Certain mineral additions exploit a very significant role the behavior and the ageing of the works in the corrosive conditions and one can use them like barriers against the aggressiveness and the phenomenon of corrosion of the concretes. Cements made up of additions can be recommended especially in massive works, the stoppings, maritime and underground constructions and in the cementing of the oil wells. The use of the adequate additions ensures the long-term stability and durability of the concretes of the underground, maritime works and the cementing of the oil wells... etc. To this end, within the framework of valorization of these additions (active and inert), in this study we were interested only in the study of the influence of incorporation of limestone, pozzolana, slag, tuff and dust electrostatic precipitator (crushed finely) like active addition in the matric E of cement, its effect on the behavior and ageing of cement S made up and on the microstructure of the concrete by a structural characterization by XRD