### <sup>27.1.1</sup> अनु, अभि एवं मानक संगठन RESEARCH, DESIGNS STD ORG

### 2019-20 के लिए परिसंपत्तियों की खरीद, निर्माण और बदलाव Assets-Acquisition, Construction and Replacement for 2019-20

ssets-Acquisition, Construction and Replacement for 2019-20 (Figures in thousand of Rupees)।आंकडे हजार रू. में)

					(Figures in thousand of Rupees)(आकड़ हजार रू. म)						
		पूंजी	पूंजी निधि	मूआनि	विनि	संनि	रारेसंको	जोड़			
विवरण	Particulars	Capital	CF	DRF.	DF	SF	RRSK	TOTAL			
18 रेल अनुसंधान	Railway Research			50,00,00	40,00,00		10,00	90,10,00			
71 भंडार उचंत	Stores Suspense										
72 निर्माण उचंत	Manufacture Suspense							••			
73 विविध अग्रिम	Miscellaneous Advances							••			
कुल योग	Total Gross			50,00,00	40,00,00		10,00	90,10,00			
जमा या वसूलियां	Credits or Recoveries										
(क) विनिर्मुक्त सामग्रियों के लिए	(a) For Released Materials	••									
(ख) अन्य जमा	(b) Other Credits										
(ग) भंडार उचंत	(c) Stores Suspense										
(ध) निर्माण उचंत	(d) Manufacture Suspense										
(ड) विविध अग्रिम	(e) Miscellaneous Advances	••				••		••			
कुल जमा या वसूलियां	Total - Credits or Recoveries										
योजना परिव्यय (शुद्ध)	Plan Outlay (Net)			50,00,00	40,00,00		10,00	90,10,00			

# 27.1.1 RESEARCH, DESIGNS STD ORG ASSETS-ACQUISITION, CONSTRUCTION AND REPLACEMENT FOR 2019-20 (INTERIM BUDGET)

	(INTERIM B	UDGEI)		(Figures in thousand of Rupees)			
Item No.	Particulars	Alloca- -tion	Sanctioned Cost	Exp. at the end of March 2018	Revised	Outlay Proposed for 2019-20	
	RAILWAY RESEARCH						
	A - Works in Progress						
1	Lucknow - Testing of high speed train at 220 kmph through design of testing campaign alongwith supply of measuring wheel	DF(3)	8,83,00		1	1	
2	Lucknow - Augmentation of rolling stock design evaluation & testing capability, consisting of procurement of measuring wheel & modeling software	DF(3)	47,20,00		1	1,00	
3	Lucknow - Consultancy for training & development for UIC-518 standards for coaching stock	DF(3)	5,86,53		1	3,00,05	
4	Lucknow - Upgradation of air brake lab from ICF to LHB coaches	DF(3)	4,24,80		1	3,21,80	
5	Lucknow - Rehabilitation of Instron make fatigue testing system installed at Fatigue Testing Lab	DRF	4,13,00		1	4,13,00	
6	Lucknow - Repl of 2 track recording coaches, 2 staff cars & 2 track recording systems of TRC-2500 & TRC-225	DRF	22,13,00	32,35,42	1,00	1	
7	Lucknow - Consultancy for reduction of exhaust emissions from diesel locos of Indian Railways	DF(3)	4,39,00	51,55	1	1	
8	Lucknow - Design & development of 32.5 ton axle load wagons for dedicated freight corridor	DF(3)	14,40,34	12,86	1	1	
9	Lucknow - Design & development of 25 ton axle load wagons for existing systems	DF(3)	25,18,25	24,44,05	1	2,00,00	
10	Lucknow - Consultancy for test track	DF(3)	6,59,91	14,28	50,00	5,53,54	
11	Lucknow - Setting up of modern research testing facilities for modernized fuel and lube lab	DF(3)	7,84,00	11,15,44	25,77	1	
12	Lucknow - Setting up state of the art electrical laboratory	DF(3)	5,15,32	4,09,53	1	62,00	
13	Lucknow - Design & development of compressed natural gas based Alco engine for locomotives	DF(3)	22,37,89	1,48,76	1,00	1,00	
14	Lucknow - Development of common rail fuel injection system for 3100 / 3300 / 3600 horsepower Alco & EMD engines	DF(3)	3,64,00	11,18	39,69	4,41	
15	Lucknow - Collection and treatment of waste water for reuse	DF(3)	2,84,93	2,09,20	52,34	3,00	
16	Kharagpur (IIT) - Setting up of Railway research centre	DF(3)	20,38,44	37,01,50	27,00	1	
17	Lucknow - Consultancy on comprehensive study of wheel shelling problem on LHB coaches	DF(3)	2,50,00	12,00	1	1	
18	Lucknow - Setting up of fire testing facilities	DF(3)	4,20,00	60,67	80,00	1,79,77	
19	Lucknow - Online monitoring system for overhead equipment traction parameters	DF(3)	2,61,56	3,81,54	25,76	1	
20	Kharagpur - Aerodynamic design of traction rolling stock with speed potential of 250 kmph (upgradeable to 350 kmph)	DF(3)	7,67,57	4,87,33	1	1,40,00	
21	Lucknow - Procurement of 2 SG ACCN coaches for staff cars of track recording cars (2 Nos)	DF(3)	2,52,68		1	1	
22	Lucknow - Development of train collision avoidance system	DF(3)	28,92,00	16,19,53	1,24,02	2,00,00	
23	Lucknow - Evaluation & management of longitudinal forces on substructure of railway bridges	DF(3)	7,28,00		1,70,58	2,00,00	
24	Lucknow - Fog vision system for diesel electric locos	DF(3)	6,58,34		1	1,38,34	

# 27.1.2 RESEARCH, DESIGNS STD ORG ASSETS-ACQUISITION, CONSTRUCTION AND REPLACEMENT FOR 2019-20 (INTERIM BUDGET)

(INTERIM BUDGET) (Figures in thou:							
Item No.	Particulars	Alloca- -tion	Sanctioned Cost	Exp. at the end of March 2018	Revised	Outlay Proposed for 2019-20	
	RAILWAY RESEARCH						
25	Lucknow - Primary facility for thermal rating of contact lines, load flow capabilities of traction distribuion system etc.	DF(3)	3,41,54	83,48	10,00	25,00	
26	Lucknow - Assessment of efficacy of retrofitment of arch bridges	DF(3)	6,76,00	19,11	7,31	1	
27	Lucknow - Repl of track geometry measurement system of HSTRC 7972 with TRC coach & staff car	DRF	10,36,00	10,16	3,50,00	3,03,60	
28	Procurement of one ORPMS along with one TRC and one Staff Car against replacement of ORPMS	DRF	19,39,94		20,00	18,00,00	
29	Technology Mission for Indian Railways	DF(3) EBR(Dep)	90,00,00 210,00,00	1,07,02	1,00,00	2,00,00	
30	Setting up of four centres for Railway Research on Indian Railways	DF(3)	80,00,00	4	11,04	1,00,00	
31	Lucknow - Mobile instrumentation car for monitoring the health of PSI	DF(3)	9,55,58		10,00	25,00	
32	Lucknow - Repl of hydraulic dynamometer and automated test cell control system for test bed No 1	DRF	6,09,05		4,95	6,04,05	
33	Lucknow - Procurement of high inertia & high speed brake dynamometer	DRF	27,00,00		1	1,00	
34	Lucknow - Procurement of measuring wheel calibration test rig	DF(3)	3,36,88		1	3,45,00	
35	Lucknow - Repl of contact sensor based TRC system (TRC-7965 & 7967)	DRF	3,12,14		1	3,00,00	
36	Trial of rail fracture & intrusion detection system (40 rkm) on North Central Railway	DF(3)	5,82,92		65,34	1,00,00	
37	Trial of rail fracture & intrusion detection system (40 rkm) on Northeast Frontier Railway	DF(3)	5,82,92		1	1,00,00	
38	Establishing network centre for formal methods in validationand certification procedure for safety critical ICT system under ICT domain (FMSAFE)	RRSK	3,48,00		1	10,00	
39	Lucknow - Repl of staff car of testing directorate (1 Nos)	DRF	2,92,00		1	2,92,00	
40	Works costing below Rs.2.5 crore each	DRF				4,00,00	
		DF(3)		••		5,00,00	
	TOTAL-WORKS IN PROGRESS	DRF				41,13,66	
		DF(3)				37,00,00	
		RRSK				10,00	
	B - New Works						
41	Lumpsum Provision For New Works	DRF					
		DF(3)				3,00,00	
	TOTAL-NEW WORKS	DRF				8,86,34	
		DF(3)				3,00,00	
	TOTAL-Railway Research	DRF				50,00,00	
		DF(3)				40,00,00	
		RRSK				10,00	
	TOTAL-WORKS IN PROGRESS	DRF				41,13,66	
		DF(3)				37,00,00	
		RRSK				10,00	

# 27.1.3 RESEARCH, DESIGNS STD ORG ASSETS-ACQUISITION, CONSTRUCTION AND REPLACEMENT FOR 2019-20 (INTERIM BUDGET)

	•	,	(Figures in thousand of Rupees)					
Item No.	Particulars	Alloca- -tion	Sanctioned Cost	Exp. at the end of	Revised Outlay 2018-	Outlay Proposed for		
				March 2018	19	2019-20		
TOTAL - NEV	W WORKS	DRF				8,86,34		
		DF(3)				3,00,00		
GRAND TOT	AL	DRF				50,00,00		
		DF(3)				40,00,00		
		RRSK				10,00		