

## **SAMPLING GUIDELINES FOR METALS IN INGOT FORM**

Comprehensive photographs will be taken of the entire operation.

The ingots to be sampled may be packed in wooden cases, steel drums or banded on pallets.

The material must first be described by name of warehouse, place of storage within the warehouse location, tonnage, date of storage, weight list per bag/drum/pallet, markings and seals affixed, or if relevant, broken, as found prior to sampling. List of seals affixed by sampler after sampling. 100% of the packages will be opened and the consignment divided into sub-lots for sampling purposes, the size of the sub-lots to be stipulated by the client. 10% of the ingots from each sub-lot will be selected for sampling and every heat comprising the sub-lot will be sampled in the correct proportion.

Any surface contamination will be removed from each ingot to be sampled (if necessary with a wire brush). Each ingot will be drilled once sequentially using a pre-determined template which accounts for the whole of the ingot form.

The ingot to be drilled will be secured in a vice with a collection dish underneath the ingot corresponding with the drill point.

Each ingot will be drilled right through from top to bottom at the marked drill point using a 10 mm (or similar) HSS drill at slow speed (330/350rpm) to avoid overheating and possible oxidation of the drillings produced.

All drillings will be collected, including those from the dish placed under the ingot and placed in a suitable container.

When all the sample ingots comprising the sub-lot have been sampled, the drillings that have been obtained will be emptied onto a clean sheet of paper and de-magnetised to remove any contamination from the drill bit.

The individual and clearly identifiable bulk samples of each sub-lot will be forwarded to XXXXXXX for preparation together with the weight of each sub-lot.

The drillings will be milled in an appropriate mill or alternatively cut the drillings, using snips if necessary, to suitable size, then mixed thoroughly.

A weighted composite sample will be prepared based on the individual sub-lot weights.

The sample will be thoroughly homogenised and then split to provide the number of samples stipulated by the client; the samples will be packetted in aluminium foil packets and hermetically sealed. The aluminium packets will be placed in labelled out paper packets.

The sample packets will be sealed with XXXXXXX sealing tape and despatched according to the client's instructions.