Inoculants

Elkem manufactures and markets a range of high quality inoculating alloys to produce ductile and compacted graphite cast irons.

They contain balanced ratios of the active elements to control reactivity, minimise slag and neutralise tramp elements.

All inoculants are available in sizes suitable for ladle or in-stream additions. Other inoculants for specialist applications are also available.

Nodularisers

Elkem manufactures and markets a range of high quality nodularising alloys to produce ductile and compacted graphite cast irons. They ensure the production of the ideal graphite form, distribution and freedom from chill (cementite).

The graphite form, distribution and size diagrams are taken from the international standard EN ISO 945:1994 and the Castings Development Centre, Alvechurch, Birmingham, B48 7QB.

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Elkem manufactures and markets a series of high quality inoculants to treat cast iron and ensure the production of the ideal graphite form, distribution and freedom from chill (cementite).

Some abnormal graphite forms in ductile iron

Description of a structure should follow the convention

Form : Distribution : Size, e.g. Type IA for a grey cast iron. Type IV for a ductile iron

Types of Graphite

- Random flake graphite
- Rosette flake graphite
- Kish graphite
- Interdendritic flake graphite

Exploded graphite

Caused by high purity charge materials and excess rare earth additions in high carbon equivalent irons or in thicker section castings.

Chunky graphite

Caused by high purity charge materials and excess rare earth additions in large section castings or at high carbon equivalent.

Spike graphite

Caused by small amounts of tramp elements, e.g. lead, bismuth, antimony and titanium, in the absence of cerium.

Elkem manufactures and markets a range of high quality inoculating alloys to produce ductile and compacted graphite cast irons.

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