Not a Nodular Iron, nor a Compacted Graphite Iron- just a grey iron with some ductility.

With the help of metallurgical measures the Consulting company for foundry Technology Regitz –Consulting GmbH in Germany has successfully developed brittle Grey Cast Iron into material with some ductility. We have been told that the negative effect of notches because of the sharp geometrical shape of Graphite Flakes can be minimized by special additions to the liquid iron and by adequate melt processing. According to information from the company following properties have been achieved:

- an Elongation of 2,5%
- a Hardness of 155-160 HB
- a Tensile strength of 290-300 N/mm²
- an Impact strength of 8 J (Un notched bar)

It is said, that no Carbides and no other obstacles were noticed.

The development of the new kind of material was a long lasting process, it went over decades and it was purposely carried out in order to open and to enlarge additional applications for the old and proven material Grey Cast Iron.

The designer has now an opportunity to choose for his components a material which combines well known advantages with additional properties such as ductility and a moderate price.

Examples of components for which the new material can be very attractive are: Clutch plates, Flywheels, Brake Discs and ............

R&D is ongoing to check suitability for Motor Blocks

One is convinced that this new material helps to close the gap between conventional Grey Cast Iron and Compacted Graphite Cast Iron and Nodular Cast Iron.

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