



# **RAPPORTO DI NON CONFORMITA' A FORNITORE** **SUPPLIER NON CONFORMITY REPORT**

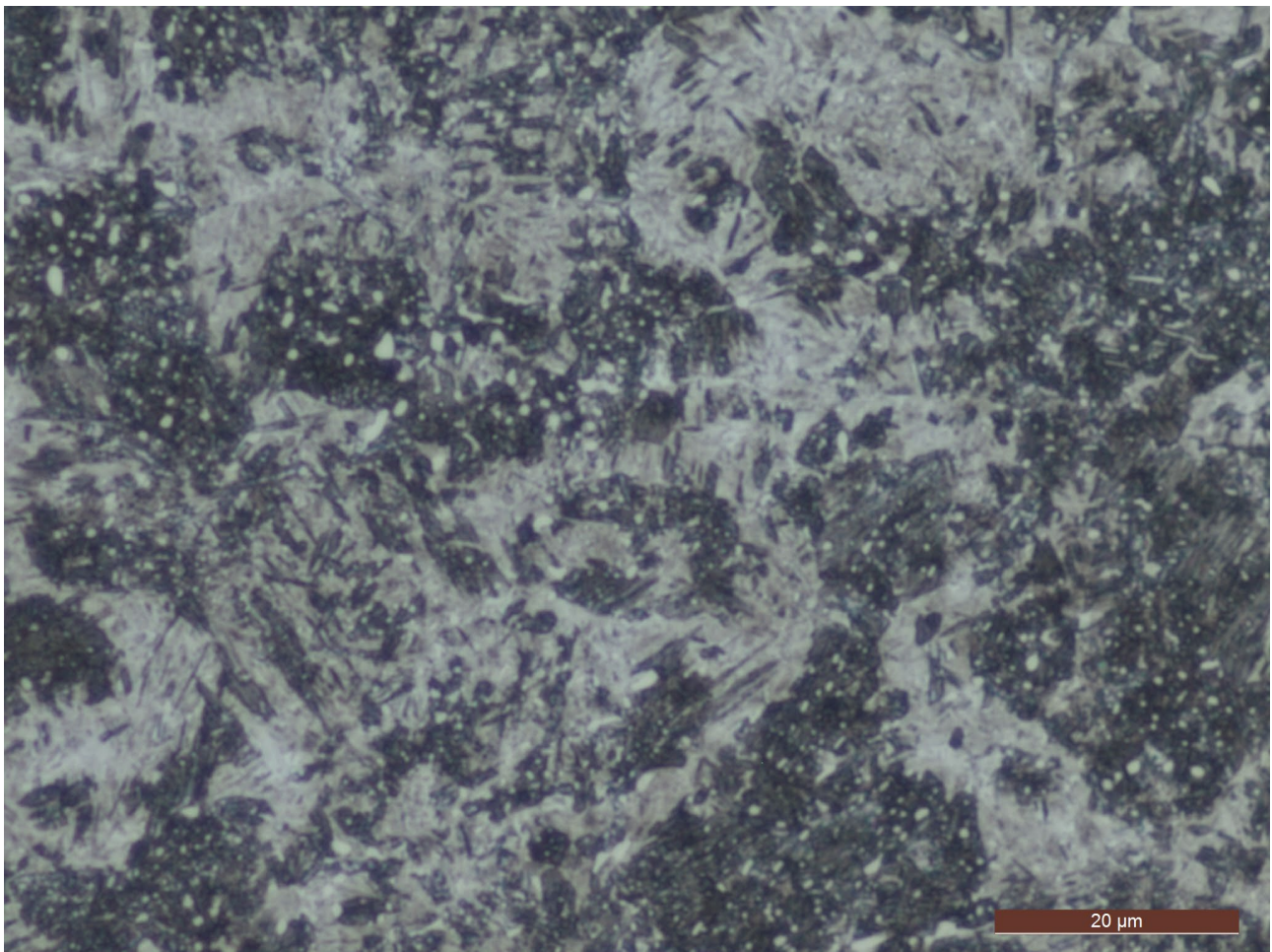
RNC Supplier	001/25	Date	14/01/2025

Dati Generali del Rapporto di Non Conformità / General Data of Non Conformity Report	
Fornitore / Supplier	MEC BEARINGS
Contatto Fornitore / Reference Person	MR. MOHIT
Aree di Rilevazione / Area of Measurement	HARDNESS
Reparto / Department	QUALITY CONTROL DEPARTMENT
N° Fattura / Invoice No.	SEE ALL DETAILS BELOW
Operatore / Operator	STEFANO VALLONE
Note / Notes	
Non-Conformità Ricontrata/Non-Compliance Found	Data/Date: 14.01.2025
<p><b>ITEM: ROLLERS ZB AISI 52100 20,0 X 30,0 MM.</b></p> <p><b>REFERENCES:</b>            Batch 202401-12, Ref. MEC134/23-24 28/03/2024, PCS. 100            Batch 202401-15, Ref. MEC134/23-24 28/03/2024, PCS. 200            Batch 240108-V, Ref. MEC134/23-24 28/03/2024, PCS. 100            Batch 240109-XXIII, Ref. MEC134/23-24 28/03/2024, PCS. 400            Batch 240109-XXVI, Ref. MEC134/23-24 28/03/2024, PCS. 500.</p> <p><b>COMPLAINED DEFECT: NON-COMPLIANT HARDNESS</b></p> <p>When we controlled in our laboratory the rollers in reference, on the pieces controlled, as sampling plan inside the batches in reference, we found these non-compliant hardness values:</p> <p><b>**Requested hardness: 60-66 HRC**</b></p> <p><b>**Surface hardness (cylindrical area) measured: 545 HV2 = 53 HRC. (With surface hardness check using HRC durometer, the obtained value was 56 HRC)**</b></p> <p><b>**Surface hardness of the head measured: 675 HV2 = 59 HRC. (With surface hardness check using HRC durometer, the obtained value was 60 HRC)**</b></p> <p><b>**Measured Core hardness: 471 HV2 = 47 HRC**</b></p>	

The cause, from our analysis, results that is the incorrect heat treatment execution. In the metallographic laboratory, we found, by analyzing a roller with low hardness, the presence of untransformed structures (dark spots with carbide concentrations, see attached picture).

The microstructure in these dark spots consists of Bainite and very fine Pearlite. This structure indicates insufficient temperature or time during austenitization phase before quenching.

Picture 1: Microstructure found with the analysis in our metallographic laboratory.



**RGP=ALLS®****RAPPORTO DI NON CONFORMITA' A FORNITORE  
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Cause della non-conformità / Reasons Which Caused The Mistake	Date/Date:
Azioni Correttive / Corrective Action	Data/Date:
Responsabile Laboratorio Controllo Qualità / Quality Control Laboratory Manager: Mr. Andrea Rossi	