

## Heat Resistant Stainless Steels Used in Cement Plants & Mills

Custom made cast components, spares, & replacement parts for your Cement Plant & Mills in heat resistant stainless-steel conforming to ASTM A 297/ A 297 M. AcmeCast® produces all the grades and types from HA through HX that are used in heat resisting applications as well as manufacturers proprietary developed alloys and ASTM Modified for industry specific end application needs of cement plants and associated industries. Our casting product meets the two basic requirements:

- Surface Film Stability, which includes "oxidation" and "corrosion resistance" in various atmospheres within the temperature range of operation.
- Mechanical strength and ductility for the service requirements.

Maximum Operating Temperature (°C)	Maximum Operating Temperature (°F)	Part Name	Environmental Conditions	Alloys Used *	Service Life in Years
650	1200	Conveyor parts	Severe abrasion and oxidation	HF, HH	Indefinite
650	1200	Cooler discharge chute	Severe abrasion and oxidation	HH, HK	3 to 5
650	1200	Clinker drag	Severe abrasion and oxidation	HH	5 to 10
760	1400	Feed-end seal ring	Some abrasion and oxidation	HH	Indefinite
815	1500	Brick anchors	Even temperature	HK	Indefinite
815	1500	Burner barrel	Slight abrasion and oxidation	HK, HH	5 to 10
815	1500	Hood, anchor firing end	Even temperature, Oxidation	HH	Indefinite
815	1500	Clinker chute	Severe abrasion, impact, oxidation	HH, HK	Indefinite
815	1500	Air-quench gates	Some abrasion and oxidation	HK, HN, HT	3 to 7
925	1700	Anchors	Even temperature	HH	Indefinite
980	1800	Feed pipe	Moderate abrasion inside feed and dust particles outside, thermal shock, oxidation and sulphur gases	HC, HF, HK	2 to 7
980	1800	Feed-end tail ring	Abrasive dust particles, thermal shock, and oxidation	HH, HK	10 to 15
980	1800	Feed filters	Some abrasion, thermal shock, oxidation and sulphur gases	HH	5 to 10
980	1800	Chain support segments	Intermittent temperature surges, light abrasion, sulphur gases	HF, HH	Indefinite
980	1800	Cooler end plates	Severe abrasion and oxidation	HH, HN, HT	1 to 5
980	1800	Cooler grates	Severe abrasion and oxidation	HH, HK, HN, HT	1 to 5
980	1800	Cooler side plate	Severe abrasion and oxidation	HH	1 to 5
1100	2000	Nose seal ring	Some abrasion, oxidation and sulphur gases	HH	3 to 10
1100	2000	Burner nozzle	Some abrasion, oxidation and sulphur gases	HH, HT	1 to 3
1200	2200	Nose ring	Extreme abrasion, oxidation and sulphur gases	HF, HH, HK	3 to 5

\* Higher alloys in the series can also be used. When a lower grade alloy, from the series is used instead of the specified alloy for a particular application, it will result in part's-failure, poor performance and shorter operative life cycle. Life cycle costing assessment reveals that high-end alloys are more economical than the low-end alloy solutions, as high-end alloys offer longer operative life, demand less frequent replacements and hence, much lower life cycle cost than mild steel or low-end alloys.