-1600	Glass, alkalis	Moderate	Startup
Throat	1300-1500	Glass	Moderate	Startup
Refiner Tank:				
Bottom, Walls	1200-1400	Glass	Moderate	Startup
Breastwalls	1400-1600	Alkalies, dust	Severe	Moderate
Upper End Walls	1400-1600	Dust, alkalies	Moderate	Moderate
Upper Sidewalls	1400-1700	Dust, alkalies	Severe	Moderate
Ports & Flues	1100-1700	Dust, alkalies	Severe	Severe
Burner Blocks	1100-1600	Dust, alkalies	Moderate	Severe
Furnace Crown	1500-1700	Alkalies	Moderate	Severe
Regen. Crown	1100-1600	Dust, alkalies	Moderate	Severe
Regen. Walls	500-1200	Minor	Minor	Moderate
Checkers:				
Top	1100-1500	Dust, alkalies	Severe	Severe
Bottom	200-900	SO ₂ from oil	Minor	Severe
Regen. Ducts	200-900	Minor	Minor	Severe

Source: *Carniglia/Barna Handbook of Industrial Refractories Technology*, Noyes Publications, Park Ridge, N.J., 1992.