	BHARAT HEAVY ELECTRICALS Ltd RAMACHANDRAPURAM HYDERABAD – 502032 FP-PI01 Specification for PIG IRON FOR FOUNDRY	Date: 01.01.2019;	Page 1 of 2
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#### 1. GENERAL:

This specification governs the quality requirements of Pig Iron for Foundry.

#### 2. APPLICATION:

Used for the production of heavy duty Iron / Steel castings.

#### 3. COMPLIANCE WITH NATIONAL STANDARDS:

This specification is based on the following national standard.  
 IS 13502 – 1992 : PIG IRON.

#### 4. SIZE AND SHAPE:

The blocks of pig can be 5 to 50 kg (approx.) having 3/2/1/0 notches, each segment weighing 5 to 20 kg (approx.).

#### 5. GENERAL APPEARANCE:

The material shall be clean and free from excessive Sand or Kish.

#### 6. CHEMICAL COMPOSITION:


Material when tested in accordance with IS: 12308 shall conform to the following composition:

C	Si	Mn	P	S	Fe
3.5 – 4.5	0.50 – 1.25	1.0 max	0.12 Max	0.06 Max	Remainder

#### 7. SAMPLING & TESTING:

- Supplier shall arrange for Third party inspection and chemical analysis at NABL accredited Laboratory at their cost, as per the scope of inspection specified in the PO/Spec. The Third party inspection agencies identified by BHEL are LRIS /BVIS (WINGS OF BUREAU-VERITAS) / DNV/ TUV (SUD) / ALFRED H KNIGHT / SGS.
- The Inspection Agency shall identify the lot offered for BHEL Purchase order supply. The Inspection Agency shall pick representative samples from the offered lot, and carryout chemical analysis at NABL accredited Laboratory for all elements specified in the specification as per applicable standards like IS-13502:1992 & IS-12308.
- The Test Report / Certificate should contain Sampling Process, Testing Methodology for the chemical Analysis, Batch/Lot No of material and seal details of the inspector.

Nature of revision	Prepared By:  अग्रवाल अभिनव ABHINAV AGRAWAL वरिष्ठ अभियंता / प्रौद्योगिकी व पैटर्नशॉप-एफ व पी Sr. Engineer / Technology & Pattern Shop - F & P बी.एच.ई.एल. हैदराबाद BHEL, HYD-32	Approved By:  सुधाकर अ.न. A.N. Sudhakar वरिष्ठ उप महाप्रबंधक / एफ & पी एवं सी डब्ल्यू Sr. DGM / F & P and CW बी.एच.ई.एल. हैदराबाद, BHEL, HYD-32
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- d. Supplier shall send a copy of the Test Report of the Inspection Agency / NABL. On receipt of the copy of Test Report, BHEL will give clearance for dispatch of material. Original Test Reports and other documents certified by the Inspection Agency shall be sent along with supplies.
- e. BHEL may test the material after receipt and acceptance of the material will be based on the BHEL's test results. If the material received is not meeting the requirement of this specification, it shall be replaced free of charge by the supplier. For result of analysis and properties the decision of BHEL shall be final and binding on the supplier.

## 8. TEST CERTIFICATES:

The supplier shall give Test Certificate incorporating the results of the Inspection Agency and also certifying that the material supplied is as per the PO and Specification. Also one set of test certificates from the original manufacturer shall be supplied, in case vendor is trader.

One set of Test certificates shall be sent along with the dispatch documents and another set of test certificates shall be sent along with invoice and other documents.

The test certificates shall bear the following information:

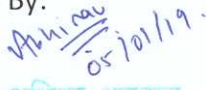

- (i) Material: "PIG IRON"
- (ii) BHEL PO: "xxxxxxxxx"
- (iii) Original Manufacturer's Name & Details:
- (iv) Trade Mark, if any:
- (v) Test results of chemical analysis from the original manufacturer.

## 9. PACKING AND MARKING:

The material shall be supplied in truck/wagon loads in loose condition but shall be protected from moisture, rain during transit.

## 10. REFERRED STANDARDS (Latest publications including amendments):

- 1) IS: 12308

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