GRAPHITE FORMS
Diagrammatic representations of the standard graphite forms in cast irons

Form

GRAPHITE SIZES IN GREY CAST IRON
Diagrammatic representations of the standard graphite flake sizes in grey cast iron at x100 magnification (Form I Distribution A)

Largest Flakes

Graphite Structure in Cast Irons

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, minimize slag and neutralize tramp elements.

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).

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

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

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

Description of a structure should follow the convention:
Form : Distribution : Size, e.g. Type IAA for a grey cast iron Type V4 for a ductile iron

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