

REPORT 14/079

Date: 08/05/2014
 Author: Giovanni Borracci

Reason for analysis: PPAP Edison

Requester: GPS1 - Russo Giacomo

Part Name: SG3
 P/N: 250.1.5169.35
 State of parts: Finished

Material: GCG_805000_Part 2
 Customer:

Result: OK

Distribution List: GPS1 - G. Russo

Notes:

Surface Hardness Verification

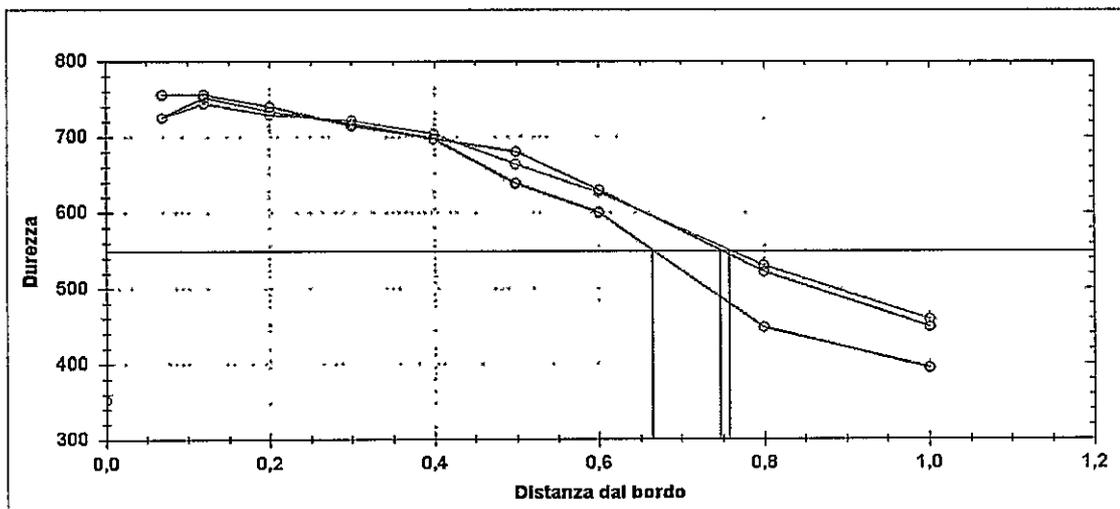
Scale	Position	Values [mm]	Range
HRA	M1	81,5	80.5 + 2.5
HRC	M1	60,9	60 + 3

Core Hardness Verification

Sample	Scale	Position	Values [HV10]	Range
1441/14	HV10	M5	351	≥ 300

CHD Verification

Sample	Scale	Position	Values [mm]	Range
1441/14	CHD 550 HV1	M2	0,76	0.5 + 0.4 mm
1441/14	CHD 550 HV1	M3	0,67	min 0.3 mm
1441/14	CHD 550 HV1	M4	0,75	0.4+0.4mm



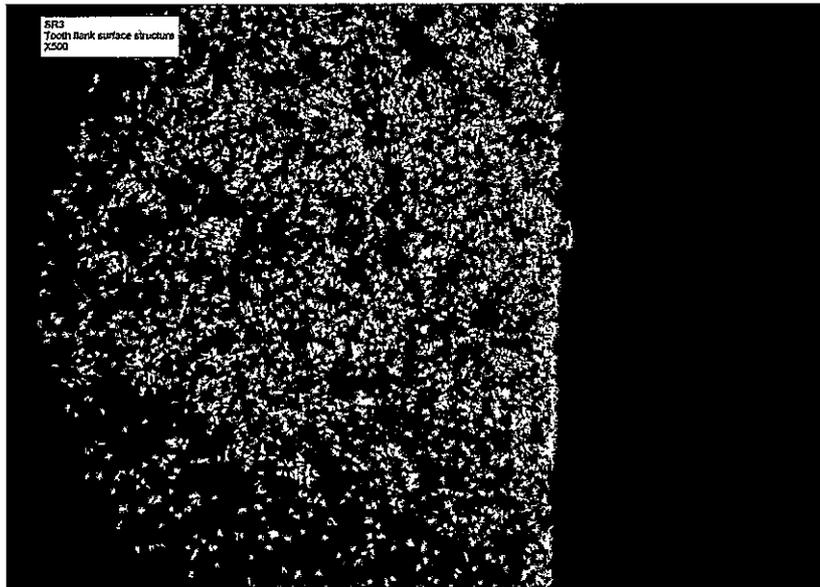
Picture 1: Hardness profiles

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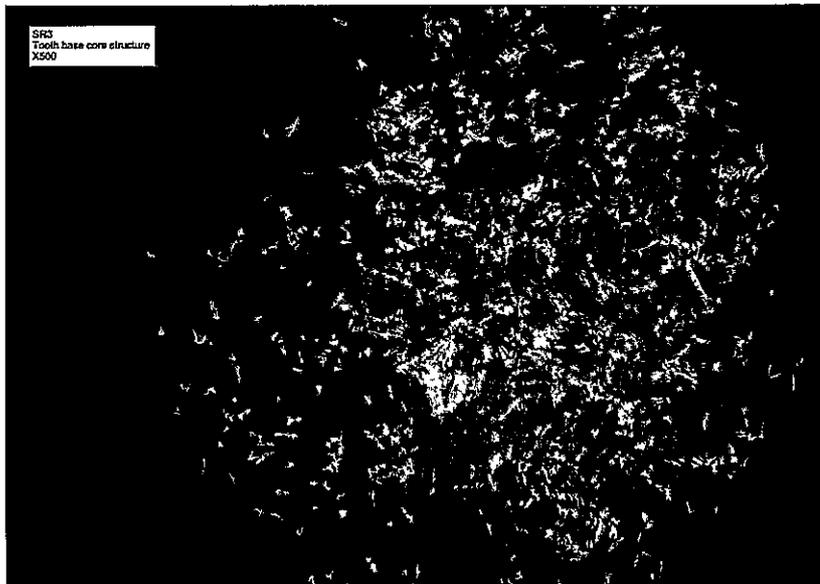
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Metallographic Analysis

Sample # 1441/14	SR3
Tooth flank surface structure:	Martensite + 5% retained austenite (OK)
Tooth base core structure:	Martensite + bainite (OK)



Picture 2: Surface microstructure at tooth flank (X500)



Picture 3: Core microstructure at tooth base (X500)