

# **Review of the Status of Ductile Iron Casting From Direct Reduced Iron in Trinidad and Tobago**

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## **Abstract**

This paper proposes that ductile iron castings could be made in a developing country such as Trinidad and Tobago using indigenous sources of iron in a foundry equipped with a small typical medium frequency induction melting furnace. The source of iron chosen was direct reduced iron (DRI) pellets, which are produced in Trinidad and Tobago.

One basic requirement of an iron-carbon melt needed to produce ductile iron is that it should contain a minimum amount of undesirable impurities such as sulphur. The iron content of direct reduced iron pellets meets this requirement as confirmed by a series of melting tests. Ductile cast iron was produced using the recommended procedures with comparable physical properties to castings produced from conventional iron sources both in the as-cast and heat-treated conditions.