

Trial #6: **Pig Iron Replacement** as a Pre-conditioner



Conducted in Cast Iron at Coimbatore as a pre-conditioner

PIG IRON ELIMIATION - TRIALS CONDUCTED IN THE FOLLOWING ITEMS

- | | | |
|-----------------------|------------------------|----------------|
| 1 Kappa Fly wheel | 4 Axle Hsg (IDB) (RH) | 7 VGT Flywheel |
| 2 PE 1.25 Fly wheel | 5 Axle Hsg (I2DD) (RH) | 8 HA Flywheel |
| 3 Axle Hsg (IDB) (LH) | 6 Axle Hsg (I2DD) (LH) | 9 U Flywheel |

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Charge mix Comparison

Charge Mix	Spec (kg)	Regular Heat (Kg)	Sample Heat (Kg)
PIG IRON	160	162	0
MS	400	402	400
CI Borings	480	480	600
Returns	550	536	580
MI Metallurgy+			3.2
	1590	1580	1583.2


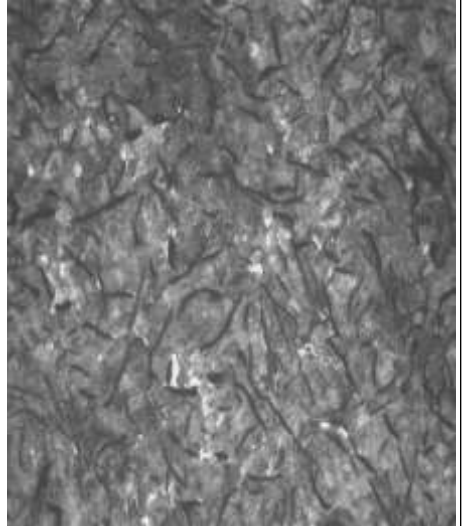
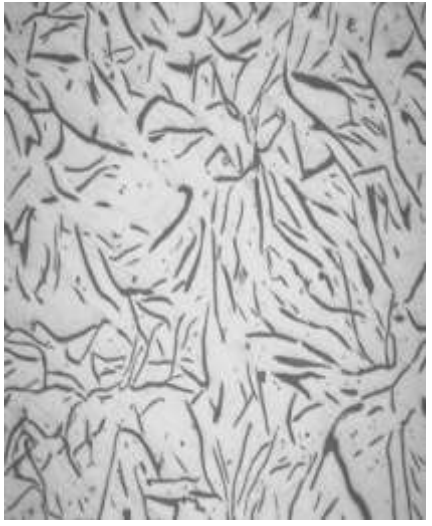
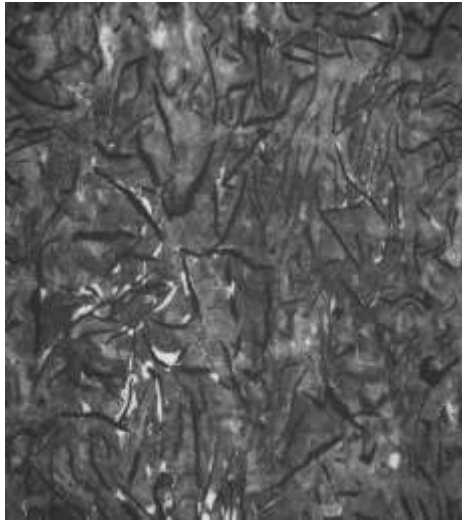
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IDB Axle Hsg (LH&RH)					
BEFORE			AFTER		
Properties	Spec	Actual	Properties	Spec	Actual
Surface Hardness	180-230	187-197	Surface Hardness	180-230	187-193
Tensile Strength	250 Min Mpa	275.76	Tensile Strength	250 Min Mpa	265.5
Pearlite	90% Min	97%	Pearlite	90% Min	96%
Ferrite	10% Max	3%	Ferrite	10% Max	4%
Micro Structure			Micro Structure		
					

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I2DD Axle Hsg (LH&RH)					
BEFORE			AFTER		
Properties	Spec	Actual	Properties	Spec	Actual
Surface Hardness	180-230	187-197	Surface Hardness	180-230	187-193
Tensile Strength	250 Min Mpa	275.76	Tensile Strength	250 Min Mpa	269.75
Pearlite	90% Min	97%	Pearlite	90% Min	95%
Ferrite	10% Max	3%	Ferrite	10% Max	5%
Micro Structure			Micro Structure		
					
					

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VGT Flywheel					
BEFORE			AFTER		
Properties	Spec	Actual	Properties	Spec	Actual
Surface Hardness	179-241	187-197	Surface Hardness	179-241	187-197
Core Hardness	179-241	179-187	Core Hardness	179-241	181-191
Tensile Strength	250 Min Mpa	271.24	Tensile Strength	250 Min Mpa	278.61
Pearlite	90% Min	96%	Pearlite	90% Min	97%
Ferrite	10% Max	4%	Ferrite	10% Max	3%
Micro Structure			Micro Structure		
