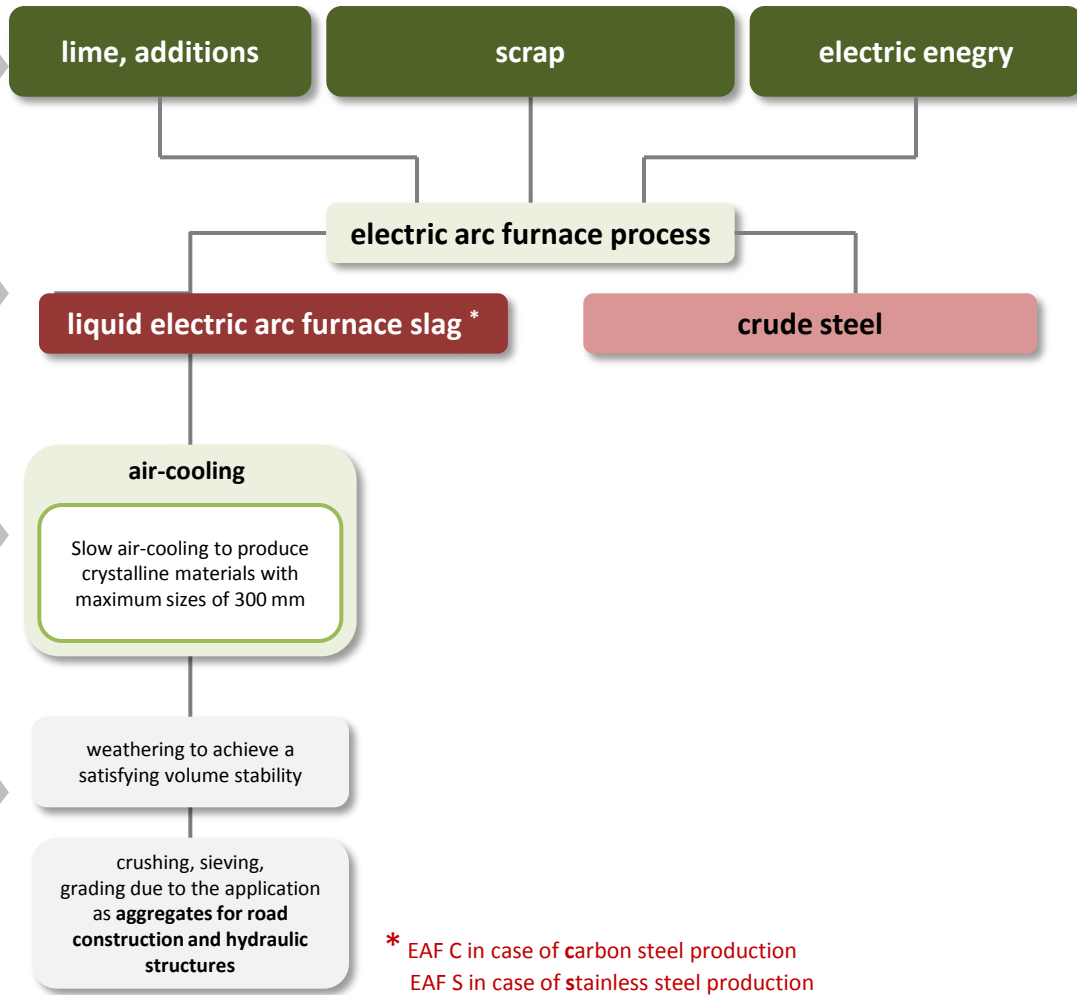# Steel Slag – Electric Arc Furnace Slag

Measures to influence the quality of slags

Process stage [1]	Measures to influence the quality	Influenced properties
Raw material preparing	selection, arrangement and pre-treatment of raw materials relating to the chemical comp. of the EAF slag	chemical composition e.g. CaO, SiO_2, P_2O_5, FeO_x, MgO, trace elements
Melting process	selection of appropriate process conditions (O_2, lime addition and quality of scrap), reduction step before tapping	temperature, composition of products (e.g. FeO, MgO_{free}) volume stability
Heat treatment	slow cooling	structure, porosity, strength, grain size distribution
Processing	crushing, sieving, grading	grain size, shape, grain size ditribution

lime, additions　　**scrap**　　**electric enegry**

electric arc furnace process

liquid electric arc furnace slag *　　**crude steel**

air-cooling

Slow air-cooling to produce crystalline materials with maximum sizes of 300 mm

weathering to achieve a satisfying volume stability

crushing, sieving, grading due to the application as **aggregates for road construction and hydraulic structures**

* EAF C in case of **c**arbon steel production
EAF S in case of **s**tainless steel production

1) All process stages are subjected to a continous production control like sampling, physical/chemical analysis and testing

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