



PRODUCT DATA SHEET



FERRUX™ Ingot casting anti-piping flux

SUMMARY

FERRUX comprises a range of high quality exothermic and insulating powders for hot topping.

DESCRIPTION

FERRUX is a powder formulation, supplied in bag form, which is used as a cover for the surface of the steel in ingot casting, to assist feeding.

APPLICATION

Generally, sufficient material is added to provide at least a 25mm layer on the ingot head, the actual thickness increasing with ingot size. The application rate per ingot tonne thus varies from as low as 0.6 Kg per tonne up to 2 Kg per tonne, depending on the product type, ingot dimension and, to a lesser extent, steel quality. There is a range of FERRUX recipes available to cater for different ingot sizes.

Application of pre-weighted bags of material is carried out simply by placing on the metal surface using a shovel, hooked tool, or by throwing. In the case of uphill-teemed ingots the recommended practice is to add the material once metal is within the feeder head. Where top-teemed ingots are concerned the anti-piping compound must be added on completion of the teeming cycle.

FUNCTION

The adequate feeding of a killed steel ingot is achieved by the use of feeder heads which can either be lightweight refractory insulators (PROFAX™, LITEFAX™ or KALMIN™ assemblies), or assemblies that are exothermic in nature. In the latter case KALOREX™ tiles are used on ingots ranging in size from 1 tonne upwards, and KALMINEX™ one-piece heads on smaller ingots.

The function of the feeder head is to prevent lateral heat losses of the feed metal to the mould wall. In the feeding of ingots it is also necessary to prevent the excessive heat losses to the atmosphere from the radiating upper surface of the molten steel. This is achieved by application of a FERRUX exothermic anti-piping compound. On completion of the exothermic reaction, FERRUX breaks down to form an insulating layer, thus preserving the heat that is built up during the exothermic cycle.

BENEFITS

- Good spreadability, with fluid powder providing a cover over the exposed metal surface and requiring minimal attention after application.
- Low fume and dust evolution.
- Product consistency, as a result of quality control testing on all production batches.
- FERRUX acts as both an exothermic and insulating ingot casting flux.

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