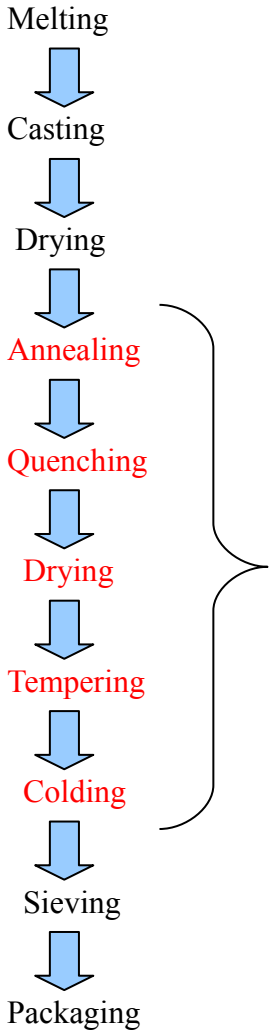
WHY DO THE WORLD USE HIGH CARBON STEEL SHOT INSTEAD OF LOW CARBON

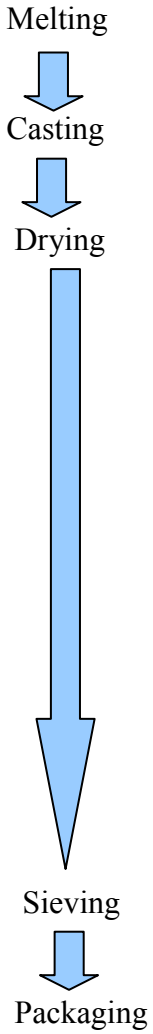
Steel shots can be produced in two chemical composition.
1. High Carbon Steel Shots (With a carbon content of 0,85-1,20 %)
2. Low Carbon Steel Shots (With a carbon content of 0,10-0,15 %)

PRODUCTION STEPS OF STEEL SHOTS

High Carbon Production



Low Carbon Production



These process steps are in only HC Shot production to give extra hardness and decreasing cleaning time. Natural Gas consumtion is aproximately 70 kg in these steps. That means 60€/MT extra cost with other costs

As it shown above figure. HC shot production is a result of an extra hardenning heat treatment. After this treatment HC shots reach 67 HRC hardness. And tempered for decreasing to required hardness. But in the working time they raise their hardness 4-5 HRC as a result of their manganese content. This extra hardness gives HC shot fast cleaning abilty. LC shots can not exceed 40-43 HRC.
In a cleaning process shot cost is only 17% of total cleaning cost. Remaining 83% is consist of electricty, man power, machine abrasion, redemption, etc. These 83% is directly depending cleaning time. If you cut cleaning time you cut these costs. And it raises the capacity usage. Maybe HC shots are 50-60 €/MT expensive than LC. But this is a result of their heat treatment process.
In the past, nobody knew HC shots. 100% of market use was LC. Some years later HC shots investigated. This was a new concept. In a few years HC shots raised its market share. Now nearly 89% of market HC and %11 LC. This is the resul of fast cleaning ability of HCS. Additionally with a LC shot its not possible to make steel grit. Because its soft and can not broken while crushing