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Minutes of meeting held at RDSO on 22.02.2017 regarding failure of TM Pinions in WAG9 electric locomotives

Members Present:

RDSO(S/Shri)	Railway(S/Shri)	KPCL (S/Shri)
O. P. Kesari, EDSE (Co-ord)	S. K. Singh, Dy.CEE/D2/CLW	Yashwant Nimkar, Manager
Mohit Sonakiya, DSE/C&S	Hemant Jindal, DEE/TRS/KYN	Ravikant J.Jadhav Sr.Manager/QA
Girraj Kishore, ADE/C&S	G. Mondal SSE/Drg/CLW	S.D. Dandage, DGM/Mktg,
Santosh Kumar, SE/D/Elect.	B. N. Singh SSE/TRS/GMO	S.S. Mahabaleshwar VP(TRM)
A. K. Brahmane SSE/MP	M. R. Ghooi SSE/TRS/AQ	
	N. K. Saxena SSE/TRS/Kyn	

A meeting was conducted at RDSO on 22.02.2017 to discuss the failures of TM Pinion in WAG9 electric locomotive. During the meeting following points were discussed:

1. A large no. of failures of TM pinions of M/s KPC have been reported by ELS/AQ, ELS/KYN and ELS/GMO. It was also reported that a large no. of TM pinions which failed within warranty period i.e. 72 months are yet to be replaced. M/s KPCL agreed to give warranty replacement for all the failed pinions under warranty by end of April 2017. Railways are advised to provide details of warranty failures of pinions to CLW for which M/s KPCL has not given warranty replacement.

2. It was observed from the data that there was a higher incidence of failures of pinions in the first and second year and from the lot having pinion serial no starting from 14E. The hardness profile used to measure case depth was not uniform and the hardness at 1.80mm was 503HV (just above 500HV required). It was also pointed out that there were cases of pinion failures in EMD locomotive pinions of M/s KPC and Quality Audit of M/s KPC revealed certain deficiencies in the heat treatment and hardening process. In view of the above it was decided that -
   a. Sample from new lots of pinions of M/s KPCL make shall be inspected by M/s KPC in particular hardness of shaft bore and case depth. The entire lot of pinions belonging to the identified batch with quality issues shall be replaced.
   b. A sample pinion failed within one year from commissioning shall be sent by GMO shed for investigation at RDSO.
   c. As the vendor development and quality control for this item is with CLW, it would take necessary action against the firm in regard to poor performance.
   d. RDSO, CLW and KPC would jointly investigate the failure of pinions supplied by M/s KPCL at GMO shed.

3. A case was pointed out by ELS/KYN, where GGAG make pinion did not have proper radius of relief groove. Zonal Railways should ensure proper radius of relief groove of pinion shaft with proper gauge before fitment.

4. A review meeting will be conducted in April 2017 to discuss the outcome and further course of action.

(Mohit Sonakiya)
For Director General/Electrical