

भारत सरकार – रेल मंत्रालय  
अनुसंधान अभिकल्प और मानक संगठन  
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Government of India - Ministry of Railways  
Research, Designs & Standards Organization,  
LUCKNOW - 226011



No. EL/3.1.35/20

Date: 29.08.2018

i)	M/s Kirloskar Pneumatic Co. Ltd., 1, Hadapsar Industrial Estate, Pune-411013	मेसर्स किलोस्कर न्यूमेटिक कम्पनी लि०, 1, हडपसार इंडस्ट्रीयल इस्टेट, पुणे – 411 013
ii)	M/s G. G. Automotive Gears Ltd., Plot No.2-A, I.S. GAJARA Industrial Area No.1, A.B. Road, Dewas-455001(M.P.)	मेसर्स जी.जी. ऑटोमोटिव गियर्स लि०, प्लॉट नं० 2ए, आई. एस. गजरा इंडस्ट्रीयल एरिया नं० 1, ए. बी. रोड, देवास – 455 001 (मध्य प्रदेश)
iii)	M/s SAN Engineering & Locomotive Co. Ltd., Plot No.1-10, Hebbal Industrial Area, Belavadi Post, Mysore-570018	मेसर्स सेन इंजीनियरिंग एंड लोकोमोटिव कंपनी लिमिटेड, प्लॉट नं० 1-10, हेबल इंडस्ट्रीयल एरिया, बेलवाडी पोस्ट, मैसूर-570018

**Sub.: Minutes of Meeting of Shaft Pinion of 3 Phase Locomotive.**

Ref.: Electrical Directorate letter No. EL/3.1.35/20 dated 04.07.2018

X-X-X

A large no. of failures for 21 teeth Shaft Pinion of 3 Phase Electric Locomotive has been reported by Zonal Railways. A meeting is held on 21.08.2018 at 11.30 hrs at Electrical Directorate, RDSO, Lucknow to address the failures.

Meentus of meeting is attached herewith for your further action.

Encl.: MOM

(Pratibha Gupta)  
JDSE/Mech.

for Director General/Electrical

Copy to:

Chief Electrical Engineer,

मुख्य विद्युत अभियंता,

i)	Secretary(Electrical), Railway Board, Rail Bhawan, New Delhi-110001	सचिव (विद्युत), रेलवे बोर्ड, रेल भवन, नई दिल्ली-110001
ii)	Chittaranjan Locomotive Works, Chittaranjan-713331(WB)	चित्तरंजन रेल इंजन कारखाना, चित्तरंजन – 713331

o/c

जाती फिया  
प्रतिभा 29/08/18



iii)	Central Railway, Mumbai CST-400001	मध्य रेलवे, मुम्बई, सीएसटी-400001
iv)	East Central Railway, Hazipur-844101	पूर्व मध्य रेलवे, हाजीपुर-844 101
v)	East Coast Railway, Chandra Shekharapur, Bhubaneswar-751016	पूर्व तटीय रेलवे, चन्द्रशेखरपुर, भुवनेश्वर-751 023
vi)	Southern Railway, Park Town, Chennai-600003	दक्षिण रेलवे, पार्क टाउन, चेन्नई-600003
vii)	South Central Railway, Secunderabad-500371	दक्षिण मध्य रेलवे, रेल निलायम, सिकंदराबाद-500 371
viii)	South Eastern railway, Garden reach, Kolkata-700043	दक्षिण पूर्व रेलवे, गार्डनरीच, कोलकाता-700 043
ix)	South East Central Railway, Bilaspur-495004	दक्षिण पूर्व मध्य रेलवे, बिलासपुर - 495 004
x)	West Central Railway, Jabalpur-482001	पश्चिम मध्य रेलवे, जबलपुर-482001
xi)	Nothern Railway, Badoda House, New Delhi-110001	उत्तर रेलवे, बड़ोदा हाउस, नयी दिल्ली - 110001
xii)	North Central Railway, Subedar Ganj, Allahabad-211001	उत्तर मध्य रेलवे, सुबेदार गंज, इलाहाबाद - 211001

- for your kind information and necessary action.

(Pratibha Gupta)

JDSE/Mech.

for Director General/Electrical



# Minutes of Meeting held at RDSO on 21.08.2018 regarding Failure Of TM Shaft Pinion in WAG9 Electric Locomotives

## Member Present:

RDSO(S/Shri)	Railway(S/Shri)	Firm(S/Shri)
O. P. Kesari, PEDSE	Santosh Rathour, AEE/TRS/GMO	Ravikant J. Jadhav, Sr. Manager/QA, KPCL
Pratibha Gupta, JDSE/Mech.	Bablu Samanta, SSE/TRS/GMO	Yashwant Nimkar, Sr. Manager/Metallurgy, KPCL
Girraj Kishore, ADE/Mech.	Abhay Kr. Tiwari, Tech./GMO	S. D. Dandage, DGM/Mktg, KPCL
Santosh Kumar, SSE/D/Elect.	S.P.Verma, SSE/TKD, WCR	Priyam Garg, General Superintendent, SAN
Sikandra Singh, SSE/D/Elect.		Navneet Mandloi, GM/GGAG

A large no. of failures of 21 Teeth TM pinion were reported by Zonal Railways. A meeting was held at RDSO on 21.08.2018 to discuss the failures of TM Pinion in WAG9 Electric Locomotive. During the meeting following points were discussed:

### 1. Discussion with M/s KPCL:

- i) M/s KPCL informed that they have supplied 660 nos. modified pinions to zonal railways. Firm was asked to submit the details of supply and fitment of these pinions, so that performance of these pinions can be watched closely.
- ii) Details of provision of old pinion after removal of notch shall also be submitted by M/s KPCL & Zonal Railways.
- iii) Representative of ELS/Gomoh informed that on date firm has to replace 76 new old design pinion and 94 warranty failed pinion M/s KPCL agreed to replace all the pinions at a rate of 30 nos. pinion per month.
- iv) Representative of ELS/TKD informed that on date pending replacement is 44 nos. Firm representative agreed to visit ELS/TKD and replace all the old design pinion removed from loco or in service in phase wise manner.
- v) Representative of M/s KPCL informed that only 05 nos. pinions are pending for replacement at ELS/AQ. However, firm was asked to submit complete details of old design of pinion supplied and their replaced with modified design in all the zonal railways.

### 2. Discussion with M/s GGAG:

- i) Representative of M/s GGAG informed that they have given template for profile checking of the pinion to the sheds. However, representative of ELS/TKD informed that they have not received the same yet. M/s GGAG is requested to give the template to all the remaining sheds & all sheds which do not have the template should ask for the same from M/s GGAG.
- ii) As per the details available overall 11 nos. pinion are needed to replace as warranty replacement at ELS/Gomoh. Firm agreed to replace all the 11 nos. pinions at the earliest.
- iii) Representative of ELS/TKD expressed that they have population of 150 nos. pinions of M/s GGAG and there is nil failure in this make of pinion.



3. Discussion with M/s SAN:
- i) Representative of ELS/TKD informed that they have a population of 23 nos. of M/s SAN make pinion, in which 05 nos. pinions failed till date. Out of 5, 2 nos. are broken and 3 nos. are chipped off. ELS/TKD was advised to send one no. failed pinion to RDSO for investigation. Firm was asked to visit ELS/TKD and submit the detailed investigation report to RDSO within 15 days.
  - ii) Further representative of ELS/Gomoh also informed that in the population of 48 nos. pinion of M/s SAN make, 7 nos. failed till date. Out of which 2 nos. failed within 1 year and 5 nos. failed between 1 to 2 years.
  - iii) As the failure rate of M/s SAN make pinion is very high, Firm was asked to bring a new pinion to check the profile along with the detailed failure investigation report and action plan.
  - iv) Firm was also advised to replace all warranty failed pinion at the earliest.
4. All the zonal railways advised to monitor closely the performance of M/s SAN make and M/s KPCL make new modified & old reworked pinion. Same should be submitted to RDSO also.
5. ELS/AQ vide their letter reported that the thread design of oil injection hole is different in different make. It is parallel in M/s KPCL make pinion and tapered in M/s GGAG make pinion. Shed also reported that there is problem of matching of thread in tapered type. CLW should look in to the matter and take the feedback from other sheds also to modify the drawing accordingly.

(Pratibha Gupta)  
JDSE/Mech.

For Director General/Electrical