of high toughness in its austenitic structure which is obtained by rapid cooling from a high temperature. It utilizes the work hardening of its serving surface. It serves many industrial requirements economically and is particularly useful for services that combines abrasion and heavy impact. Tensile strength and ductility are both affected by composition, heat treatment and considerably by grain size.

Since Hadfield's discovery a lot of literature has been published on this subject. Some realistic improvement has been made by metallurgical researchers and mining engineers, even though there are some practical problems occurring in manufacturing process. Hence the process technology should be developed to prevent the practical difficulties. Following are some of the casting difficulties occurring in this manufacturing process.

1. High tendancy of the molten metal to react with moulding materials and acid refractory materials.
2. As this material has a low thermal conductivity and a high thermal expansion, the casting might crack due to the thermal stresses, during rapid cooling.
3. Low toughness value in the as cast structures due to the formation of carbides and other transformation products.

This paper will attempt to show how the above problems are overcome by different casting techniques such as moulding, melting, finishing and heat treatment processes.