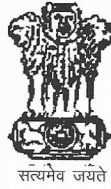


भारतसरकार-रेलमंत्रालय अनुसंधान  
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Government of India  
Ministry of Railways  
Research, Designs &  
Standards Organization,  
LUCKNOW - 226011



No. EL /2.2.1/High Reach

Dated 14.08.2019

1. M/s. SCHUNK Metal & Carbon (India) Pvt. Ltd., No. 54/2, White Field Road, Mahadevapura-P.O., Bangalore – 560 048
2. M/s Concept Rail Engineers Pvt. Ltd., C-557, 5th floor, 71 Canning Street, Kolkata-700001
3. M/s. Faiveley Transport Rail Technologies India Ltd., P. Box -39, Harita, Hosur – 635109 (Tamilnadu).
4. M/s. Contransys Pvt. Ltd., 16, Hare Street, KOLKATA , 700 001.
5. M/s. Pullman Engineering C. Pvt. Ltd., 32A, Ganesh Chandra Avenue, Kolkata-700013.
6. M/s. Sanrok Enterprises, E-14, Greaser Kailash Enclave-1, New Delhi-110048.
7. M/s. Air Control and Chemical Engineering Co Ltd., Barejadi, PO Nandej, Western Railway, Ahmedabad-382435, Gujrat, India
8. M/s. River Engineering Pvt. Ltd. 912, 9<sup>th</sup> Floor, Devika Tower, 6, Nehru Place, New Delhi-110019 India
9. M/s. Daulat Ram Engineering Services Pvt. Ltd. 10/2 NH-12 Simrai Post bedullahganj, District Raisen, Simrainagar, Manddideep -494993 (MP) India.
10. M/s. CRRC ZELC (India) Private Limited, 103, The Capital, Block C-70, Bandra Kurla Complex Bandra(East), Mumbai-400098, Maharashtra, India

**Sub:** Minutes of Meeting on development of High Reach Pantograph as per specification No. RDSO/2007/EL/SPEC/0054 Rev. '3'.

**Ref:** RDSO letter of even No. dated 02.08.2019.

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Dear Sirs,

Reference above, the meeting was held at RDSO on 13.08.2019 to discuss development of High Reach Pantograph as per specification No. RDSO/2007/EL/SPEC/0054 Rev. '3'.

Minutes of meeting is attached for your ready reference and necessary action. This has also been uploaded on RDSO website.

Thanking You,

Yours Faithfully,

*(Signature)*  
(Aseem Kumar)

for Director General/Elect.

**Encl:** Nil.

**Copy to:** 1. Secretary (Electrical), Railway Board, Rail Bhavan, New Delhi-110001.  
- for kind information please.

**(Kind Attn :** Sh. A K Goswami, DEE/RS/RB)

2. Principal Chief Electrical Engineer, All Zonal Railways/Production Units.  
- for kind information please.

**Encl:** As above

*(Signature)*  
(Aseem Kumar)  
for Director General/Elect.



**Minutes of Meeting on development of High Reach Pantograph  
as per Specification Revision "3" on 13.08.2019 at RDSO**

**Member Present:**

SN	Name (S/Shri)	Designation
<b>RDSO</b>		
1	O.P. Kesari	PEDSE
2	Aseem Kumar	DSE/Pn.
3	V K Yadav	SSE/D/Elect.
<b>CLW</b>		
1	S K Mondal	SSE/Drg/CLW

SN	Name (S/Shri)	Designation
<b>M/s. Schunk</b>		
1	Austin Jaikiran	VP Operations
<b>M/s. Faiveley</b>		
1.	Seetharam	Manager Product Engg.
2.	Milind Basle	DGM/Sales
<b>M/s. Concept</b>		
1.	Mahendra P Shah	Executive Officer
2.	Chirag Shah	Director
<b>M/s. CRRC</b>		
1.	Li Xuetao	Director Project Development
<b>M/s. Contransys</b>		
1.	Rajesh Talwar	GM/Production
<b>M/s. River Engineering</b>		
1.	Vijay Srivastava	Manager Marketing
2.	Nikunj Singh	Engineer
<b>M/s. Pulman</b>		
1.	B Mitra	Manager
<b>M/s. Daulat Ram Engineeing</b>		
1.	M K Das	Manager
<b>M/s. Mersen India</b>		
1.	D Basak	GM/PTT
2.	R Sarkar	GM/Marketing
3.	Sanjay Samanta	Design Engineer
<b>M/s. Air Control</b>		
1.	Vishal Daga	Jt MD
2.	T Das	GM/Marketting
<b>M/s. SANROK Enterprises</b>		
1.	Bikash Mallick	Manager - Technical

A meeting has been convened at RDSO for reviewing the development of high reach pantograph for electric locomotives as per specification Rev. "3". Discussion held is as follows:

**1.0 Targets of development of high reach pantograph:**

**1.1 At the onset of the meeting PEDSE apprised that –**

The Development procedures of high reach pantograph have already been simplified by revising the STR and specification in consultation with industries. Minor modifications are required in design of revision "2" to revision "3" pantograph. Now the firms should expedite the development on priority.



## 1.2 Development and type test Schedule:

Following targets for development activities were decided with firm:

SN	Firm	Development Time line given by the firm
1.	M/s. Schunk	Design document will be submitted within three months. Firm apprised to submit Internal test report within 6 months, however firm was requested to complete testing within 3 months.
2.	M/s. FTRTIL	Design document will be submitted by 30.09.2019. Firm apprised to submit Internal test report within 6-8 months, however firm was requested to complete testing within 3 months.
3.	M/s. CPL	Firm apprised to submit the design document by 15 September 2019, with modifications in Rev. "2" pantograph.
4.	M/s. CRRC	Firm apprised to submit the design document by 15 September 2019. Internal Test report will be submitted by 15 December 2019.
5.	Ms. Concept	Firm was advised to register on portal. Firm stated that they should submit design document within two month.
6.	M/s. Mersen	Registration will be made by 15th September 2019. Design document will be submitted by beginning of November 2019. Internal test report will be submitted within 6 months.
7.	M/s. River	Design document will be submitted within one month. Firm apprised to submit Internal test report within 6 months.
8.	M/s. DRE	Design document will be submitted within one month. Firm apprised to submit Internal test report within 6 months.
9.	M/s. SANROK	They will apply for registration and submit design documents within two months.
10.	M/s. Air Control	They will apply for registration within one months and design document will be submitted within 2 months.
11.	M/s. Pullman	The firm apprised they have taken collaboration from G&Z Canada. Firm is advised to process for the registration.

## 1.3 Following points were also discussed during the meeting:

- For the firms who have already developed Revision "2" pantograph, If there is no major change in shape and size in high reach pantograph between revision "2" and revision "3, type test like wind tunnel, shock and vibration, heating test and endurance test may not be necessary. However, this will be decided after scrutiny of design and drawing documents submitted by firms.
- Since revision "3" pantograph may take few months for development, Zonal Railways/Production units may continue with the procurement of revision "2" high reach pantograph for three phase locomotives.
- All the firms were requested to submit their time line for submission of design documents, internal test report, Shock and vibration test, heating test, wind tunnel test and balance test at their works etc. within a week.

The meeting concluded with vote of thanks to the chair.

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*Handwritten signature and date:*  
14/8/2019