

HARDNESS AND NODULARITY ASSESSMENT OF V-6 ENGINE CASTING

Report Type: V-6 Engine Casting QC

Department: R&D

Analysis Type: To determine nodularity and Vickers hardness of V-6 engine casting.

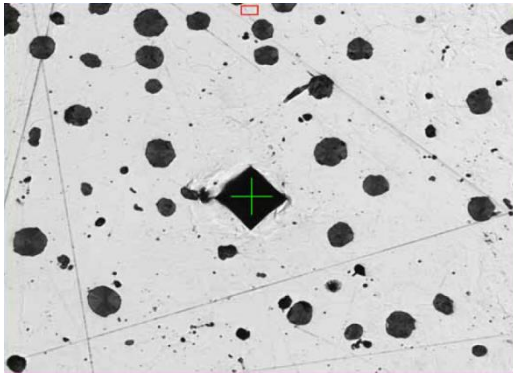


Figure 1: Original image after indentation.

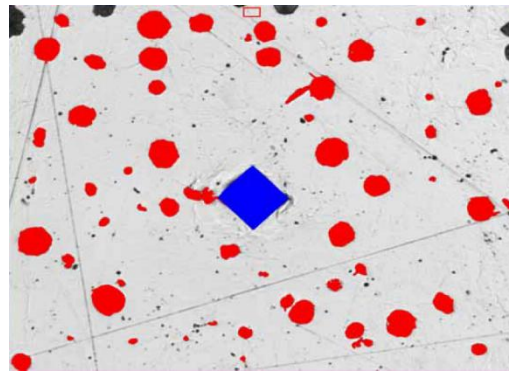
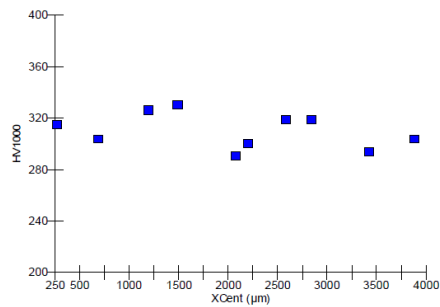


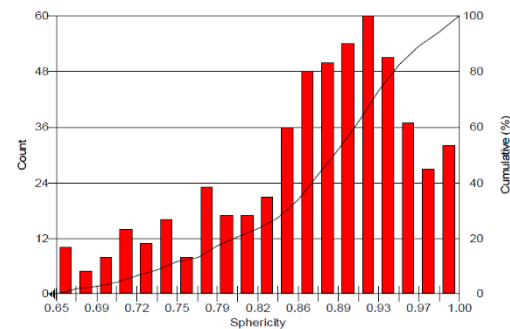
Figure 2: Graphite nodules and indent are detected and assigned in different bitplanes.

Results:



Min: 290 HV
Max: 330 HV
Avg: 310 HV
STD: 13.7 HV

Figure 3: Vickers hardness measurements.



n: 545
Nodularity: 89.1 %
(above 0.65)

Figure 4: Nodularity distribution in the indentation areas.