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भारत सरकार - रेल मंत्रालय  
अनुसंधान अभिकल्प और मानक संगठन  
लखनऊ - 226 011  
Government of India-Ministry of Railways  
**Research Designs & Standards Organisation**  
LUCKNOW - 226 011

**TECHNICAL CIRUCLAR NO. 17**

NO. EL/ 3.1.38

Dt.24.3.98

**Chief Electrical Engineers**

- Central Railway, Mumbai CST 400 001
- Eastern Railway, Fairlie Place, Calcutta 700 001
- Northern Railway, Baroda House, New Delhi 110 001
- Southern Railway, Park Town, Madras 600 003
- South Eastern Railway, Garden Reach, Calcutta-700 043
- South Central Railway, Rail Neelayam, Secunderabad-500 071
- Western Railway, Churchgate, Mumbai-400 020
- Chittaranjan Locomotive Works, Chittaranjan-713 331

**Sub: Haulage Capacity of WAG7 Locomotive with revised gear ratio of 16:65**

Based on RDSO's report on "Rating, performance, starting Adhesion, Continuous Rating, Rheostatic Braking and specific Resistance Investigations on WAG7 Electric Locomotives," Report No.531 of May 1994 a starting tractive effort of 44t has been achieved. Considering this increased starting tractive effort of 44t and with the gear ratio of 16:65, the performance curves GEL-1077 for WAG7 loco(gear ratio 16:65) are enclosed as Annexure-I for your reference and record.The load table is enclosed as Annexure-II.

With this WAG7 loco with 16:65 gear ratio is capable to start and haul 4738t on 1 in 200 up gradient.

The existing performance curves GEL-1032 for WAG7 loco will continue to be applicable for WAG7 loco with gear ratio 18:64.

DA: As above

*(Handwritten signature)*

(V.K. Aggarwal)  
for Director General/Elect.

Copy to: Secretary (Electric Traction) Railway Board, New Delhi-110 001.

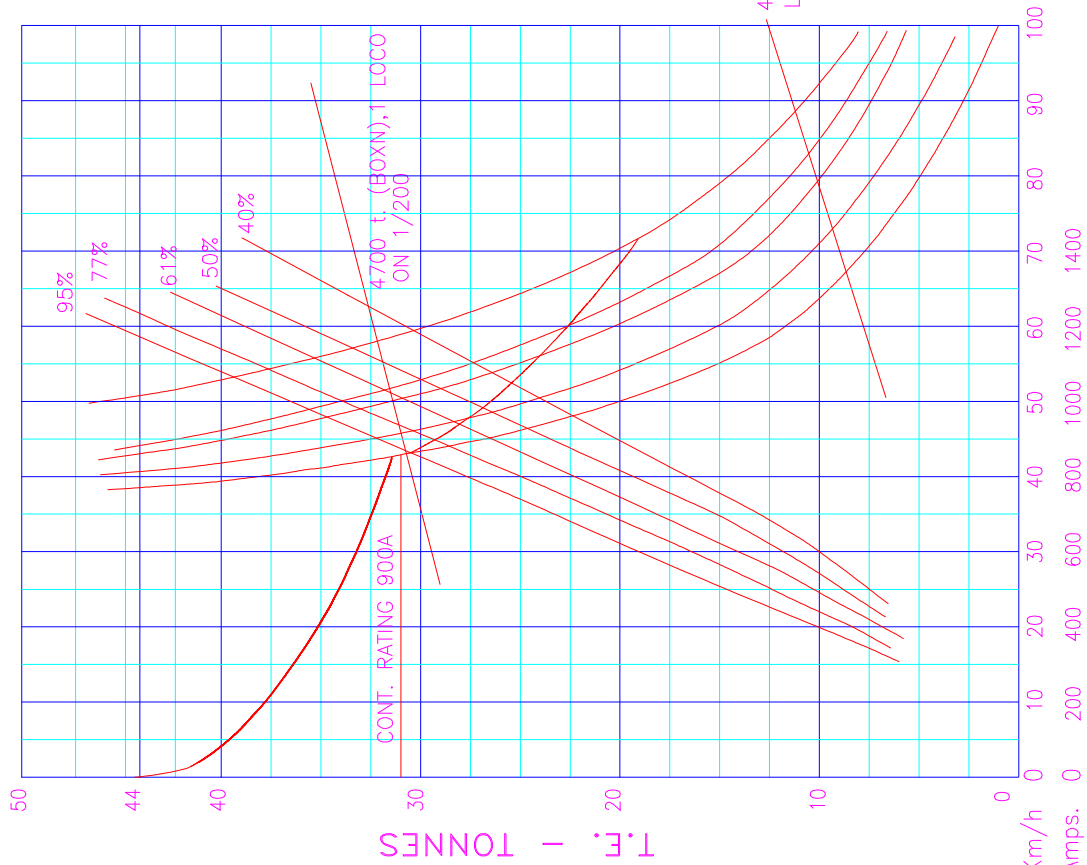
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(V.K. Aggarwal)  
for Director General/Elect.

ANNEXURE-I

TRACTION MOTOR - HS 15250A  
 No. OF MOTOR - 6  
 CONT. RATING - 750V, 900A  
 GEAR RATIO - 16:65  
 WHEEL DIA - 1055 mm  
 WEIGHT OF LOCO - 123 t  
 LINE VOLTAGE - 22.5 Kv  
 TRANSFORMER - 5400 KVA

⊗ STARTING T.E.44.0t AS PER REPORT  
 No.M-531



REF:- SCALE:- N.T.S. APPROVED BY:- Sd/- FOR D.G.

PERFORMANCE CURVES OF WAG7 LOCOMOTIVE

RDSO.ELEC.DTE. GEL-1077

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**Annexure II**

**WAG 7**

**HAULAGE CAPACITY OF WAG7 LOCOMOTIVE (WITHOUT ACCELERATION RESERVE)**

**G.R. 1:4.06 (16:65) T.M. HS-15250A LOCO WT 123T**

TYPE OF WAGON	GRADE	TONNES AT KMPH (TANGENT TRACK)									START*	
		20	30	40	50	60	70	80	90	100		
BOX'N'	LEVEL	ABOVE 7500							7302	4619	2785	10815
	1/500	7169	7169	7169	7169	6192	5005	3465	2345	1465	7169	
	1/200	4738	4738	4738	4085	3285	2715	1915	1295	820	4738	
	1/150	3960	3880	3795	3210	2590	2150	1515	1020	645	3977	
	1/100	2705	2665	2625	2225	1805	1500	1055	725	450	3002	
	1/50	1345	1335	1320	1120	905	750	515	-	-	1700	

\* 44T starting TE as per RDSO Report No. .M-531