

313046

**LABORATORY REPORT**  
 GETRAG S.p.A. - B/WLQ 2

 **GETRAG**
**REPORT 14/064**
 Date: 29/04/2014  
 Author: Francesco Abbaticchio

Reason for analysis: PPAP

Requester: GPS1 - G. Russo

 Part Name: Ring Gear  
 P/N: 250.1.5186.75  
 State of parts: Finished

 Material: GCG\_805000\_Part 2  
 Customer: EDISON

Result: OK

 Distribution List: GPS1 - G. Russo  
 ME- G. Cacciapaglia

Notes:

**Surface Hardness Verification**

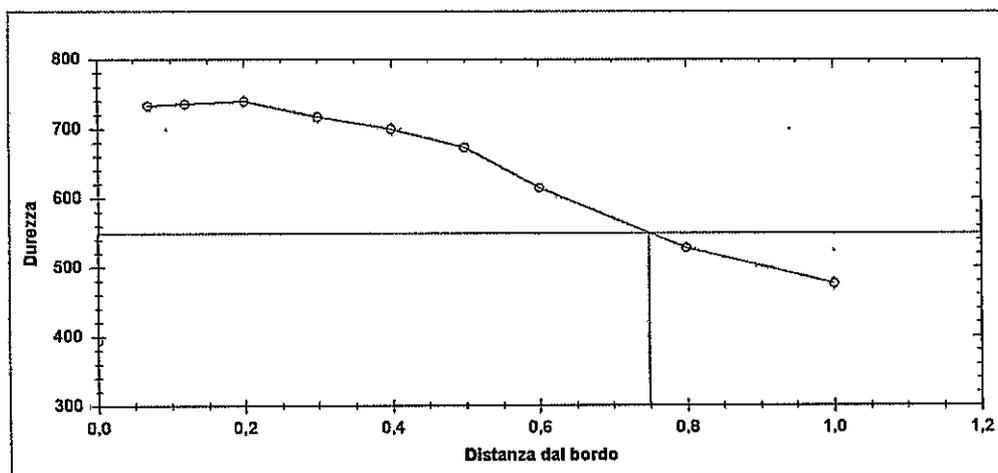
Scale	Position	Values [mm]	Range	Component
HRC	M1	60,8	-	Gear
HRA	M1	81,4	80.5 + 2.5	Gear

**Core Hardness Verification**

Sample	Scale	Position	Value	Range	Component
1355/14	HV10	M3	393	≥ 300	Gear

**CHD Verification**

Sample	Scale	Position	Values [mm]	Range	Component
1355/14	CHD 550 HV1	M2	0,75	0.5 + 0.4 mm	Gear



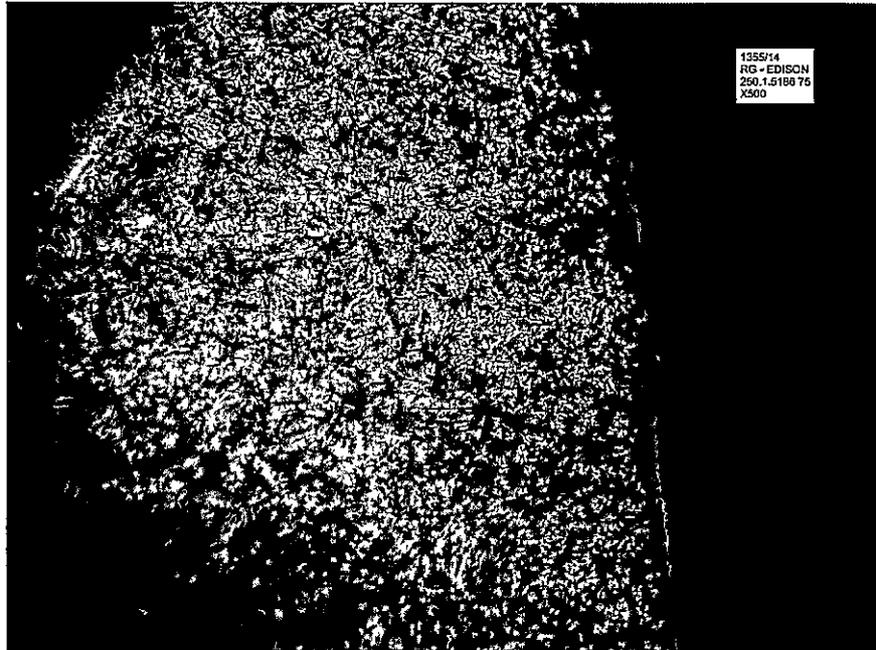
Picture 1: hardness profiles

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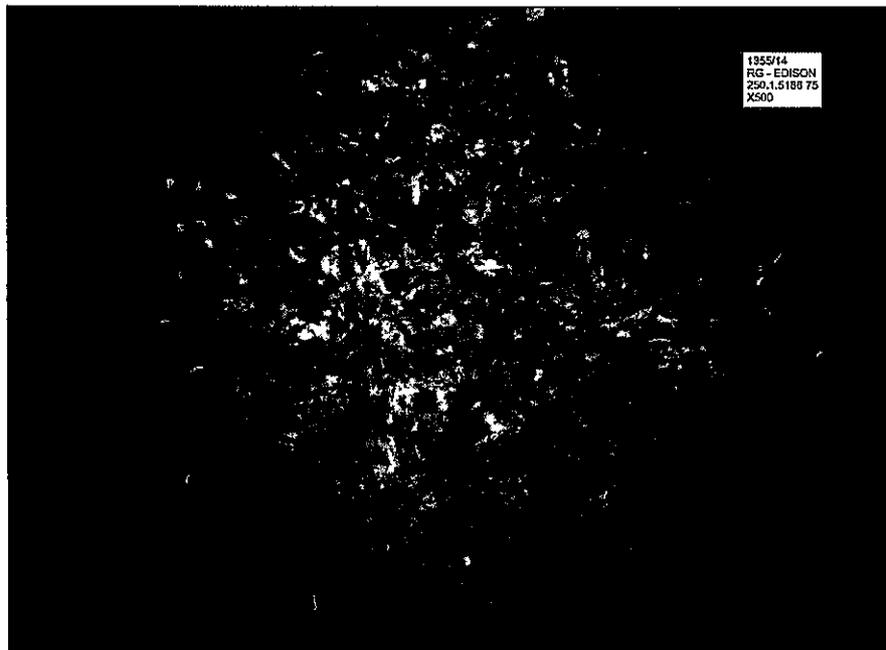
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*Metallographic Analysis*

Sample #	1355/14
Gear - Tooth flank surface structure:	Martensite + <5% retained austenite (OK)
Gear - Tooth base core structure:	Martensite + bainite (OK)



Picture 2: Surface microstructure at tooth flank



Picture 3: Surface microstructure at tooth root